

Oct, Nov + Dec 1970
Ch.

Tamil Arasu

Oct, Nov, Dec
1970

N/O.
C-2.

FORTNIGHTLY
CT. 5th 1970

Tamil Arasu

R.R. 451/P

70



DOCUMENTATION
DONE

Vol. I OCTOBER 5, 1970 No. 7

CONTENTS

	Page
Mahatma Gandhi—A Pen Picture	4
Those Twenty Days	5
Gandhiji on Tamils	9
Unemployment Relief for Teachers and Engineers	10
Salem Steel Project	11
The Kanjamalai Riches	13
After Salem, What?	15
Small Cement Plants	17
Coir Schemes	18
Tamil Nadu Enters Electronics Field	19
Massive Minor Irrigation	21
Sathanur	27
Banana Goes Abroad	29
Tamil Nadu Archives	31
Sweet Siruvani	35
Doraiswamy Road Sub-Way	37
Blind School	39
Chief Minister's Police Medal	41
Tourism Earnings	43
TANSI Spans Oceans	44

Cover Page—Father of the Nation.

Back Page.—Inauguration of work on Salem Steel Plant.

Handwritten signature





Gandhi was well built, with fine muscular bulging chest, thin waist, and long thin firm legs, bare from sandals to short, tight loin cloth. His knees were pronounced bulges and his bones wide and strong; his hands were big and the fingers big and firm. His chocolate-coloured skin was soft, smooth, and healthy. His fingernails, hands, feet and body were immaculate; the loin cloth, the cheese cloth cape he occasionally wore in the sun, and the folded, moistened kerchief on his head were bright white.

His body did not look old (written when Gandhiji was 73). He did not give one a feeling that he was old. His head showed his age. His head was large, wide at the top and tapering down to a small face; big ears extended away from it abruptly. His upper lip, covered with a black-and-white stubble mustache was so narrow that it almost met the fat, down pointed nose. The expression of his face came from his soft and gentle eyes, the sensitive lower lip which combined self-control with strength and showed a suffering, and the ever-present smile revealing naked gums.

His facial features, with his quiet, confident eyes, whether he was speaking or listening, was always alive and registering activity. He spoke with a low, singsong, undistinguished voice (many Indians have the same singsong when they speak English), and he gestured eloquently but not always, with the fingers of one hand. His hands were beautiful.

TWENTY DAYS

M. KARUNANIDHI

5. Italy of Today

Before I proceed to refer to the Chapters of Italian history wherein the undaunted braves of that land wrought political changes as varied in magnitude as the rise and fall of the waves of the sea, would it not be better if I were to describe in some detail the political and economic conditions of the present-day Italy?

The Italian Republic to-day contains within its territory the sovereign, independent Republic of San Marino and the sovereign, independent State of Vatican City.

The beautiful natural seaports Naples, Leghorn, Laspezia, Genoa

and Savona adorn the mountainous west coast of Italy. Dotted on the low-lying Adriatic coast are the natural seaports, Venice, Bari, Brindisi and Taranto.

The official language for the whole of Italy is only Italian and it is the language spoken by the vast majority of the people. Different languages are spoken in different parts of the country, but Tuscan of the Tuscany region is said to be only a version of Italian, distinct on account of quality. French is spoken in the Piedmont regions and actually it is the second official language in the valley of D'Aosta. German

is widespread in the Upper Adige regions and Latin holds sway in the northern and north-eastern areas.

The dailies available at newsstands and the books sold at the stalls are all in the Italian language. The use of English is limited to those fields of activity that have to be in contact with the outside world; and the feeling is deep-rooted in Italy that for all other purposes, the mother-tongue is eminently adequate.

Roman Catholicism is the State Religion in Italy and 99 per cent of the people happen to be Roman Catholics.

Constitutional monarchy had been functioning in Italy from 1861 onwards but it was put an end to on 2nd June 1946 when, through a referendum, the people of the country ushered in a Republic. A Constituent Assembly was also elected at the same time and the new Constitution became effective from 2nd January 1948.

The Italian Republic is headed by a President who is elected on the basis of two-thirds majority of the Parliament comprising the Senate and the Chamber of Deputies. The term of the President is 7 years. In the electoral college for choosing the President, three representatives from each of the regions of Italy are also allowed to participate, apart from the members of the Senate and the Chamber of Deputies.



Democrats and placed them in power ; but ideological squabbles from time to time led to the attenuation of the party's strength. The Italian Communist party takes the second place there, in terms of political quantity ; it has also the distinction of being the largest of the Communist parties in West Europe.

There are two rival parties, both subscribing to the creed of Socialism. The bigger of the two is the Socialist party and the other is the Social Democrats Party. Apart from these, the other parties in the political arena are the Republicans the Liberals and the Radicals.

When I visited Italy, it was the Christian Democrat Party that was in the seat of Government were, to provide employment opportunity for all, to eradicate the economic disparities between the North and the South, between the Industrial and the Agricultural sectors and to create equal opportunities for all sections of the community. The foreign policy of Italy has been committed to the task of striving for peace, ensuring defence and preserving liberty. At the time of my visit, the stability of the Government was very much in the balance.

Parity Economy.

By way of securing parity with its agricultural economy, Italy has attained widespread Industrial productivity in the several sectors. Of the total labour-force of the country, 38.20 per cent is engaged in Agriculture and 33.10 per cent in Industry. Farming is concentrated in the Central and Southern regions whereas industrial potential is located to a large extent in the north.

Fifty per cent of the farmers in Italy have an average holding of 1.20 acres of land each. Of the industrial workers 76 per cent are engaged in small industries and that too, small industries of

the scale employing not more than two. Heavy industries have also been developed to impressive dimensions.

Industry has registered spectacular growth after World War II, and this is all the more noteworthy when we learn that Italy has to import the bulk of its requirement of raw materials. Coal is imported to the extent of 90 per cent and other items like petroleum, cotton, copper, phosphates, wool and iron have also to be obtained from other countries in large proportion. Natural resources of minerals like sulphur, mercury, lead and zinc are very limited indeed.

The labour-force in Italy is made up of 20 million and 15 lakhs workers. Of this 10 million and 90 lakhs are engaged in factories and the rest in Agriculture and other fields of work. There are 4 major trade Unions in the country and it has been estimated that their total membership is of the order of 60 lakhs of workers. The factories are on a 6 day schedule during a week and work is for 8 hours in a day. The holidays are 16 for the year and of these, four are paid holidays. The minimum age for employment is 14 years. Women and children are not allowed to work in the factories on night-shifts.

The Red Hall

Such is the political, economic, industrial and agricultural background of Italy and it was in Rome, the capital of the country

that the corporation accorded a reception and presented a medallion to me. The function was arranged in the 'Red Hall' where the dazzling paintings and the sculptures relating the history of the ages held our sustained attention. Not a single marble has been wasted there. Every slab, every piece has been rendered eloquent.

It is literally impossible to describe the magnificence of the paintings there in the 'Red Hall', depicting the battlefields where the warriors of Rome performed their deeds of valour and collected

the trophies of war in the form of wounds on their chest. A battle-scene has been painted on an entire wall of the Hall and looking at it, I came to feel that I was actually standing in a sector of the battle itself. Impressed beyond words, I captured the painting in the Camera but my desire to reproduce the print, for all to see and admire, could not be fulfilled. I don't know what exactly happened to the picture-whether it was lost amidst the hundreds of snapshots or whether those who accompanied me left it behind, through forgetfulness !

I tasted the pleasures of walking freely. . . .



The political parties that came into being in the wake of Benito Mussolini's fall in 1946 were national liberation groups forming part of a broad alliance of those parties that had been in existence before the emergence of Fascism. However, after 1946 when Elections were conducted for the Constituent Assembly, the political parties were grouped in three separate categories, namely, the Leftists, the Neutrals and the Rightists. Amidst this, the Christian Democrats' Party enjoying the support of the Roman Catholics has shaped itself into a separate influence of substantial strength, under the leadership of Gasperi. The results of the parliamentary elections held in 1948, 1953 and 1958 favoured the Christian



With the way side Painter.

Walk Free

After viewing the grandeur of the 'Red Hall', we decided to take a walk for a brief while, on the streets of Rome. To walk freely on the streets of Tamil Nadu has been an impossible task for me, since identification leads to hundreds of kind people surrounding me and deluging me with their affection. I was confident that such would not be the position in distant Rome and for the first few minutes of the stroll, I could experience the exhilaration of the bird set at liberty. But after that, strange to say, I noticed quite a few citizens men and women, almost closing in on us and walking in our footsteps. It was of course an agreeable surprise to me that there were people, even in far away Rome, who knew me by sight; but the pleasure, alas, was short-lived. For, what had attracted the attention of the followers was the 'Tilak' and the saree of my wife, I told my wife: "Well, back in Tamil Nadu I am the object of the people's attention when I step outside, but here you seem to have taken my place!"

After walking along a few more streets, we got into the car again and drove to the office of the F.A.O. The Organisation is meant for the advancement of Agriculture. The

Officers there not only accorded us a warm welcome but availed of the occasion to put questions to me by way of seeking information and clarifications; and it almost became a regular seminar. Dr. Poduval who was formerly working in the Annamalai University is now a senior officer at the F.A.O. and he explained that, although the Organisation is not in a position to render direct financial aid for many projects, it does come forward to provide financial assistance through the World Bank, for agricultural development and progress.

When in the course of the discussions, an officer happened to mention that North Italy was way ahead in economic development whereas South Italy had lagged somewhat behind, I could not help commenting; "Perhaps, everywhere North and South would be found only in such circumstances!" The interjection was received with broad smiles by those present.

Reply to Critics

Another officer pointed out that it is being stated that democracy in India is in danger and that disunity and poverty are proving intractable problems. When he desired to know my views in the matter, I answered:

"The task of eradicating poverty is rendered rather difficult, as a result of the Leftists and the Rightists being extremely tenacious in clinging to their respective policies. But there are definite possibilities of evolving unity amidst diversity in India." Towards the close of the engagement, I told the gathering: "Although stability of Government is not a strong point in Italy, the economic development here has been substantial and impressive. But as far as India is concerned, I cannot say that economic development has been up to the mark. When I return, I would communicate my opinion to the Government of India that India would do well to adopt such ways and means for development as have been evolved in Italy."

After the reception at the F.A.O., we once again set out to see the sights of Rome. The Republic Square is one of the places in Rome where a festive atmosphere prevails in the evening in such abundant measure that it cheers the heart and kindles the enthusiasm of the visitors. Thus a trip to the spot is a must for tourists and it was at this engaged in painting became an instant friend of mine.

(to be continued.)



GANDHIJI ON TAMILS AND TAMIL LANGUAGE

No other Indian can equal the performance of the Tamils in this fight (Sathyagraha in South Africa). It therefore occurred to me that I should read Tamil with close attention, if for no other reason than to tender sincere thanks to them at least mentally. Accordingly the last one month was devoted mostly to the study of Tamil. The more I learn it, the better I appreciate the beauties of this language. It is a very fine and sweet language, and from its structure and from what I have read in it, I find that the Tamils have produced, and still produce, a large number of intelligent, thoughtful and wise men. Moreover, since India is going to be one country, some Indians outside Madras should also learn Tamil.

—from *Indian Opinion*, dated 5-6-1909.

GANDHI MEMORIAL SCHOLARSHIPS FOR HARIJAN PUPILS

A special scholarship scheme for Scheduled Caste students was announced by the Tamil Nadu Chief Minister Thiru M. Karunanidhi on 2nd October 1970 in connection with the observance of the 101st birth anniversary of Mahatma Gandhi.

Known as the "Gandhi Memorial Scholarship Scheme" it will be available to two students belonging to Scheduled Castes in each district—a boy and a girl—who secure the highest marks in the P.U.C. examination.

Each student will get Rs. 100 per mensem besides a cash grant of Rs. 500 to meet the immediate expenses for continuing the study in degree classes. The assistance under the scheme will be available to a student for a maximum period of six years.

Thiru Karunanidhi announced the scheme at the all-party public meeting at Seerani Arangam, organised by the Tamil Nadu Government to celebrate Gandhiji's Birthday and said the winners of the Gandhi Scholarships would be eligible for the usual concessions available to Scheduled Caste students.

He said the Tamil Nadu Government had decided to institute the above scheme in memory of Gandhiji who had dedicated his life in the cause of Harijans and the down trodden.

The Chief Minister also said the Tamil Nadu Government wanted to continue the various concessions enjoyed by Backward Classes and Scheduled Castes in the matter of education and appointments until the "social inequalities" were completely removed.

THE HUMAN TOUCH IN SALEM IRON

The Government have reassessed the land requirements for the Salem Steel Project and have decided to restrict the requirements to 16,964 acres, as against 24,446 acres originally notified for acquisition. The areas released from acquisition comprise heavily built-up areas, developed agricultural lands, areas having semi-industrial complex like powerloom, weaving, etc. This puts an end to the 10-year misery of the people of Kanjamalai who could not raise money on their property, as a result of acquisition notice.

Anticipating the need for encouraging several small industries, an intensive campaign was organised in Salem for the registration of small industries, supply of machinery from National Small Industries Corporation, etc. In one sitting lasting six days 489 small-scale units were registered!



TAMIL NADU SCHEME TO RELIEVE UNEMPLOYMENT

The Tamil Nadu Government has drawn up an ambitious programme to relieve educated unemployment in Tamil Nadu. The scheme will cost Rs. 1 crore per annum.

Under this scheme, 6,000 teachers (graduates and others) and 2,400 technically-trained men including engineering graduates are to be given job opportunities immediately.

Under the scheme 6,000 teachers will be taken in immediately. This would be in addition to the 7,000 already recruited.

These newly recruited teachers would serve an apprentice period for two years and would have first preference in the appointment of teachers in the regular cadre.

The graduate-teachers would receive Rs. 175 a month, secondary trained teachers Rs. 125 and higher elementary teachers Rs. 100.

The Government has already a two-year stipendiary training scheme for graduate engineers, diploma-holders, and I.T.I. Craftsmen. Under the scheme 2,000 of them would be given job opportunities before the end of the year. The Government is also examining ways to find them more employment in public and private sector undertakings.

Under the scheme, the graduate engineers will receive Rs. 250 per month, the diploma-holders Rs. 150 and the Craftsmen Rs. 70, up-wards.

Gandhi is for all

The Gandhiji Birthday celebrations in Tamil Nadu this year though it followed the pattern set in the previous two years was memorable in that it was elevated to the stature of an event of national significance transcending party and ideological loyalties. In fact, this spirit of supra-party consciousness for paying our homage to Mahatma Gandhi was initiated by Anna, when he issued the clarion call of 'Unite for Gandhi', to mobilise the entire State towards the Gandhi centenary celebrations.

The Tamil Nadu Government went to a lot of expense this year to instill the fact that Gandhi is for all, through newspaper advertisements, posters and other means of publicity. These advertisements stressed the fact that the Government had been convening all-party public meetings in connection with Republic Day and Independence Day to enable all to identify themselves as belonging to one nation and one country. On top of all this, the invitations to the function went out in the warm facsimile of the Chief Minister's hand writing and signature. Thanks to all the publicity and persuasion virtually all sections of the population turned out to the public meeting on 2-10 1970 held in honour of the Father of the Nation. All the leaders of political parties who were invited to participate in the function, responded and spoke on the occasion. The Chief Minister also announced that the Birth Day of Pandit Jawaharlal Nehru would also be celebrated in similar 'common-for-all' function.

The Salem Steel Plant which was inaugurated on 16th September 1970 will produce special steels of high value as against structurals and merchant sections originally envisaged. The product mix and the capacity of the plant are still under study. The capital outlay on the plant will be in the region of Rs. 100 crores.

The Kanjamalai Iron Ore, on which the present Project is based, has been known for more than a hundred years. With it is associated the name of an enterprising resident of Salem, Arunachalam Achari, who as far ago as the beginning of 19th century, produced steel from these iron ore deposits and fashioned it into articles of every-day use. Subsequently, the deposit of iron ore attracted the attention of a number of foreigners, one of whom in 1830 erected an iron works at Porto Novo, and demonstrated that pig iron could be successfully manufactured from the Salem Iron Ore with the help of charcoal. A company was started in 1833 under the style "Porto Novo Iron and Steel Company" but this company was wound up in 1866. Even



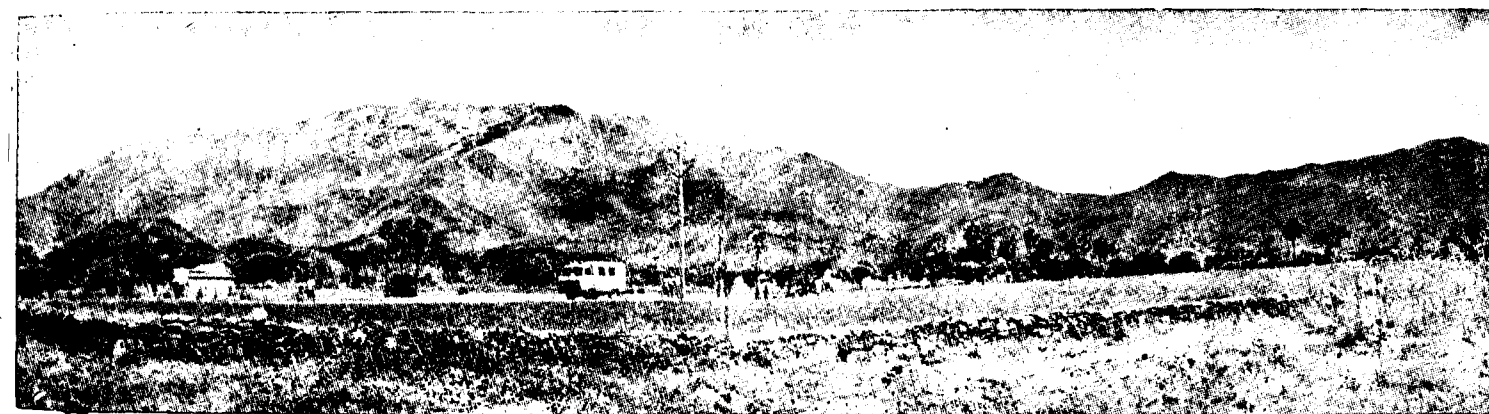
subsequently, sporadic attempts were made to prove the iron ore deposits and exploit them.

The proposal for a steel work based on these ores could not take shape on account of the non-availability of an important element for steel manufacture, namely metallurgical coking coal in the region. The discovery of extensive reserves of lignite, estimated at about 2,000 million tonnes in Neyveli provided this basic input.

In view of the fact that the iron ore deposit in this area, has very low phosphorous and sulphur content, it is ideally suitable for the manufacture of special steel.

Pending Central approval of a steel plant, the State Government decided to set up a plant for the concentration of the magnetite iron ore at Kanjamalai and for pelletisation for export in the form of pellets.

Seven possible sites were studied for locating the steel works. Out of them, the Kanjamalai site was considered the best in view of its potential advantage such as lower assembly cost of raw materials, access for both Broad Gauge and Meter Gauge lines without need for transshipment, adequate supply of power and water and ready access to the main market centres





in South India. The Kanjamalai site has also the lowest ton kilometre of movement for raw materials assembly.

The availability of raw materials water and power have been proved beyond doubt. The ore reserves at Kanjamalai have been proved as 144 million tonnes. Other reserves in Godumalai Theerthamalai, etc., all situated within a radius of 50 miles, are estimated as 170 million tonnes. The other probable reserves in Perumamalai, Rasi-puram, Namakkal, etc., would account for another 190 million tonnes. Thus, there are estimated reserves of 500 million tonnes of iron ore deposits in Tamil Nadu.

Lignite.—For the Salem Steel Plant, lignite char will be used as reductant. Lignite char is available in plenty in Neyveli region.

Limestone.—Limestone of flux grade suitable for steel making is available in Salem district itself and also in the neighbouring States of Mysore and Andhra Pradesh.

The other requirements such as magnesite, bauxite, etc., are available in Salem district itself. Manganese could be obtained

from Tumukur in Mysore State and Bentonite from Rajasthan.

Water.—Mettur reservoir will be the source of supply for water for the steel plant. Water will be pumped to a reservoir to be located at Nangavalli/Sitamalai region from where it will be gravitated to the receiving tank in the plant site. The total distance of the conveying main is 27 k.m.

The maximum power demand for the Steel Plant is of the order of 97 MW which could be obtained from the Madras Grid.

The plant may take about 6 years to go into production and is likely to provide employment opportunities for about 5,000 people in all categories put together.

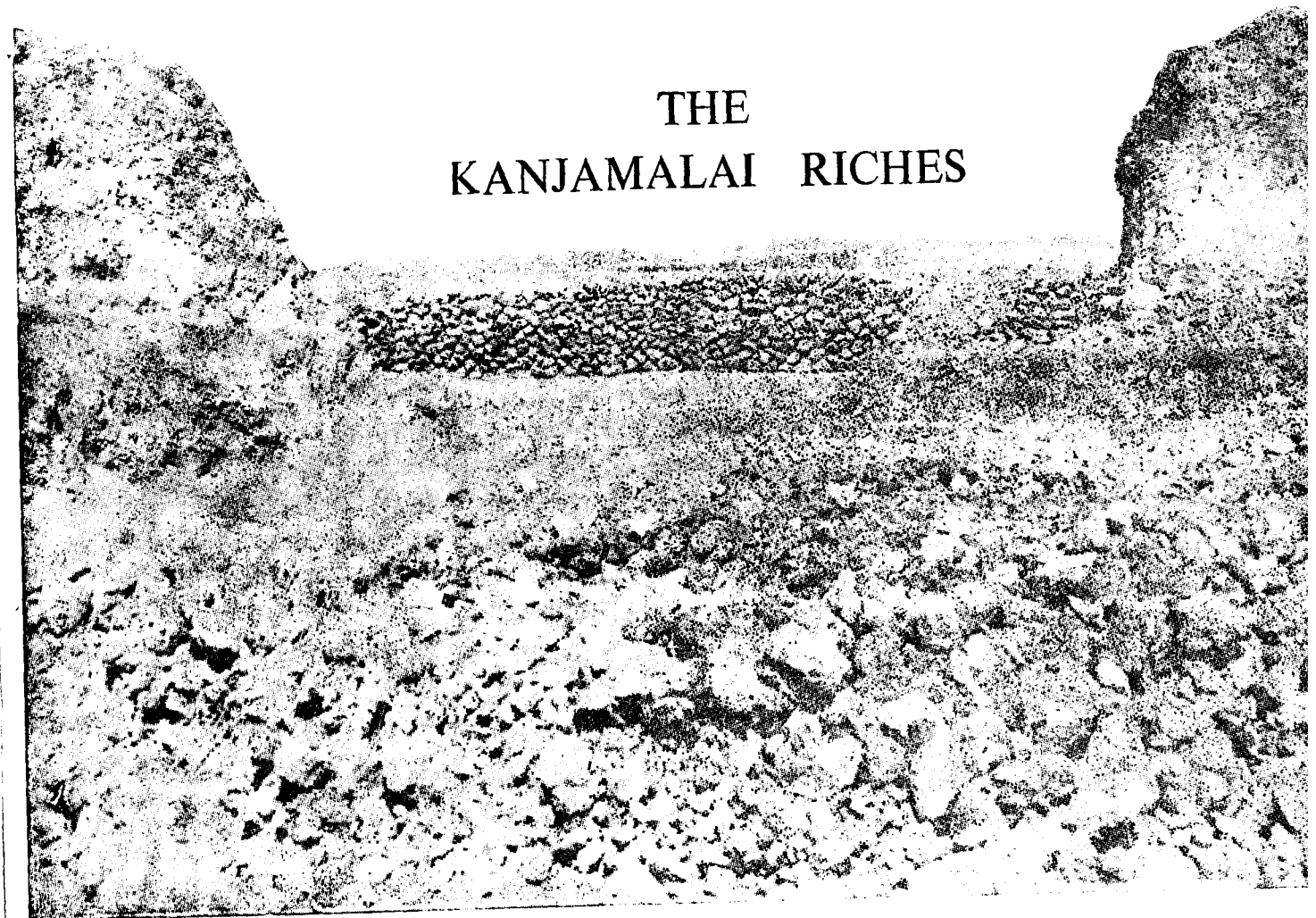
The capital cost of this Project is likely to exceed Rs. 100 crores. An investment of this order is important not only for its own sake but as a big step towards further industrialisation of this area. This investment in a commodity like steel will not only have multiplier effect but perhaps, what is more important develop technology and skill in various spheres which will help diverse ways to develop other industries.

Inauguration of a project of this nature is always a landmark in the industrial development of the country. It is, however, more so in the present case because the technology proposed to be used in this plant will be new to the country. Instead of the conventional method of reducing iron ore with the help of coke in the blast furnaces, it is proposed to use lignite char for pre-reduction of the magnetite ore which will then be smelted in electric furnaces.

Latest Technology :

Another new feature of this plant along with the two plants to be set up at Hospet and Vishakapattinam is that it will be designed, engineered and later managed by indigenous talent. This will mark a departure from the past because the first three Steel Plants in the public sector were set up by foreign agencies more or less as turn-key jobs. Even the first stage of Bokaro depended to a large extent on the Soviet Union. The sense of discipline and also the skills for which the people of Tamil Nadu are noted will be harnessed in this mammoth venture, to earn for Salem Steel a world renown.

THE KANJAMALAI RICHES



The Salem Steel works will have several distinctive advantages even when compared to the existing steel works in the country. The proposed location of the plant at the iron ore mines coupled with the availability of large deposits of metallurgical grade of limestone, bauxite, etc., at close proximity secures for this plant the advantage of the lowest raw material assembly cost in the entire country.

Plant.	Transport requirements Ton-km. per ton of steel ingot.
(a) Existing :	
TISCO ...	592
IISCO ...	724
Rourkela ...	880
Durgapur ...	881
Bhilai ...	1,617
Bokaro ...	842
(b) Proposed :	
Salem ...	161
Vizag ...	3,090
Hospet ...	3,293
Goa ...	4,216

Inestimable are the riches of Kanjamalai in the form of Magnesite Iron ore. In addition there are vast quantities of limestone in the Tiruchengode-Sankari area only about 30 kms. from Kanjamalai. There is also the advantage of the neighbouring magnesite deposits which are used for the manufacture of fire bricks necessary for steel plants. Large quantities of magnesite ore are already being used by refractory manufacturers in different parts of the country and it has been estimated that about 20,000 tonnes of

fire bricks will be required for medium-sized steel plants. Lignite char will have to be transported to the Kanjamalai area over a distance of only 170 kms and it has been estimated that 320,000 tonnes of lignite char will have to be used for smelting purposes.

There will be no shortage of iron ore for smelting purposes over a long period as there are already proved reserves to the extent of 370 million tonnes. It is estimated that nearly 100 million tonnes of iron ore will be available in the first band of Kanjamalai hill. There are two other bands which together may yield about 40 million tonnes of ore. Similarly, the reserves in Godumalai and Thirthamalai hills are estimated at 60 million tonnes in each place. These ores occur in the form of magnetite quartz containing 35 to 40 per cent of iron. Since then additional deposits have been located in the form of underground reefs in the neighbouring areas over long distances up to Tiruvannamalai. Thus even a plant of 1½ million tonnes can be easily fed.

Not of Low Grade

It is incorrect to say that Salem ore is of low grade and is not economical for smelting purposes. Even without the Salem Steel Plant being erected, the Japanese were interested in buying this ore because of its special quality and the scope for exporting beneficiated ore through Madras and Cuddalore Ports.

The Salem Steel Plant will be inducing a chain reaction which will have far-reaching consequences for the regional economy.☺



A pilot mine has been cut open in the Southern flank of the Kanjamalai hills to determine the behaviour of the mineral while blasting, the most suitable method of winning the iron ore and the equipment required for the purpose. The Neyveli Lignite Corporation Limited has been entrusted with the work of executing the pilot mine. Photo on top shows dynamite being put into the mine. Bottom photo shows the mine after the blast.



A
F
T
E
R

S
A
L
E
M

W
H
A
T
?

The Salem Steel works presents the opportunity of opening up new industrial horizons in the rapidly developing Southern region of the country. Compared to other Indian Steel works, Salem has the advantage of lowest raw material, assembly and product distribution costs. The available raw materials can be utilised with advantage through the application of new technology to produce quality products at competitive costs.

The richness of an ore is only with reference to what use we make of it. It is as rich as we make of it depending on the

following items of heavy engineering industries were generally recommended by the Techno-Economic Survey in 1961:

- (a) Malleable iron castings.
- (b) Alloy tool and special steel.
- (c) Steel Press work.
- (d) Grey iron castings.
- (e) Steel castings.
- (f) Steel forgings.

(a) Malleable iron castings:

The Malleable iron castings is in great demand in India. They are very useful in the manufactures for railways, automobiles, agriculture, Posts and Telegraphs, Electric High Tension fittings,

imports annually about 280 tons of these special steels at a cost of Rs. 15 lakhs. In fact an Alloy industry for tool and special steel can be started in the Salem-Neyveli belt which can supply to the whole of India and can even export. It is well-known that Salem has supplied such excellent steel to the Greeks, the Romans and Egyptians from times immemorial. A new plant for such tools of the capacity of 2,000 tons can be started at a cost of Rs. 3 crores.

(c) Steel Press Work :

It has got a demand of 4,000 to 5,000 tons per annum. This is

INDUSTRIAL PROJECTS IN SALEM-NEYVELI COMPLEX

method of extraction and smelting. What may be a poor ore with reference to one method of extraction and smelting may be quite rich by a different method. In America it appears many low grade ores are being worked to produce iron. In addition to the small scale industries, engineering industries which provide the most essential foundation for any organised or planned scheme for industrialisation may be started. They comprise generally of castings and forgings of components and parts required for making or assembling machines required for manufacture. The

Transmission fittings and hard fittings. We are importing nearly 7,000 to 8,000 tons of malleable iron castings every year. It is estimated that 10 tons of malleable iron castings per day may meet the needs of the whole State. An industry can be started for this purpose in Salem-Neyveli industrial belt.

(b) Alloy Tool and Special Steel :

In regard to Alloy tool and special steel the country's requirements are of the order of 9,000 tons of finished products. At present most of the requirements are met by imports from abroad at high cost. Tamil Nadu alone

an allied industry to engineering industry. An additional capacity for 2,000 tons per annum at a cost of Rs. 3 crores could be started.

(d) Grey Iron Castings :

Grey Iron Castings can be divided into three divisions ; heavy, medium and small. The heavy unit can be located in Madras. The medium and the small scale industries can be started in Coimbatore. An additional capacity for 10,000 tons per annum may be found necessary which can be started at an estimated cost of Rs. 3 crores.

(e) **Steel Castings and Steel forgings.**

The Railways and the Automobiles concerns consume large quantities of steel castings and forgings which are now imported from abroad. The Railway equipment committee constituted by the Government of India has stressed the need for self-sufficiency with regard to steel castings and steel forgings. The Railway has estimated that its demand would be of the order of 42,000 tons per annum, while the indigenous capacity was only 31,000. Hence it was thought the licenced total additional capacity of 13,000 tons per annum may be provided for a new steel castings industry in the Salem Engineering Belt.

However, the National Council of Applied Economic Research have recommended a capacity of 6,000 tons per annum of steel castings at a cost of Rs. 6 crores which can be increased in course of time. In addition, Automobile and Accessories, Motor Vehicle bodies, Scooters, Cycles, etc., may be thought of in this area.

Manufacture of Machine-tools, Cotton Textile, Power Drill, Carbide Tips Plant, Aluminium Industry, Heavy Electrical Project, Electrical Motors and Pumps, Switch Boards and Gears, Transformers and Switch Gears, Electrical Steel Sheets, PVC Cables and Materials, Insulators, Fertilisers and a few chemical industries can also be thought of in this area.

After technical appraisal, the Council has recommended the creation of additional capacity in Tamil Nadu for the following engineering goods industries:—

Ball and Roller Bearing (one million units); Bolts, Nuts and Rivets (6,000 tons); Shot and Chilled Iron (1,000 tons); Tea Processing Machinery; Power Station Equipment; Industrial Gas Cylinders; Industrial Blowers; Air Compressors; Machine tools; Diesel Engines; Power Transformers (1 million KVA); Electric fans (1 lakh units) and ACSR conductors (5,000 tons).

In addition to the above mentioned new units, the Council has suggested substantial expansion of capacity in the following engineering industries:—

Bicycles; Machine Screws; Railway Wagons; Steel Pipes and Tubes; Structural Fabrication; Metal Containers; Sugar Mill Machinery; Automobiles and Accessories; Pistons and Piston Rings; Power driven pumps; Dry batteries; Storage batteries; Galvanized and Barbed Wires; Textile Machinery; Agricultural tractors and Enamel wares. It has recommended doubling the installed capacity in respect of the following engineering industries:—

Automobiles and trucks, Motor Cycles; Vehicular type of diesel engines; Electric Motors; Abrasives; Small tools and Distribution transformers.

According to the National Council, one of the weaknesses of the engineering industry in the State is inadequacy of intermediate processing facilities such

as foundries and forges. To overcome these obstacles to the growth of the engineering industries, the Council has suggested the manufacture of Grey Iron Castings; Malleable Iron Castings; Steel Castings; Steel Forgings; Steel Press Work; Aluminium Castings; Electrical Steel Sheets. Re-rolled Steel and Alloy; Tool and Special Steel. **The Council considers Salem to be the best location for rolling and re-rolling, Madurai for malleable iron castings, Coimbatore for grey iron castings and Madras for the rest of the above items.**

The National Council of Applied Economic Research has recommended in addition to the Salem Steel Plant, a pig iron plant of 30,000 tons capacity at Salem and Coimbatore. According to them the pattern of regional distribution of Industries would radically alter the face of Salem and South Arcot Districts. Of course, no one can neglect Coimbatore which has become the Manchester of India. With the adjoining district developing its natural resources, many basic engineering industries can be further developed in Coimbatore. It is said that among the districts of Tamil Nadu, Salem offers the maximum industrial potentialities. With immense possibilities of industrial development, Salem-Neyveli Belt would very easily become the Ruhr of Tamil Nadu. Many steel mills may be commissioned for the production of different types of steels for different industries. Industries based on Beryl, Calcite, Columbite, Felspar, Silica, Steatite may be started in Salem.

CALCIUM FOR CARBIDE INDUSTRY

Steps to locate new Sources

The State Geology department, in view of the importance of coral limestone of high purity for the calcium carbide industry, has been devoting special efforts in this behalf. The occurrence of shell lime-stone in Tisiyanvilai area, Tirunelveli District was taken up for detailed study. The deposit is estimated to occur over an area of 1,200 m. by 800 metres. The limestone has an average thickness of 4.5 metres. The quality is good in the central portions and coarse-grained, but tends to deteriorate in the northern and eastern portions. About 2 million tonnes of limestone has been estimated to occur here, but a final picture would emerge only after sampling and drilling which is proposed to be taken up shortly.

Sources of lime

Considering the fact that the backwater lagoons are potential areas for collection of dead shells, which constitute source of high grade lime, the backwater region in Kaliveli and Kandadu areas of Marakkanam, South Arcot District was taken up for assessment. It is estimated that limeshell layer of about 1 metre thickness on an average is obtained here. However, a certain portion of the area has already been won away. It is proposed to extend the survey further into the other backwater region. The area covered so far is about 5 sq. kms. The percentage of

SMALL CEMENT MAKING PLANTS

Foreign Interest in Tamil Nadu Technique

The pilot Cement Plant of Tamil Nadu Government at Kallakurichi is continuing its research activities to promote the sale of 75/150 tonnes-capacity-per-day plants. The Government of Indonesia have evinced interest in setting up such plants in their country and have approached, the Government of India for placing the services of an expert at their disposal. The proposal is under consideration.

Patented Plant

Being the first shaft-kiln Plant on a new fuel mix process in India the Pilot Cement Plant, patent

rights are being sought for it.

The production capacity of the plant is 25 to 30 tonnes of cement a day. The present production is 10 tonnes a day. The targetted capacity will be achieved on studying the operation and further improvements.

The purpose of designing such smaller capacity plants is to encourage industrialists to set up small cement plants in areas where small deposits of limestone are available and which cannot sustain the establishment of the conventional large scale cement factories.

limeshell bearing layers has been fixed preliminarily at 25 per cent.

High Grade Limestone is being utilised in the State for the manufacture of chemicals such as bleaching powder and calcium carbide. Incidentally one of the mineral deposits exotic to this State are the massive corals which grow around the small islands in the Gulf of Mannar. These along with the sea-shells which are found in the lagoonal waters of Pulicat and Marakkanam carry negligible impurity.

At present in the State there is one factory manufacturing Calcium Carbide in the South which has its problems in the procurement of essential raw materials viz., coking coal and coral limestone (of very high purity calcium carbonate with negligible phosphorus content).

The electrical process for the manufacture of this vital industry was first introduced about 70 years ago and in India in a small way from 1943.

COIR SCHEMES



Tamil Nadu stands third in the area of coconut cultivation and second in the yield of coconuts in the country. Coconut husks which are mostly used as fuel in Thanjavur and other districts, could otherwise be profitably used in the extraction of fibre. There is also demand for coir fibre in foreign countries.

The Government Coir School at Eathamozhi in Kanyakumari district imparts training to students in coir yarn spinning and manufacture of coir products like mats and mattings in a two-year course.

A pilot plant has been set up at Tenkasi in Tirunelveli district

with a view to demonstrate the possibilities of introducing mattress and bristle fibre in the State. All the machineries imported from the United Kingdom and Austria have been erected. The Unit started functioning on 13th June 1968. Partial production is being carried on in this Unit. The Unit can go into full production only after 4 more soaking pits are constructed and regular water-supply is arranged. Action has been taken to acquire the adjoining land with the well and to take pipe lines from the well for regular water-supply. The mixed fibre produced by the Unit is being supplied to the Hospitals.

In order to develop the Coir Industry in this State and to provide an additional income to the coconut growers by profitable use of coconut husks in the mechanical extraction of coir fibre from unretted husks, a revised comprehensive scheme has been formulated. This scheme contemplates.

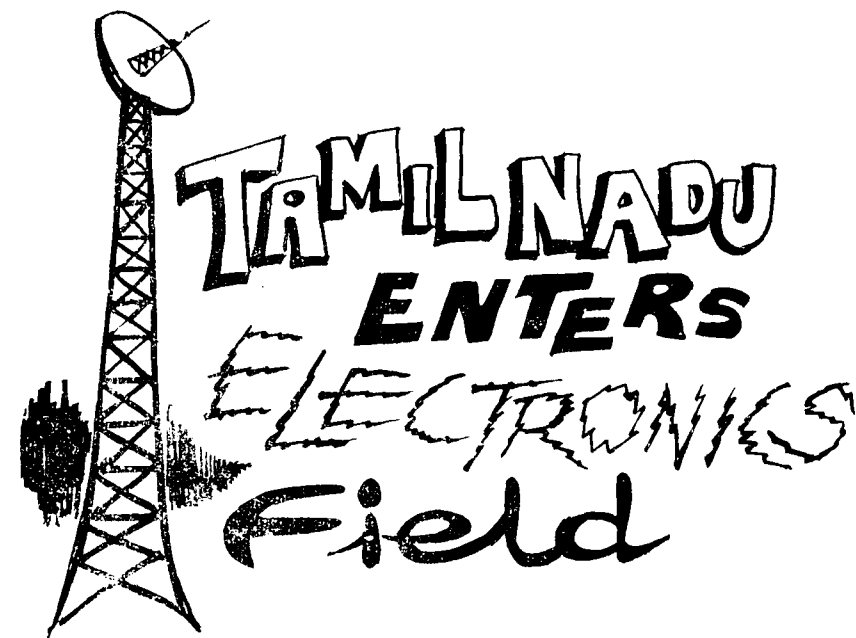
(1) Organisation of 6 demonstration units to be located in Thanjavur, Tiruchirappalli, South Arcot, Salem, Coimbatore and Tirunelveli districts in stretches where there is concentration of coconut trees, to educate the entrepreneurs on the feasibility and economics of such a unit and to kindle their enthusiasm to start the coir fibre units.

(2) Providing financial assistance, to the prospective entrepreneurs, to set up mills, for land, building, machinery and working capital, under the State Aid to Industries Act.

(3) Organisation of a Central Service Industrial Co-operative Society to market the fibre produced by the Units.

The Scheme involves an expenditure of Rs. 15.45 lakhs by way of loan to the private entrepreneurs, a small grant to the Central Society, besides share participation in the Central Society. Free services of staff according to the approved pattern will be provided. The six departmental units need Rs. 3.60 lakhs towards non-recurring expenditure and Rs. 0.76 lakhs towards recurring expenditure, and this has been provided.

Different electronic components will be produced in the functional industrial estate for electronics at Adyar, Madras. Work on the estate has already started at an initial cost of Rs. 36 lakhs in a ten-acre radio-free-zone. The first six sheds will be available for entrepreneurs by December 1970. Simultaneously training in electronics instrumentation has also been initiated in a few polytechnics. In addition, the Technical Training Centre, Guindy which imparts specialised training to degree and diploma holders will include electronics in its syllabus.



The State Government has already recommended to the Centre six private manufacturers having plans to make T. V. components, for issue of licence.

Technicians for electronics industry are under training



Thiru S. Madhavan, Industries Minister, explaining to newsmen the Tamil Nadu Government's role in promoting the industrial estate, said that unlike in the other industrial estates, the sheds will be let to entrepreneurs on a "hire-purchase" basis. They would not be rented. As in the other estates, common facilities like testing facilities and laboratories would be provided by the Government. If the response from the entrepreneurs warranted it, the industrial estate would be further expanded.

A seven-member technical committee consisting of Prof. A. Sampath, Deputy Director, I.I.T., Madras, Thiru K.S. Hegde, Principal of the Engineering College, Guindy, Thiru Sheshadri and Thiru M. Lakshminarayanan both from M.I.T., Madras, Thiru M.G. Damodar, Philips, India, The Director of Small Industries Service Institute, Madras and Thiru E. N. Narayanaswamy, Deputy Director of Industries, has recommended that the Government promote 25 lines of production. The working group, appointed in April last, has prepared

"almost a near-feasibility report" with estimates of costs, raw material requirements, demand projections, foreign collaborations available, and facilities needed.

The group has recommended production of metal oxide resistors, capacitors (both polystyrene and polycarbonate), Ferrites, microwave instruments and antennae, ceramic and teflon wafers, auxiliaries like litz and solderable wires, batteries, battery eliminators, penmalloy laminations, special solders, connectors, and electronic hardware like fasteners and belts.

The group, whose report has been accepted by the Government, after discussions with officials, scientists, industrialists and experts from the Bhabha Atomic Research Centre and National Laboratories, has okayed the whole scheme of the electronics industrial estate. It has welcomed the idea of a certification and product development laboratory in the estate campus on the lines of the regional evaluation laboratories. The I.S.I. is being associated in this venture.

The group has recommended that at least two units for manufacture and assembly of T.V. receivers should be encouraged

in the estate, as also development of electronic ceramics and a research centre for this purpose in the ceramics complex at Vridhachalam.

For feeding skilled personnel, the group has emphasised the need for craftsmen training in electronics in the I.T.I.'s in the State.

The group has favoured canalising imported raw materials and components through the Tamil Nadu Small Industries Development Corporation.

The group's report contains a list of processes developed by various National Laboratories for development of electronics. It has recommended setting up a Standing Committee for development of electronics with a technical officer as convenor to keep close liaison with all National Laboratories and other organisations to advise the State Government on various promotional measures from time to time.

A degree course in Electronics and Communication Engineering with an intake of 22 students was started in the Alagappa Chettiar College of Engineering and Technology, Karaikudy, in 1969. Similarly, a diploma course in Electronics Engineering was started in the Government Polytechnic for Women, Coimbatore. In the Government Polytechnic for Women, Madras also an electronics diploma course is run. (Pictures on this page and in the previous page are of students in Women's Polytechnic, Madras.)



Schemes of minor irrigation, including sinking of tube-wells and open wells, and farm-mechanisation programme devised by the Government of Tamil Nadu for institutional finance were placed before a World Bank Team for the purpose of financing by International Development Association.

The World Bank Team comprising Mr. Christopher H. Walton Leader, and Messrs. E. A. Bobb,

districts of Thanjavur, Tiruchirappalli and South Arcot and a farm mechanisation scheme envisaging the procurement and deployment of 3,000 tractors.

New Horizons

The Minor Irrigation Programme contemplated in the project report is on a scale not attempted so far. Various measures have therefore been taken to gear up the organisation to the new tasks ahead. At the

enable adequate scrutiny of schemes and monitor effectively their implementation. The Registrar of Co-operative Societies' Organisation too has been strengthened and an officer of the status of the Joint Registrar of Co-operative Societies has been posted for handling Agricultural Refinance Corporation Schemes. Delay points have also been eliminated and powers have been delegated to ensure quick decision and smooth implementation. Review

MASSIVE MINOR IRRIGATION

R. Rossi, J. M. Daniel (members) and D. Thomas (observer) toured the scheme areas in the districts of South Arcot, Tiruchirappalli, Thanjavur, Coimbatore, Salem and North Arcot, for a fortnight in September.

The bank team has indicated the strong possibility of I.D.A. credit for financing these schemes and has urged the Government of Tamil Nadu to have these schemes executed in a matter of two years instead of three years as planned at present.

Tamil Nadu requires the import of 200 hand-boring sets, 50 rotary drills and 10 rotary-cum-hammer drills. The project as a whole consists of eleven schemes for the financing of agricultural development through construction of open wells, deepening of wells and installation of pumpsets, three schemes for the sinking of filter-points and tube-wells in the

AND FARM MECHANISATION

district level, a Project Officer has been appointed so that he could monitor the schemes being implemented under this project. Technical Cells have also been constituted at the district level which are expected to analyse the data compiled by the Ground Water Investigation Units as well as other agencies and use such data for the formulation of new schemes and the effective implementation of sanctioned schemes. The District Collector has been made fully responsible for all the minor irrigation schemes in the district. Thus the agency at the district level would now be in a position to tackle the schemes entrusted to it. The Land Development Bank too has been strengthened. A Technical Cell has been created in the bank to

PROGRAMME

Committees have been constituted at the district level as well as the State level. The State Level Committee on minor irrigation schemes is presided over by the Minister for Co-operation while the non-minor irrigation schemes would be reviewed by the Chief Secretary.

Benefits of Tube-Wells

The main benefits accruing from the filterpoint tube-well schemes is through supplementation of existing irrigation sources. In South Arcot and Tiruchirappalli districts, these tube-wells will, in addition to increasing the extent

of double cropping, assure irrigation facilities to summer crops. The benefits in the case of Thanjavur cultivators consist of intensive cropping and better yields from the crops now grown. These tube-wells filter-points will help in raising nurseries in advance for taking up Kuruvai planting soon after water is let out from Mettur Reservoir and this will enable a considerable step-up in double cropping area. These tube-wells and filter-points will also supplement canal irrigation for the second crop during January and February when the Mettur Dam will be closed. Apart from this, cultivation of summer crops like

maize, cotton, vegetables, pulses, etc., can be taken on. Besides farmers would be able to raise certain crops like sugarcane in factory zones and bananas in deltaic areas.

The Tamil Nadu Co-operative State Land Development Bank is the apex financial institution for these schemes. To help the Bank make a proper appraisal of the schemes especially from the ground water and agronomy angles a technical cell consisting of a State Geologist, an Agricultural Engineer and an Agricultural Economist, with a complement of subordinate staff will be constituted in the Bank.



The "Chintamani" Co-operative Super Market in Coimbatore has adopted a novel method of assisting its clients. It runs a posh bus like the one shown here to enable customers carry home their purchases without loss or exertion. This facility is availed by housewives residing

in the neighbourhoods of Coimbatore. Imaginative measures like these have enabled the Chintamani to record an average monthly sales of Rs. 26 lakhs last year. It has 17 departments including Agro services which sells all agricultural implements including tractors!

PICTURE PAGES.

Opposite page:—Thiru K. Rajaram, M.P., presents a ceremonial gift of gold plated silver mangoes to Prime Minister Thirumathi Indira Gandhi and Chief Minister Thiru M. Karunanidhi on the occasion of the inauguration of work on the Rs. 100 crore Salem Steel Project on 16-9-70.

Centre spread:—Views of Sathanur Dam and the picnic centre surrounding the Dam.

Last page

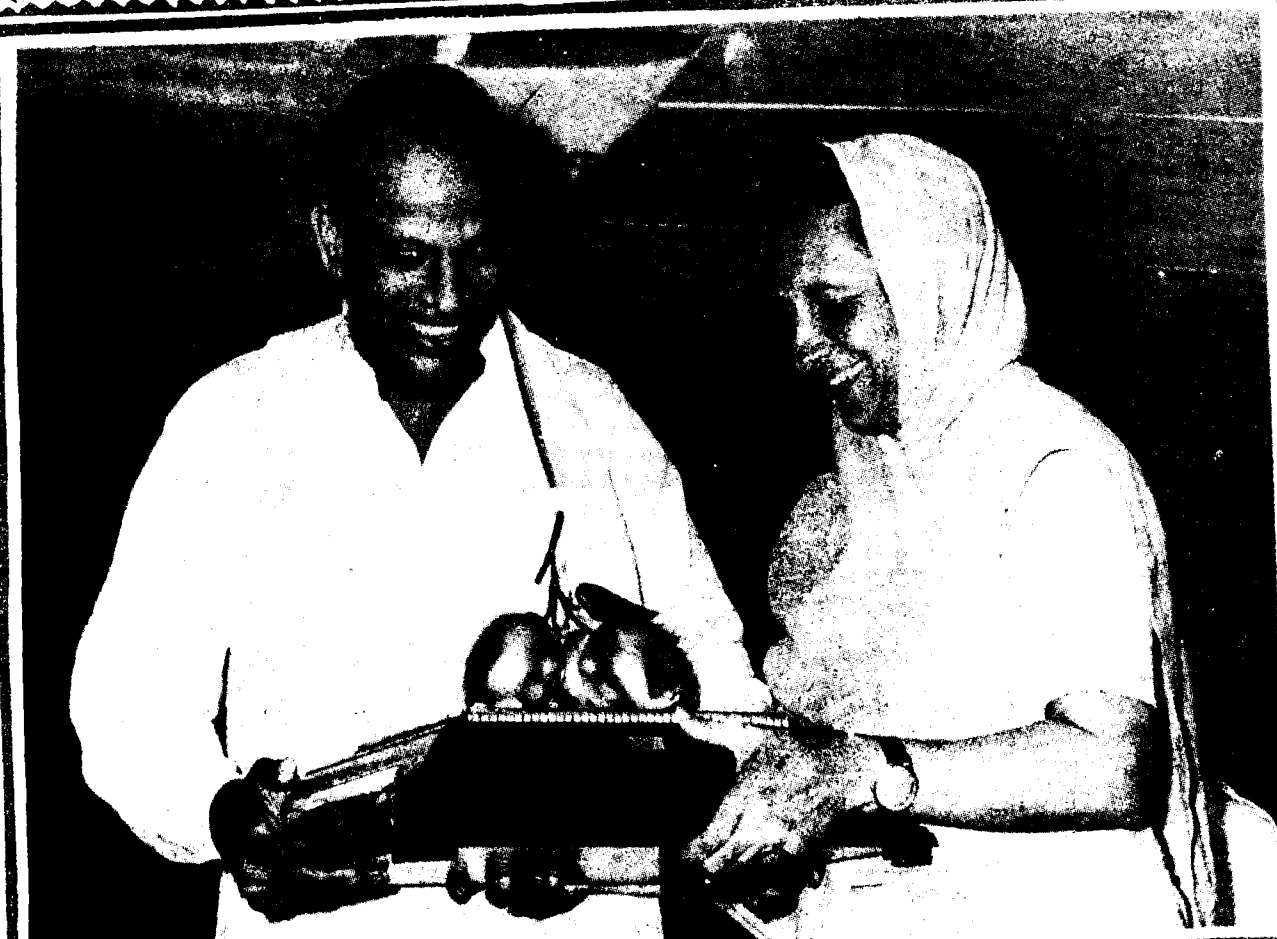
Top left:—Governor Sardar Ujjal Singh, the Prime Minister, the Chief Minister, the Minister for Industries Thiru S. Madhavan and Union Minister for Steel and Heavy Engineering Thiru B. R. Baghat at the Memorial Ashoka Pillar, Salem Steel works.

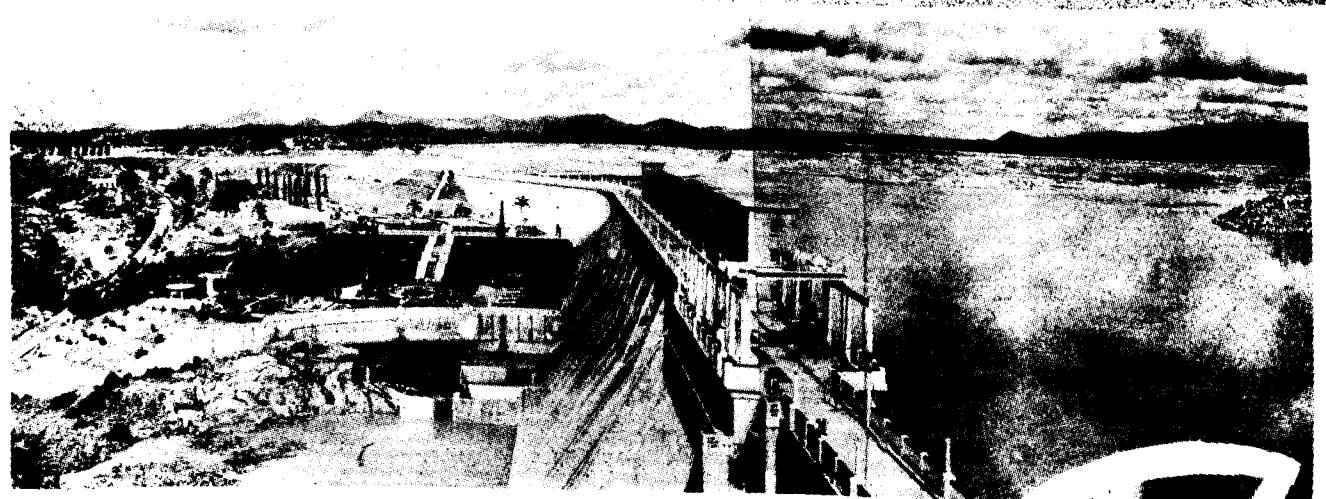
Top right:—The Governor, the Chief Minister and the Prime Minister arriving in an open jeep for the inaugural function.

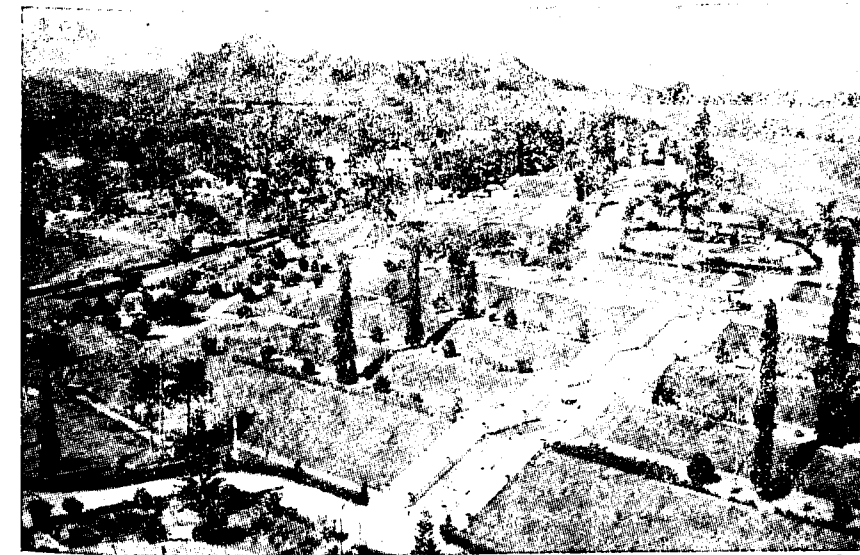
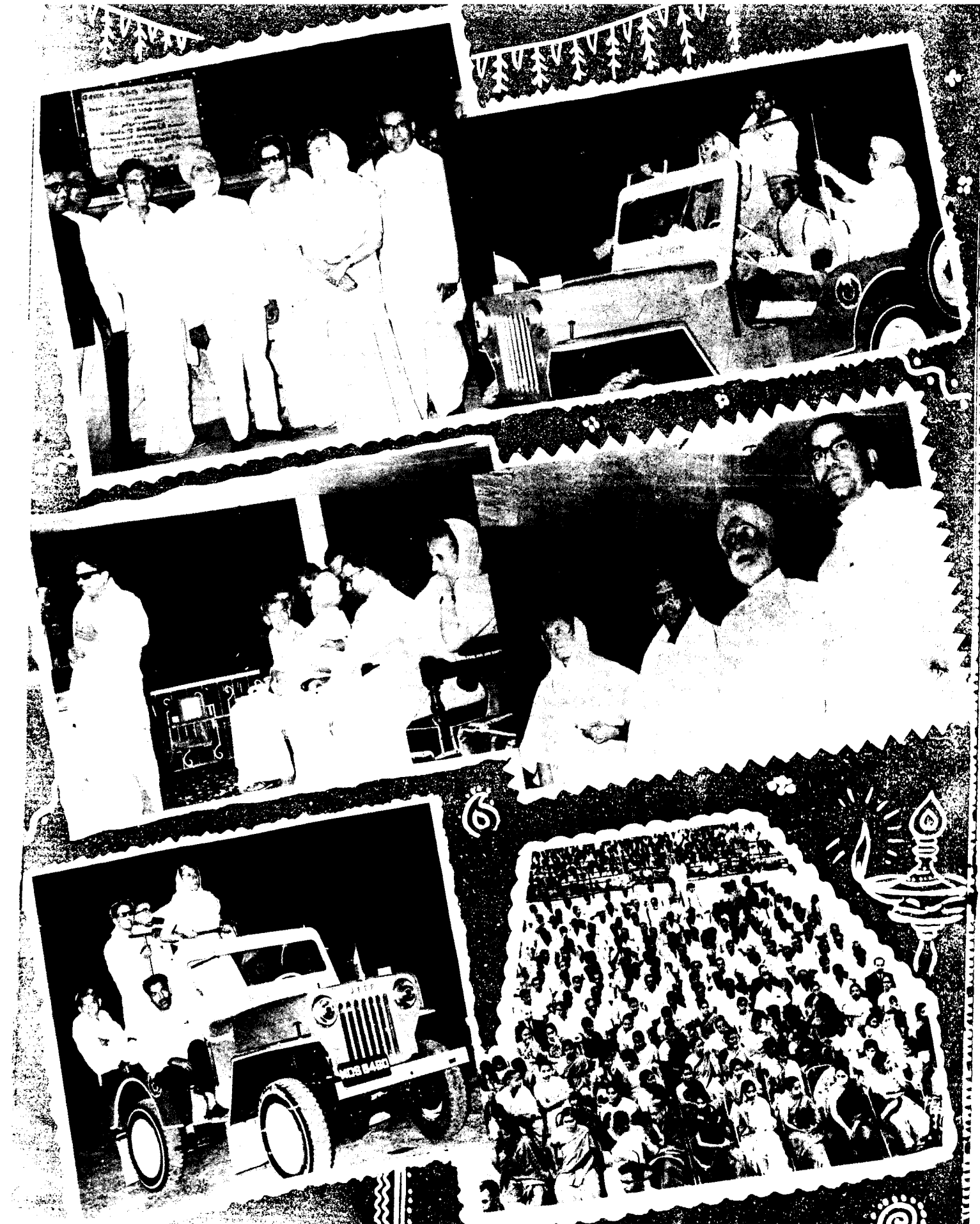
Middle left:—The Chief Minister making his Presidential speech.

Middle right:—Intently watching the unveiling of the Memorial Ashoka Pillar are Thirumathi Indira Gandhi, Thiru M. Karunanidhi, Sardar Ujjal Singh and Thiru B. R. Baghat.

Bottom right:—The ladies enclosure of the large audience which turned out for the inauguration of Salem Steel Project.







Terrace garden at Sathanur

Sathanur... A WEEK-END RESORT

The Sathanur Dam is located across the Then Pennai River near Sathanur village about 20 miles from Thiruvannamalai town in North Arcot district, Tamil Nadu. The catchment area of the river at the Dam site, is 4,180 sq. miles. The Then Pennai starts from the South Eastern slope of Chennakesava Hills in Mysore State and flows over 53 miles in that State and then enters Tamil Nadu near Hosur in Salem district. A Dam across the river about 6 miles from Krishnagiri has been completed. The Sathanur Dam is about 70 miles below the Krishnagiri Dam and it is 178 miles from the origin of the river. The river below the Dam traverses through the North and South Arcot districts and

finally enters the sea near Cuddalore town. The total length of the river is 253 miles.

Irrigation facilities available in Thiruvannamalai and Chengam taluks are scanty and are not quite dependable. There were no means of drawing water from the Then Pennai traversing through the district. Several schemes were investigated from time to time, but no scheme was taken up owing to several considerations like economical return on the outlay, unreliability of flow data in Pennai, etc. But after the second World War, steps were taken to review all such schemes under the "Grow More Food" drive. The present scheme was taken up for detailed investigation in 1954. This was

immediately sanctioned for execution at an estimated cost of Rs. 289 lakhs. The project was inaugurated on 2nd October 1954.

The margin of the river below the Dam is rocky and rugged for a considerable distance thus rendering a direct off-take from the reservoir for irrigation canal impracticable. Therefore, water from the reservoir is let down in the river itself and picked up about $4\frac{1}{2}$ miles lower down by an Anicut. Thus, the project comprises of a reservoir with a storage capacity of about 4,600 million cubic feet (first stage), a pick up Anicut and a canal system. The total length of the Dam is 2,558 feet of which masonry section is 1,373 feet. The balance is of earth Dam.

The length of the pick up Anicut is 400 feet excluding 20 feet byewash on the right flank and its maximum height above the foundation is 25 feet. It is designed to discharge a maximum flood of 280,940 cusecs.

The main canal which takes-off from the pick up Anicut on its left flank is 22 miles in length and it is designed to irrigate a total of 21,000 acres both in North Arcot (Chengam and Thiruvannamalai taluks) and South Arcot districts (Thirukoilar taluk). The total length of the distributaries is about 55 miles.

The canal was opened for irrigation during 1956-57 itself when the Dam was partly finished and an area of 408 acres was irrigated during 1957-58. The full ayacut of 21,000 acres was thrown open for irrigation during the year 1959-60.

In the second stage of the project the capacity of the Reservoir was increased from 4,600 m.c.ft. to 8,100 m.c.ft. This was made possible by providing 20 ft. high gates on the crest of the spill-way. The extra storage available will be utilised to stabilise 5,000 acres of second crop in the Thirukoilur Anicut System which was precariously carried on depending on the available spring flows.

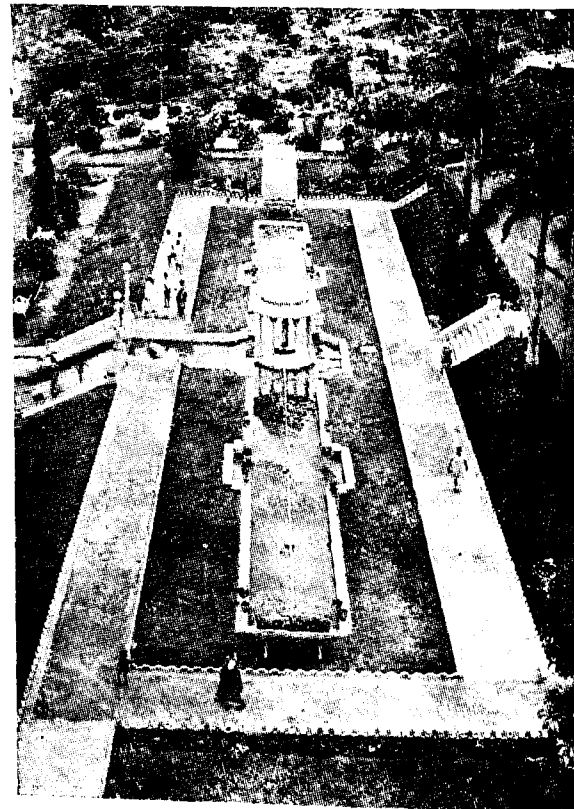
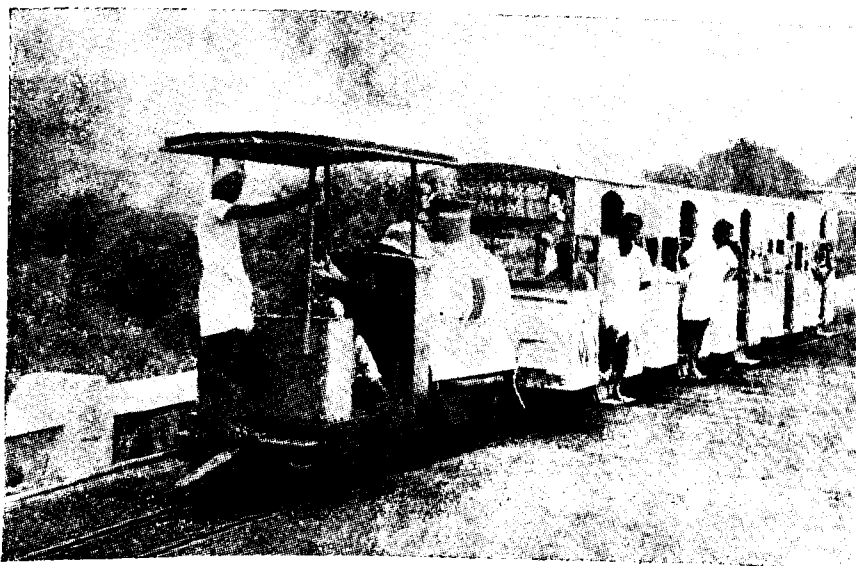
The proposal of providing 20 gates and operating arrangements including overhead platform, counter weights, etc., for the 9 vents of 40 feet into 20 feet on the crest of the spillway section have all been completed. Water is stored in the dam from late November and supplied for irrigation till late March every year.

Sathanur Dam provides attraction for Tourists

An attractive park has been laid out in the rear of the Dam. Special illumination on Saturdays and Sundays attracts the tourists.

Accommodation is provided at the dam site for the tourists at cheap rates by the Public Works Department. There are 70 rooms. The daily rent varies from Re. 1 to Rs. 4.25 according to the comforts available. About 3,000 tourists visit every week. The income from tourists by way of rent amount to Rs. 2,000 per month.

The Sathanur Toy-Train



An ornamental garden at Sathanur

There is a swimming pool and a toy-train. Tourists can enjoy boating also. There is a small zoo with bear, python and some birds of different species.

This dam site with attractive landscape gardens of the Japanese pattern is a favourite venue for shooting films. On payment of the stipulated fees, permits for such film-shooting are issued. Annual income derived by way of such licence fees amount to Rs. 12,000. Being only 130 miles from the city, with plenty of accommodation it is a suitable week-end resort for families.



THE BANANA CAN BRING MORE FOREIGN EXCHANGE

Banana is one of the important table fruits in Western Countries as also in Russia and Japan. But all these countries have to import the banana. It is in this context that the banana has become an important commercial crop with a high potential for earning foreign exchange.

Banana is one of the oldest fruits known to mankind. It is the most important fruit of the tropics. It is also one of the most nutritive and popular table fruits of South India from time immemorial.

Banana is capable of earning more foreign exchange than other traditional agricultural commodities which figure in export such as pepper, cashew kernels, sugar and coffee. Estimates of foreign exchange earned from an unit area of 1,000 acres of selected agricultural commodities in India are as detailed below :

	(Rs. in lakhs.)
Pepper	4.3
Cashew Kernels	12.0
Sugar	16.6
Coffee	19.7
Banana	99.4

Banana ranks first in the matter of foreign exchange earnings from the same unit area of production. From this, one can judge that a far smaller extent of land is required under banana than under any other agricultural commodity to earn the same amount of foreign exchange.

India is the second largest producer of bananas being next only to Brazil, but the exports from India form a mere 0.4 per cent of the world trade against 48 per cent exported by Brazil.

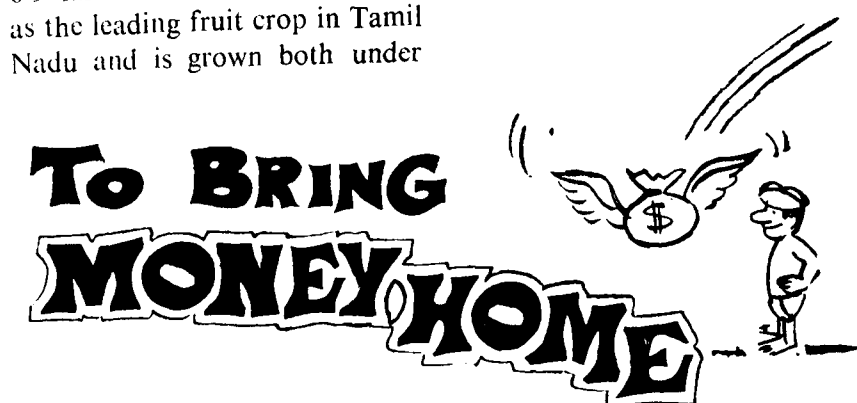
In India, Tamil Nadu occupies a premier place in area & production of banana, with an area of 89,000 acres and a production of 6.9 lakh tonnes. Banana ranks as the leading fruit crop in Tamil Nadu and is grown both under

irrigated and in rainfed conditions in the plains and in the hill ranges upto an elevation of 5,500 feet. Banana cultivation is a paying vocation besides being one of the most efficient means for augmenting food production in Tamil Nadu.

Export Possibilities

Tamil Nadu has the commercial variety of bananas much in demand in the world-trade, viz., the 'Dwarf Cavendish' variety which is known as "Mauritius" or "Vamana Keli". The Dwarf Cavendish variety of banana grown in the sandy areas around Tuticorin is acceptable to the Market in Europe, U.S.S.R. and Japan. Especially it is very much liked by the Japanese, as it is sweeter than the present variety (giant Cavendish) now marketed in Japan.

Tamil Nadu offers excellent possibilities in extending the area and production of Dwarf Cavendish due to the nearness of areas to ports of export, the possibility of planting almost through a major part of the year enabling production to be evenly spread out, the very intensive methods of cultivation adopted and the high tonnage obtained per acre. Dwarf

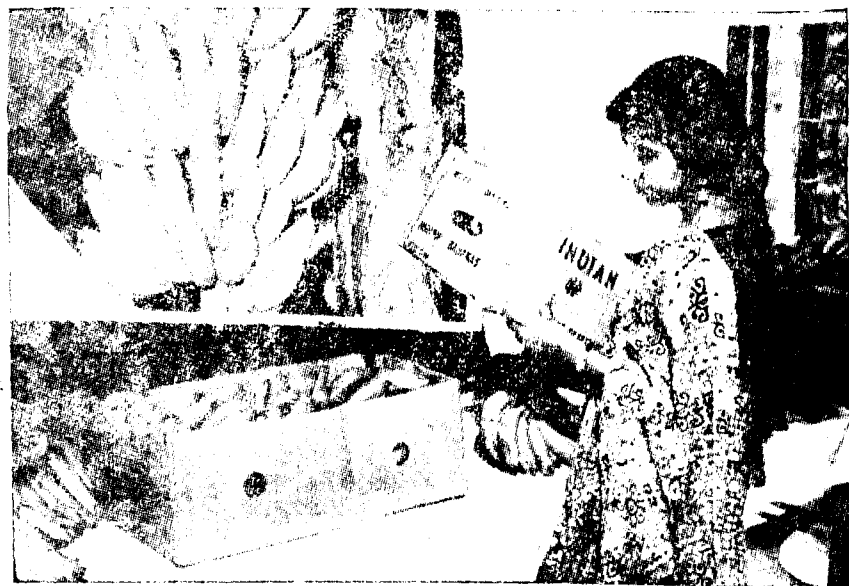




The Dwarf Cavendish.

Cavendish variety is mainly grown in the districts of North Arcot, Madurai and Tirunelveli and to a smaller extent in Chingleput, Thanjavur and South Arcot districts.

To improve and stabilise the cultivation practices in the exportable Dwarf Cavendish Banana in garden land conditions, a Banana Research Station has been sanctioned. This Research Station will be located in North Arcot district. Already, by means of the Banana Package Scheme the yield per hectare of the



Export Packing of Bananas.

Dwarf Cavendish variety has increased both in terms of bunch weight from 10 kg. to 16 kg. and in terms of hands per bunch from 7 to 9 with not less than 16 to 18 fruits per hand.

Rs. 4 Crore for Banana

There is a proposal to cultivate Dwarf Cavendish variety in 6,000 acres in the sandy areas around Tuticorin. The Agricultural Finance Corporation has agreed to assist this scheme with financial assistance of Rs. 4.43 crores. When the first berth in the Tuticorin Harbour is ready, banana export could commence from Tamil Nadu to Japan, leading to earning of foreign exchange to the tune of 6 crores of rupees per year by this scheme alone.

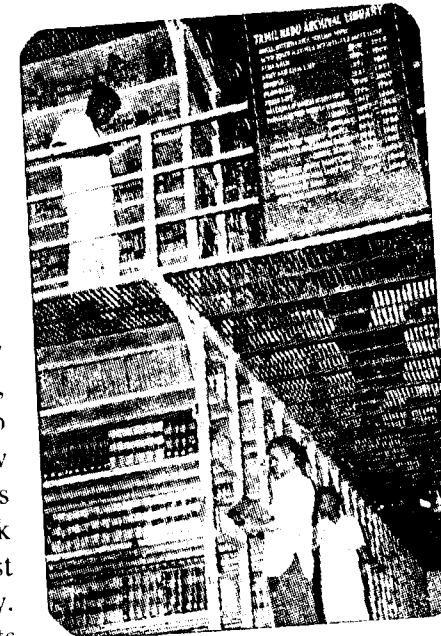
With such advantages banana is sure to become one of the major export items of Tamil Nadu. Measures such as the Banana Research, Package Scheme for Banana Cultivation, etc., have been taken up for extending and improving banana cultivation. An exhaustive article on the various steps taken up for stepping up of banana cultivation will appear in the next issue of Tamil Arasu.

The Madras Record Office (now Tamil Nadu Archives) which came into being in 1909 is entrusted with the custody of all historical documents, books and Secretariat records for proper preservation. The records of the Board of Revenue, the Collectors, the Chief Conservator of Forests, the Survey Department, the High Court, the District Courts, etc., have also been entrusted to it. It has now about 6 million files and 6 lakhs books and volumes dating back to 1670, making it the biggest record repository in the country. The records in the Districts after 1857 and the language records i.e. Tamil, Telugu, etc., still await centralization.

The records lying with private individuals, associations, institutions, religious mutts, etc., are equally valuable from the point of view of history. They have to be unearthed, preserved and made available for research. With this object in view, Regional Committees have been constituted in States on the recommendation of the Government of India. The Tamil Nadu Committee, which was first constituted in 1948 has been listing records of importance with the private owners for inclusion in the National Register being prepared by the Government of India.

Repository of Dutch Records.

The Tamil Nadu Archives is the only centralised repository of Dutch Records in India. There are 1,642 volumes, of Dutch records which relate to Cochin and Coromandel coast. The



All Our Yesterdays

ARE IN THE
TAMIL NADU ARCHIVES

Dutch occupied Cochin from 1663 to 1795 and the Records cover the period from 1657 to 1845. The Dutch Records in all other parts of India were concentrated in the Madras Record Office in 1931. All of them have been presslisted, and catalogued; 15 of them have been printed.

The Dutch and Danish records preserved in Tamil Nadu Archives contain valuable materials on the history, administration, etc., of Cochin and Tranquebar by the respective nations. The Persian records mirror the internal administration and the correspondence of the Nawabs of the Carnatic during the 18th century and as such contain good



source materials of our history. A mine of published information relating to sociology, politics, science and religion is found in the books registered at the office of the Registrar of Books and preserved here.

It is a matter of pride to note that even the East India Company's Government in Madras realised the importance and need for the centralisation of the Provincial records. Certain apartments on the north side of the Fort Square, considered to be well suited for the purpose, were appropriated for keeping the records. This was the nucleus of an organisation which later developed into the Madras Record Office, now known by the name Tamil Nadu Archives, almost a century later.

Wide Range of Material

The archival materials in the Tamil Nadu Archives range from the list of packets received from England to the conclusion of a treaty with an Indian Prince. Thus, for instance, there is abundant material on irrigation schemes; on the development of large and small scale industries, cottage industries, village industries; on the existence of hitherto untapped minerals like copper, silver, lead, lignite and iron ore on the one hand and on land revenue collection, permanent settlement of 1802, Ryotwari settlement of 1818, Inam Settlement of 1858—1869 acquisition of Estates and Conversion into Ryotwari Tenure of 1948, Land Reforms fixation of ceiling in 1961 on the other.

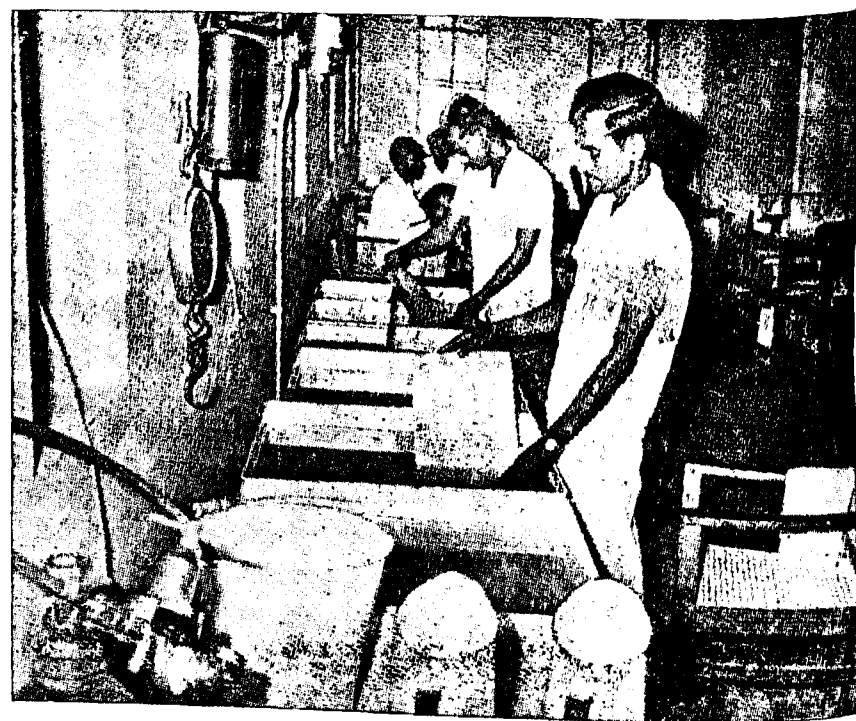
Materials on judicial administration, from the establishment of the first Supreme Court in 1678 and Mayor's Court in 1688 down to the reforms in Civil and Criminal Law; on the administration of police from the grant of a Cowle to Pedda Naicken for attending to police duty of guarding the town of Chennapatnam down to modern period are also available. Archival materials are likewise found on several matters connected with Local Administration from the passing of the India Act XXVI (1850) down to formation of Panchayat and Panchayat Unions and on the origin and growth of education from the creation of a fund of a lakh of rupees out of the revenues of the East India Company for promotion of the literature and encouragement of scientific

knowledge among the inhabitants of the British territories (1813), the efforts made by Sir Thomas Munro in establishing Collectorate and Tahsildari schools, the formation of University Board (1841) down to Bifurcation of Secondary and Higher Education in Madras. Source materials on buildings, roads, Railways, medical aid, co-operation, labour conditions, famine, unemployment, ports, religious endowments, fisheries, boundary disputes, territorial rights, economy, sociology, etc., are also available, besides those connected with claims of inamdars, Devasthanams, political pensions, welfare schemes, etc.

Facilities for Research :

In order to facilitate quick disposal of requisition for records both for administrative and

Deacidification of documents.



research purpose, this Archives has undertaken the preparation and publication of Press lists, Guides, Calendars, etc. It also possesses manuscript and printed indexes for all series of important records. Press lists have been prepared for all Government records from 1670 to 1800 including the Factory Records of Ganjam, Vizag, Masulipatnam, South Arcot and Malabar Districts.

From the year 1857 up to date the Government and the Board have compiled current printed

Dusting of shelves by vacuum cleaner.



indexes of completed correspondence for deposit in record with the files to which they refer. Guides have been prepared and published for all district records down to 1835. Calendars have been compiled and published.

Preservation Methods :

Preservation of records is one of the primary functions of an Archives. The value of historical records increases as centuries pass by and the older the records the greater their value, both for administrators and for historians. The problem of preservation

of records has two main aspects. Firstly, the preservation of records on good paper which are not affected by any destructive agencies against deterioration in figure by proper housing, control of atmospheric conditions and precaution against insect attack. This really is preservation by preventive measures. Secondly, the rehabilitation of brittle, damaged or insect-infested records by fumigation, lamination and chifton mending.

The conventional methods of keeping records, repairing them and freeing them from record pests have been found to be ineffective and unsatisfactory, especially when the volume of records to be preserved is so vast. The emphasis now, therefore is on introducing modern techniques and equipments.

Archivism is yet to devise a method by which all records, files, bundles or volumes can be repaired or strengthened mechanically applying latest techniques. Any repair has, therefore, to be done sheet by sheet, a process which is apt to be slow. And when the archivist is confronted with a mass of decayed and brittle records, he is agitated, for he knows it too well that employment of even a large number of persons to mend the records on conventional lines may not touch the fringe of his problem, he knows also too well that allowing the decayed records to decay further would amount to discarding them to self destruction.

(Cont. on Page 46.)



Since Inauguration on September 27, 1969 by President V.V. Giri, our progress has been oil-smooth. We started with 6 items of production. Today, we produce 11: Petrol, Cooking Gas, Diesel, Superior Kerosene, Aviation Turbine Fuel, Jet Fuel, Industrial Fuels, Naphtha, Lube Base Stocks, Asphalt, Sulphur!

To energise the Nation's transport, homes, agriculture, industries ... and Economy!

India's ninth Refinery, we have so many **firsts** to our credit:

- ♦ **FIRST** with a Hydrogen Unit
- ♦ **FIRST** with 11 grades in Lube Base Stocks
- ♦ **FIRST** with Sulphur Recovery Unit
- ♦ **FIRST** with LPG from initial stages
- ♦ **FIRST** with a Process licensed by the Indian Institute of Petroleum
- ♦ **FIRST** with many indigenised items — of 48.5% value.

And MRL is foremost — the nucleus — in a developing industrial belt.

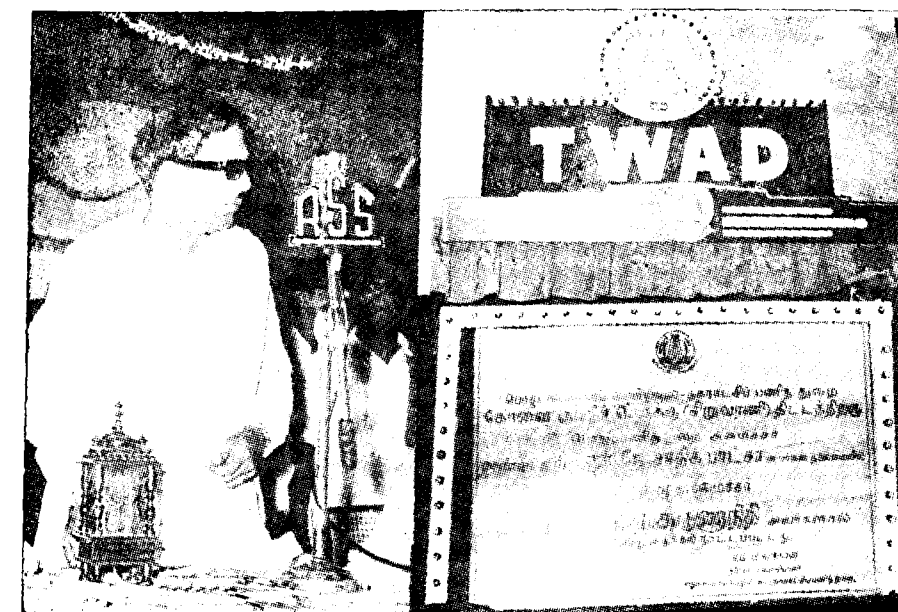
MRL — A GIANT EVEN IN INFANCY!



MADRAS REFINERIES LTD.
Madras

FD5MR1496A

COIMBATORE GETS



SWEET SIRUVANI

The pride of Coimbatore has ever been its ever-cool drinking water—the famous Siruvani Waters. Thanks to an amicable inter-State Agreement between the Governments of Tamil Nadu and Kerala, the fast expanding town of Coimbatore is now assured of its pride in the matter of drinking water for many, many years to come.

The Siruvani waters is adjudged the second best in the world, and no wonder Coimbatoreans if they are away from Coimbatore, will, miss with nostalgia nothing but their Siruvani water. The large-hearted way the Kerala Government acceded to the needs of Coimbatore will be remembered with gratitude by all in Coimbatore as supply at 20 gallons per head per day is assured for the growing city.

Work on the Rs. 6 crore scheme for augmentation of Siruvani Water Supply was inaugurated on 15th September 1970 by the Chief Minister. The scheme envisages the construction of an impounding reservoir in Kerala territory and diversion towards Coimbatore by means of a tunnel. The augmentation scheme will come into use in 1½ years, and will represent a five-fold increase over the present rate of supply to the city.

The existing scheme

The existing water-supply scheme for Coimbatore town was completed and brought into use in 1931. The source of the water supply is the head waters of the Siruvani Stream having its origin in the Attapadi Valley in the Western Ghats.

Designed for a population of one hundred thousand at a per capita rate of 20 gallons per day, the scheme has practically no storage and depends on the dry weather run off in the source for the supply. The scheme is currently serving the town with a restricted supply of 14 gallons per head per day for the present estimated population of 3.5 lakhs during non-summer months. Even this rate is greatly reduced during the summer months, due to the drying up of the Muthikulam Falls which is the main feeder of the source of the present scheme. During this period, the Municipality supplements, the reduced yield from the Siruvani source by pumping water from the Periyar Stream flowing in the Noyyal Valley to an extent of four hundred thousand gallons per day.

(contd. next page.)

2,50,000 SCHOLARSHIPS FOR YOU

The number of international scholarships for study abroad was negligible two decades ago. It has now reached the dimension of a noticeable world phenomenon. "Study Abroad" a biennial UNESCO compendium which covers world opportunities in a single volume, contained some 15,000 scholarships in its first edition, published



in 1948. The new edition just issued lists more than 250,000 awards in virtually every field and at all levels of learning in almost all of UNESCO's Member States. The information is for the 1970-1971 and 1971-1972 academic years.

A new trend to be noted is the increase of awards open only to women. The previous edition of 'Study Abroad' contained less than 1,000; the present

volume reports almost 3,000 awards open only to women candidates.

Opened at random, "Study Abroad" reveals the great variety of possibilities offered. Are you a scientist with a background in isotope techniques interested in the three-week seminar on neutron activation analysis held in the United States? Are you a marine Zoologist free to accept a six-month residency at a university on the west coast of Italy? Scholarships can shorten the distance for you.

Fields of study range from earthquake engineering, cell research and theatre to nutrition and teaching about the United Nations.

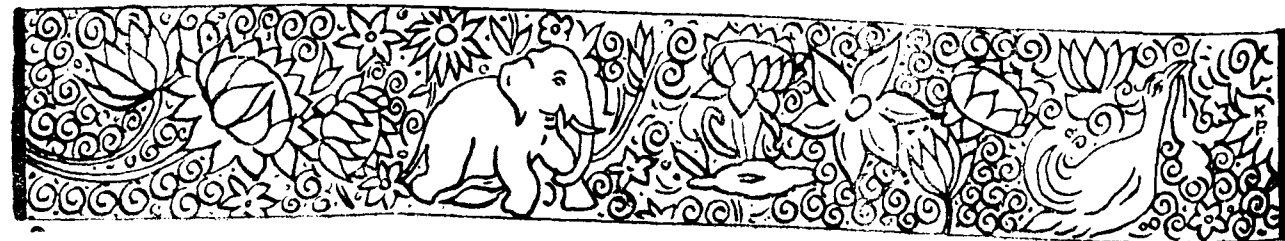


contd. from Page 39.

The project work under the augmentation proposals envisage construction of an impounding reservoir in Siruvani Valley with a storage capacity of six hundred and fifty million cu. ft. and an intake tower at the existing tunnel head to divert water through the existing tunnel to the Coimbatore side of the Western Ghats. The

supply is proposed to be drawn at the foot of the hills through the natural course of the Anayar Stream into a treatment plant. After treatment, the purified water is proposed to be conveyed to the Coimbatore town through a gravity main of 33" diameter and distributed to the town through distribution reservoirs

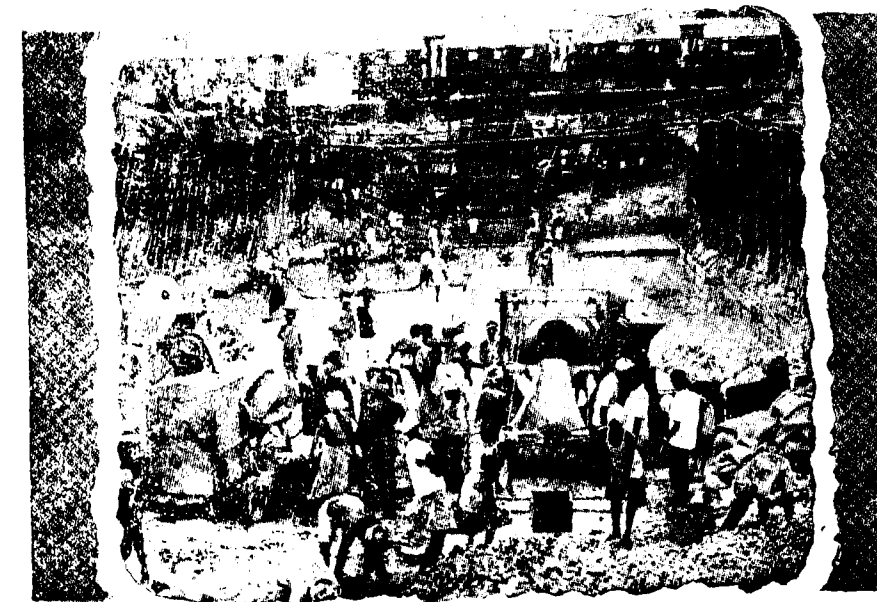
and the existing distribution system with certain improvements. The supply contemplated to the greater Coimbatore town in the intermediate stage period up to 1986 including its suburbs is 17.6 million gallons per day and the supply contemplated during the ultimate stage period from 1986 to 2001 is 22.5 million gallons per day.



DORAISWAMY ROAD SUB-WAY

The area known as West Mambalam lying on the West of the Railway line has been developing very fast in the course of the last decade. The growth was mainly in the nature of residential housing. The people have therefore to cross the Railway line every morning and evening to go to their work and back to their home. Besides the shops and schools being situated in T. Nagar, the necessity for many daily crossings of the Railway line extends even to the younger folk and women.

The daily movement of pedestrians and vehicular traffic from one side of the railway track to the other takes place (through four level crossings) two of them situated to the north of Mambalam Station and two of them situated to the south of the station. Those on the north are Rengarajapuram Road and Doraiswamy Road and those on the south are at Madley Road and the Burial ground Road (Kannammupet).



COSTLY LAND GOES INTO SUB-WAY

The closure of the level crossing extending even upto forty-five minutes during the peak hours of traffic in the morning and evening is causing considerable inconvenience to the public and waste of time. Large crowds collecting at the level crossings waiting for the gates to open and the sudden rush and scramble when the gates are opened after long waiting resulting some times in accidents have become a normal feature.

It has therefore become a matter of urgent necessity that an over-bridge or sub-way should be provided at least at some of these points so that the public may not be inconvenienced in their day to

day activities. Doraiswamy Road level crossing is one such place where intensity of vehicular and pedestrian traffic is large.

The railway track at the place being at a higher level than the adjoining ground level it is proposed to construct a sub-way at this place in preference to an over-bridge as the sub-way will be more economical. The most formidable obstacle is that the area in this region is heavily built up and the land required will have to be acquired at a heavy compensation. In view of this and the fact that the construction of a standard over-bridge at Arcot Road level crossing at about 1/4 mile from this place has already been completed, it was originally considered sufficient that a sub-standard subway with a head room of nine feet may be constructed at the place for the use of pedestrians, cycles, and car traffic only. Lorries and buses were to be prohibited, so that the length of the subway will be less, resulting in the reduction of cost of acquisition. Accordingly a design for the construction of a sub way of 9'0" clearance at a cost of about Rs. 12.6 lakhs was prepared and the same was approved by the Government. Subsequently due to the representation of the

public the Government have since decided to increase the clearance of the sub-way from 9'0" to 12'0" so as to permit the City buses to ply and have also directed the Commissioner, Corporation of Madras to prepare and submit plans and estimates. Accordingly the revised designs with plans and estimates have been prepared for 12'0" clear sub-way which will allow all kinds of vehicles except lorries.

The estimated cost of the scheme is Rs. 25 lakhs. The sub-way will consist of three parts namely (1) open sub-way, (2) Service Roads and (3) Sub-way covered portion, viz., Bridge. The sub-way will be 34'0" wide in the railway and bridge limits for a length of 197'0" and provides 24'0" vehicular way with footpath of 5'0" wide on either side. For the rest of the open portion the sub-way will be 26'0" wide without footpath with 1'0" kerb on either side. The work is in progress and will be completed early in 1971.

FILM AWARDS 1970.

The Government appointed a Committee under the Chairmanship of Dr. Varadarajanar, to select the best Tamil Film, etc., of 1969. The Committee viewed 11 films received as entries. The Committee has announced the following 15 awards:—

1. First best feature film	...	Adimai Penn.
2. Second best feature film	...	Akka Thangai.
3. Third best feature film	...	Deiva Magan.
4. Best Director	...	Thiru P. Neelakantan (Mattukara Velan).
5. Best Actor	...	Thiru Sivaji Ganesan (Deiva Magan).
6. Best Actress	...	Thirumathi Sowcar Janaki (Iru Kodugal).
7. Best Story Writer	...	Thiru Bala Murugan (Thunaivan).
8. Best Dialogue writer	...	Thiru Sornam (Nam Nadu).
9. Best Music Director	...	Thiru K.V. Mahadevan (Adimai Penn).
10. Best Camera Man	...	Thiru Marcus Bartley (Santhi Nilayam).
11. Best Supporting actor	...	Thiru Major Sundararaj (Deiva Magan).
12. Best Supporting actress	...	Selvi Pandari Bai (Adimai Penn).
13. Best male singer	...	Thiru S. P. Balasubramaniam (Adimai Penn, Santhi Nilayam).
14. Best female singer	...	Thirumathi K. B. Sundarambal (Thunaivan).
15. Best song composer	...	Thiru Marudakasi (Thunaivan).

The Committee also recommended that a special prize may be awarded to the child actress Baby Rani for her performance in 'Kanne Pappa'. The Government has accepted these recommendations.

SUGAR WAGE BOARD AWARD

As there was delay in the submission of the recommendations of the Wage Board for Sugar Industry, appointed by the Government of India, the workers in the Sugar Mills in Tamil Nadu agitated for revision of Wages, Dearness Allowance, etc. Pending the announcement of the recommendations of the Wage Board, settlements were reached in this State with the help of the Labour Department providing for the payment of interim relief; in

view of the settlement, the workers agreed to wait till 15-7-69. The recommendations were not known even by then, and further talks were held before the Minister for Labour when a proposal for setting up a negotiating Committee to discuss the issues in dispute was put forward. Meanwhile the Government of India have published the recommendations of the Central Wage Board for Sugar Industry and have also announced acceptance of its majority recom-

mendations. In view of the above changed circumstances, the Government consider that there is no necessity to constitute a negotiating Committee. The majority recommendations of the Wage Board are commended for implementation by the Managements and Unions concerned, who are requested to settle at Unit level any points that may arise in the course of such implementations.

SCHOOL FOR THE BLIND, POONAMALLEE.

The school came into existence as a joint effort of the Madras Association for the Blind and the Victory Memorial Committee. The Victory Memorial Committee of the World War I, which had some funds and a huge building with spacious grounds, felt that the fund could be best used for the welfare of the blind and so approached the Madras Association for the Blind stipulating certain conditions. The latter acceded, and this school came into existence in 1930 under the name "Victory Memorial Blind School, Poonamallee". This school had a powerful governing body to manage the Institution. But after some years the Governing Body requested the then Government of Madras to take over the management of the school. The Government managed the affairs of the Institution for 2 years; the same Governing Body then thought it was better, to hand over the assets and liabilities of the Institution to the Government of Madras. The School thereafter became a purely Government Organization under the direct control of the Education Department.

The school started with 17 pupils taken over from the Corporation Blind School which had just then been closed. At that time the Palayamkottai School thought it fit to send 28 of their pupils for further training and employment in this school. The strength of the school in 1946

(when it was handed over to Government) was 100 and it has since increased to nearly 300 students.

Boarding, lodging, tuition, clothing, medical attention, books and Braille appliances are provided free to the pupils, who are also allowed to travel to and from their homes for the summer holidays at State expense.

Broadly speaking, the school consists of two sections: viz., Educational and Industrial.

The main objects of this school are: (i) to give academic education up to the S.S.L.C. examination standard, (ii) to train blind adolescents in certain trades, (iii) to train teachers of the blind, (iv) to print Books in Braille and (v) train adults in light engineering operations.

Educational Section

Blind children between the ages of 5 and 10 are admitted into this section for coaching them in standards I to XI. The syllabus and text books are the same as those presented for the corresponding classes in normal schools. The school trains students for the S.S.L.C. Public Examination. Practically during all these years the School has achieved 100 per cent results in the Public Examinations. After passing the

S.S.L.C. examination some students take to University education, and so far five have graduated in different subjects. The pupils are also coached and encouraged to appear for the Government Technical Examinations in Music.

Extra-curricular activities receive due importance in this section. Scouting, girl-guiding, Red-cross, Literary associations, Dramatic groups and Orchestra are very popular with the students. They are also very keen on gardening, camping and going out on excursions.

Industrial Section

Blind adolescents between the ages of 14 and 20 are trained in handloom weaving and cane-work. This course of training is spread over a period of four years; but in individual cases, it is extended, if necessary. After training, their services are utilized to make and perfect the respective products for sale.

The handloom weaving section, meets not only clothing requirements for the inmates of this



TRAINS BLIND IN USE OF TOOLS AND MACHINE

Institution, but also meets the requisitions of two other institutions. A sizable quantity is sold to the public as well. The products are quality fabrics and sold at competitive prices.

Similarly, in cane-work, several utility articles like chairs, stools, carbacks, shopping baskets, tapal boxes, trays, etc., are made. Customers with aesthetic taste are quite satisfied with the products from this section.

Mat-weaving, knitting, machine-sewing and hand-sewing are taught as hobbies.

Teachers' Training Section

The teachers' training section, trained qualified teachers, in teaching blind children as and when required till recently. The Government of India has since selected this school to run a Regional Training Centre for training teachers of the blind. This Centre will cater to the needs of four States, viz., Tamil Nadu, Mysore, Andhra Pradesh and Kerala. It is hoped that this Training Centre will become a permanent feature of the School for the Blind.

Regional Braille Press

A Regional Braille Printing Press has also been located in this school compound to produce text-books in Braille in Tamil, Telugu, Kannada and Mala-

yalam, and has already started producing text-books for the lower classes.

U.S.A. aided to Light Engineering Project

A new research-project was started by the management in training blind adults in light Engineering operations. This Project is located in the Industrial Estate. It trains blind adults in the use of hand tools and certain electrically driven machines like lathes, drills, sanders, wool-grinding machines, fly-presses, etc. The successfully trained students are placed in factories on a competitive basis, and the respective managements are satisfied with the quality and quantity of their work.

New Vistas for Blind

It is comforting to be able to say that the blind earn anything from Rs. 75 to Rs. 285 per month on a par with their sighted brethren. This scheme has become possible because of the financial assistance given by Government of the U.S.A. to the Government of Tamil Nadu. It is hoped that this study will open up new vistas for the benefit of the blind.

This school which greatly expanded not only in its numerical strength but also in the



variety of its activities, has come to be now recognized as one of the foremost institutions of India as a whole and it is the fervent hope of the management, that there will be progressive increase in the activities of this Institution, in the years to come. ☺

State Board for the handicapped

The Government of Tamil Nadu have constituted a State Board for the handicapped on which the Director of Employment, the Director of Education, the Director of Industries and the Chairman of the Central Social Welfare Board will be ex-officio members. The Governor will be the President and the Health and the Education Ministers will be Vice-Presidents. The Chairman, Secretaries and Treasurer will be non-officials. The Executive Committee will have representatives from all the institutions of the handicapped. There will also be eight nominated members from the two houses of the legislature.

Chief Minister's Police Medal

Instituted last year, for the first time, the Chief Minister's Award to the Police, this year was presented at Coimbatore. Incidentally Tamil Nadu is the only State which confers such distinction at State level on its constabulary. This year four members of the Police Force were singled out for Gallantry Awards, one of them was a Police Constable, and the rest were three Inspectors of Police. The other 17 awards were for outstanding services. The names of recipients of the Chief Minister's Police Medals for outstanding service are given below. Three of the Gallantry Awards were for tracking down, and arresting nine revolutionary top ranking extremists of All India importance in Madras City on the night of 18th December 1969 at grave personal risk. They are :

Thiru T. Natarajan,
Inspector of Police,
Special Branch,
C.I.D., Madras.

Thiru A. Ramaswamy,
Inspector of Police,
Special Branch,
C.I.D., Madras.

Thiru S. Ganesan,
Inspector of Police,
Madras City Police.

The act of Gallantry on the part of the Police Constable Thiru P. C. Chelliah is as follows :

On 14th June 1966, a platoon of 'F' company of the Special

Armed Police IV (Tamil Nadu) Battalion on deputation in the Assam State, took charge of an out-post at Jayanpunchi, Cachar district. At 4-25 a.m. on 27th September 1966 the out-post at Jayanpunchi was fired upon by surprise by armed Mizos, numbering about 100. The Special Armed Police Platoon returned the fire. The engagement continued till 6-30 a.m. when the Special Armed Police platoon

successfully repelled the Mizo attack. The attackers fled into the thick jungle, leaving behind a sten gun, magazines with 30 rounds, some 303 empty cases and a pair of Binoculars. In this attack, three constables of the Special armed police suffered fatal bullet injuries. Eleven others suffered injuries, the most serious being Police Constable 1083, Chelliah, whose left leg had to be amputated. The object of the Mizos obviously was to overrun the Special Armed Police Out-post and capture the arms and ammunition therein.



Police Constable 1083, Chelliah of Special Armed Police IV, Battalion, in facing the armed Mizos squarely at the fag-end of the night and helping his platoon to put the Mizos to flight, even when he was badly injured, showed extraordinary devotion to duty and gallantry in the best traditions of the Tamil Nadu Police.

The names of recipients of the Chief Minister's Police Medals for outstanding Service are—

1. **Thiru G. Narayana Vastad**, Deputy Superintendent of Police, North Arcot District.
2. **Thiru K. Narayanasamy**, Deputy Superintendent of Police, South Arcot District.
3. **Thiru B. Abdul Majeeth**, Deputy Superintendent of Police, Category-II, Tiruchirappalli District.
4. **Thiru M. Veluswamy**, Assistant Commandant, on deputation in M.S.P.I. (Tamil Nadu) Battalion, NEFA.



5. **Thiru M. S. Subramaniam**, Divisional Fire Officer, Tiruchirappalli.

6. **Thiru R. Govindarajulu**, Inspector of Police, Crime Branch, C.I.D., Madras.

7. **Thiru D. Thassiah**, Inspector of Police, Tirunelveli District.

8. **Thiru R. H. Taylor**, Inspector of Police, Government Railway Police, Tiruchirappalli.

9. **Thiru K. K. Chenthamarakshan**, Inspector of Police, Thanjavur District.

10. **Thiru V. S. Kandaswami**, Inspector of Police, Food Cell, C.I.D., Madras.

11. **Thiru P. Muthiah**, Inspector of Police, Directorate of Vigilance and Anti-corruption, Madras.

12. **Thiru S. Natarajan**, Inspector of Police, High Court Vigilance Cell, Madras.

13. **Thiru P. Meenakshisundaram**, Inspector of Police, Special Branch, C.I.D., Madras.

14. **Thiru P. J. Manual**, Reserve Inspector, Headquarters, Madras City Police.

15. **Thiru N. M. Somasundaram**, Sub-Inspector of Police, S.B., C.I.D., Madras.

16. **Thiru C. Ranganathan**, Jamedar, Special Armed Police-I, Battalion, Avadi.

17. **R. Manicka Naidu**, Head Constable 16, Directorate of Vigilance and Anti-corruption, Madras (over 30 years service).

18. **Thiru R. Karuppiah**, Head Constable 1309, Ramanathapuram District.

19. **Thiru M. D. Subramaniam**, Police Constable 1046, Chingleput East District.

20. **Thiru K. Velayutham**, Police Constable 545, The Nilgiris District.



Earnings from Tourism go up

The foreign exchange earnings from tourism in India in 1969 has shown a 23 per cent increase, and, according to official figures, the earnings had gone up to Rs. 33.11 crores as against Rs. 26.42 crores in the previous year. Only 21.5 per cent of tourists visiting India went over to Madras to tour Tamil Nadu.

Interesting facts regarding the various aspects of tourism have been revealed in a sample survey conducted by the Indian Institute of Public Opinion on behalf of the Department of Tourism. According to the survey, the average expenditure of a tourist was Rs. 1,367.81 and his average stay 22.3 days. The largest income was derived from the tourists from U.S.A. The average expenditure by an American tourist was Rs. 1,714.

Encouraging Tributes

Encouraging tributes were paid by most of the tourists. As many as 93 per cent of the tourists had declared that they enjoyed their stay in India. For 60 per cent of them the Indians were warm and friendly people. For 54 per cent of them the things that attracted them were the beautiful creations of man—buildings, temples and churches. About 48 per cent of them appreciated the beautiful and natural scenery. Other things that attracted some tourists were good shopping facilities and reasonable prices; attractive customs and ways of life of the people; exotic environment and wholesome food.

In all, 2.45 lakhs of foreign tourists visited India in 1969 of whom 48,080 turned towards Tamil Nadu. Tourists from U.S. formed the largest number followed closely by U. K. Quite a good number came from West European countries like France and Germany. As for the mode of transport, 83.9 per cent of the tourists left by air, 11.1 per cent by sea and 5 per cent by land. There was an increase in the destination traffic, India being the destination point for 52 per cent of the tourists in 1968-69 as compared to 43 per cent in 1965-66. The average stay of tourists was estimated at 22.3 days an individual.

Diverse Enjoyment

The purpose of the tour was declared to be "tourism as holiday" by 53.4 per cent of the tourists as against 51.4 per cent in 1965-66. On the other hand, the proportion of those coming to see relatives and friends had declined from 15.7 per cent to 12.6 per cent. An increase has been registered in the category of those tourists who had no special purpose. A large proportion of them are supposed to be non-conformists like "Hippies".

Air travel has been most popular for tourists from all countries. Travel by overland routes is also becoming increasingly popular.

The most popular centre in India for the tourists was Delhi. A majority of tourists leaving by air chose Delhi as the embarkation point, Bombay being

NEW LOOK FOR MADRAS AIRPORT

Work on the International arrival wing of the Madras airport is going on apace and it is expected to be completed very shortly. It is estimated to cost just over Rs. 10 lakhs.

The total cost of air-conditioning of the buildings (which include the restaurant, domestic arrival and departure wings and international arrival and departure wing) are expected to come to about Rs. 30 lakhs.

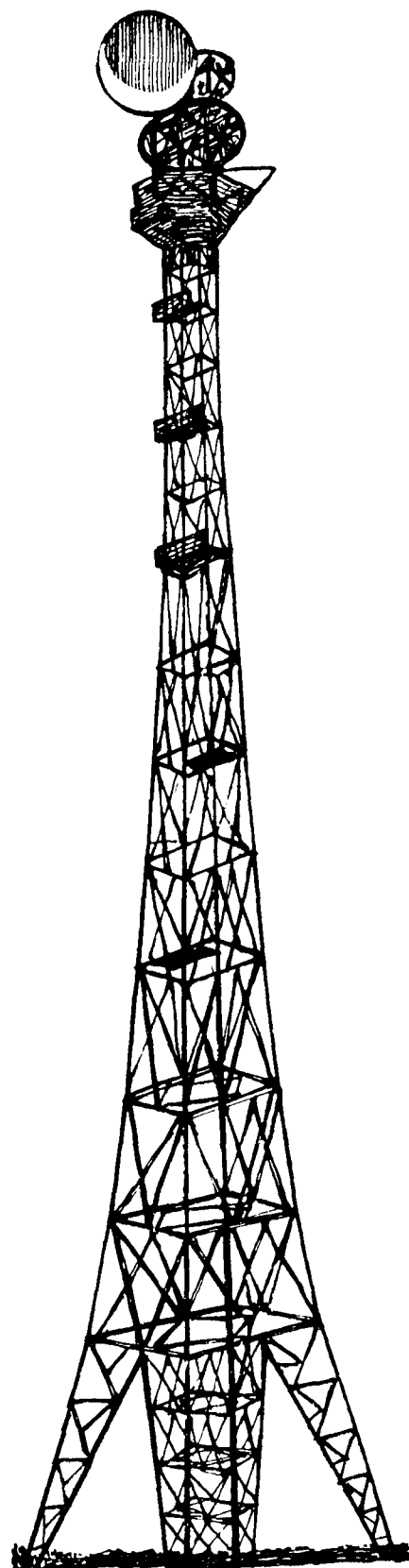
It is proposed to provide a conveyor belt for taking baggages from the air-craft to the baggage counter. The runway is proposed to be extended by another 3,000 feet to 13,000 feet.

BUOY LIGHTS FOR MADRAS HARBOUR

Lighted buoys will be used in the Madras Port's 15.6 metres deep and 3.2 km. long main channel to demarcate either side. The channel has been recently dredged to facilitate the piloting of deep tankers and ore-carriers into the harbour.

A total of nine buoys, each fitted with a light having flashing characteristics for night navigation, would be installed to mark the channel.

the next in preference. Most of the tourists visited Agra (35.2 per cent), Calcutta (24.2 per cent); Madras (21.5 per cent), Varanasi (11.8 per cent) and Jaipur (10.2 per cent).



THE TANSI

Challenging projects like the re-decking of Dhanushkodi Pier and export of 80 metres high micro-wave towers to African Countries have been successfully completed by the Tamil Nadu Small Industries Corporation in the last year. The TANSI has earned a big name for steel structural work at home and abroad. Virtually, these structurals span oceans and scan the skies in the African countries now.

During the year 1968-69, the TANSI was able to secure sizable orders from Hindustan Shipyard, Vishakapatnam, Madras Port Trust, Madras Industrial Development Corporation and from the State Highways Department for the re-decking of Dhanushkodi Pier. Site Workshops were set up by the Company at Vishakapatnam and Rameshwaram. On the basis of the TANSI's performance at Vishakapatnam, additional orders of 790 tons of structural works were placed on the Company by the Hindustan Shipyard

Limited. The re-decking of Dhanushkodi Pier was a challenging project and the company completed it in time.

All this is in the general trend of events in the engineering field in Tamil Nadu. Tamil Nadu Technicians have been erecting electric transmission towers in African countries. The Tiruchi Heavy Boiler Plant has recently secured from abroad an order for making a heavy boiler for thermal generation. Following the supply of micro-wave towers as high as 80 and 90 metres for the Southern Railway micro-wave communication net-work, the TANSI has now secured an order from Kuwait for the supply of similar towers. These towers are being galvanised in TANSI's unit at Mettur. The Kuwait order is worth Rs. 60 lakhs and involves 4,500 tonnes of steel. The out-turn of this unit (i.e., The Galvanising Plant, Mettur) of TANSI for the current year is likely to exceed Rs. 1.25 crores. The TANSI as a whole was able to do better than Rs. 6 crores of turnover last year.

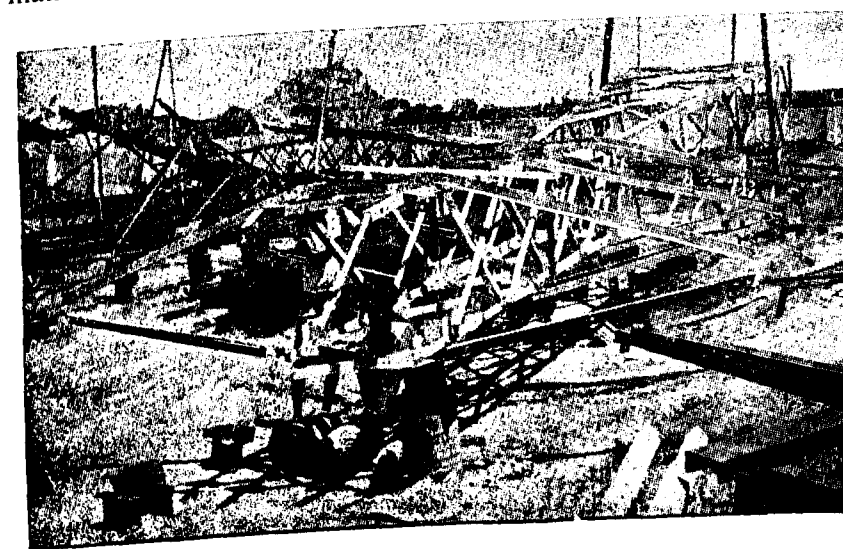
For the galvanising plant, orders have also flowed from Nigeria. The plant is equipped with 21 feet long galvanising pits and the electric cranes of the galvanising pits can handle up to 48 tons for automatic dipping and drying.

The increase in tempo of production and sales of TANSI was mainly on account of planned attempts made to exploit the idle capacities available in all its 60 units. As a result, production in the General Purpose Engineering Workshops went up from Rs. 56 lakhs in 1967-68 to Rs. 76 lakhs in 1968-69, while in some of the units in the group, the rise was as high as 60 to 100 per cent.

The activities in the Units of the Corporation were diversified to undertake manufacture of new products. The Farm Implements Unit, Tiruchirappalli,

successfully developed manufacture of tractor trailers. The experience gained has enabled the Unit to stabilise production of this item. Sizable orders have been received and executed for this item from Agriculture Department as well as from private parties.

The Fractional Horse Power Motor Unit, Guindy, has started manufacturing a new product,



A Galvanised transmission Tower.

emergency lamps. From the enquiries received, there seems to be a good demand for this item.

There are 60 units under the Company now and they were set up originally for various non-commercial purposes such as dispersal of industrial growth, training of artisans, adoption of modern techniques, etc.

With a view to running these Units on fully commercial lines, the Government formed on 10th September, 1965 an autonomous Corporation—The Madras State Small Industries Corporation limited. Its name has now been changed as "Tamil Nadu Small Industries Corporation Limited".

Half the number of units have no end products and are completely dependent upon job orders for their existence. The capital structure in these Units has had no relationship to their commercial viability, as these units have been conceived and designed primarily as Service Centres.

July 1970), there were lesser registrations and lesser vacancy notifications but more placements. The Employment Offices in Tamil Nadu registered 35,835 applicants and placed 3,965 registrants during August 1970.

The number of vacancies notified by employers to Employment Offices was 4,436 a decrease of 353 over the previous month. The Live Register at the end of August 1970 stood at 4,15,173 an increase of 9,428 over the previous month.

Medical Officer ; Maternity Assistant ; Pharmacist ; B.T. Assistant (Maths. ; Science) ; Tamil/Telugu/Malayalam Pandits; Urdu Medium Basic Trained teacher (Higher/Secondary grade-male/female); Kannada medium Secondary grade trained teacher ; Physical Education Teacher ;

Reports received from the Employment Officers in the State, revealed that during August, 1970 (compared with those of

Stenographer ;
Laboratory Technician ; Power
driller ; Instru-
ment Mechanic ;
Mechanic with
3 years experience
and Road Roller
Driver.

The Special Employment office for Physically Handicapped at Madras registered 63 (Blind-12 ;

(continued from page 33)

Tamil Nadu Archives enjoys the distinction of being the first and well organised Archives in India. The Archives preserved here reflect the origin, growth and expansion of British Rule by territorial conquest and the final establishment of supermacy over all rival powers both foreign and Indian. The archives preserved here also contain, a mine of information on the aspirations and achievements of the British Government on all matters of administration, covering all aspects of Socio-economic problems, besides throwing light on the views and ideas of able and experienced administrators, statesmen and legislators of the past, on all matters of public interest.

The Tamil Nadu Archives has been justifiably attracting research scholars from distant countries like the United States, Australia, Czechoslovakia and France. Recently there was a case where a valuable record was borrowed by the Yale University in the United States for an exhibition organised in connection with the bicentenary of Yale who was former Governor of Tamil Nadu.

KURALAGAM

Phone: 24754 21552-21553

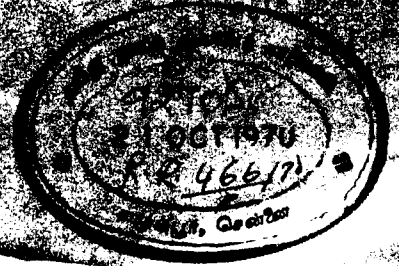
The one place
for
all things

HOUSE OF EVERY
TOURIST VISITING

MADRAS

Registered No. M.

SECRET

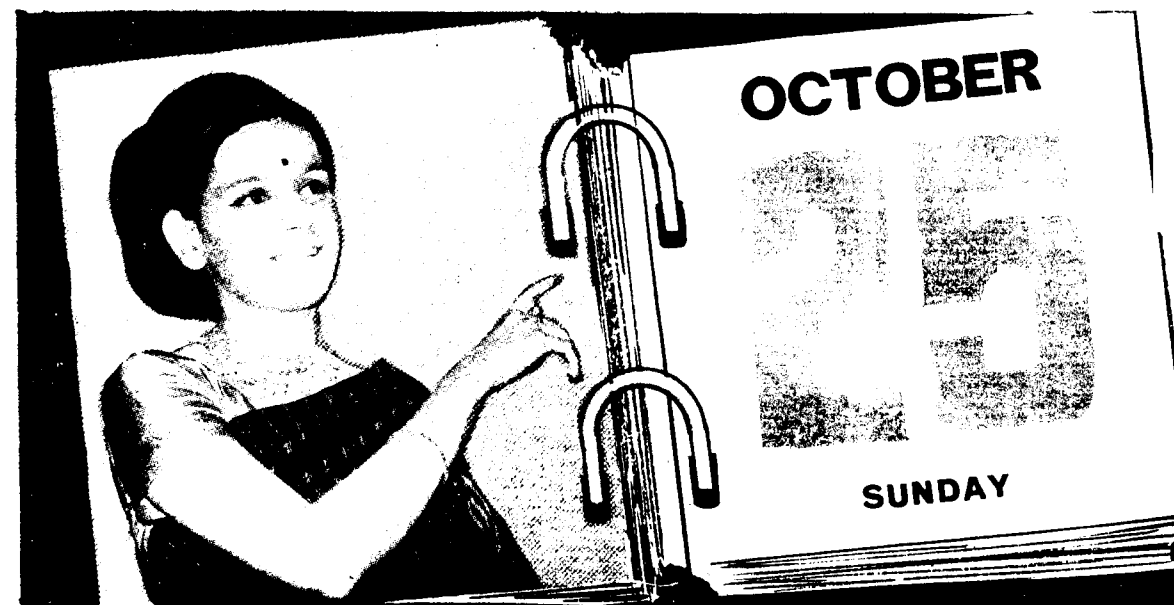


name for perh, and pce

நாகப்பன். நாராயணசாமி. வள்ளியம்மை

தென் ஆப்பாக்க அறப்போரில் தமிழர்களின் தியாகம்

Make a date with



It doesn't cost much to make a fortune! If you're lucky, you may win a lakh just for an investment of one rupee! Remember, only Tamil Nadu Raffle Scheme offers the largest number of prizes.

Your investment also brings all-round prosperity as the money is re-invested by the Government for providing more food, clothing, housing, education and medical attention for all.

Rupees One Lakh must be won

Total Prize Amount for the 25th Draw: **Rs. 17,50,000** (in each series)

FIRST PRIZE OF ONE LAKH (in each series)

Date of Draw: **25-10-1970**

So far Tamil Nadu Raffle has created 185 Lakhiers!

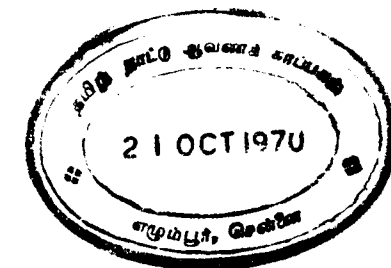
Cost per Ticket Re. 1/- only
Sales are now on! Rush.

BUY TAMIL NADU
RAFFLE TICKETS



Issued by : Director of Information & Publicity, Government of Tamil Nadu, Madras-9.

★Subject to issue of 5 series.



Vol. I OCTOBER 20, 1970 No. 8

CONTENTS

	Page
Those Twenty Days	5
How to be a Successful Industrialist	10
Money, Methods, Models	12
The Ophthalmic Hospital	13
We can grow more Banana	15
H. P. F. to make Colour Films	17
Madurai—the Temple City	19
The Urge to Visit	27
Cattle Festival	31
Unique Mountain Railway	32
Tourist Taxis	34
Vedanthangal	35
Wild Life Sanctuaries	37
Gopurams of South India	39
Folk Arts of Tamil Nadu	42

Cover Page :

A memorable celebration in memory of Gandhiji is depicted

TAMIL ARASU
 extends a hearty Welcome to the
 Delegates to the
XIV Meeting of the
All-India Tourist Development Council
 at Madurai, 18th to 21st October 1970



TWENTY DAYS

M. KARUNANIDHI

6. IN THE TIVOLI GARDENS

The Republic Square in Rome turns into a colourful place of energetic enthusiasm towards the evening. People come there in their hundreds and among them you find many a family in entirety, children and all. Our hearts were captivated by the joyous scene—of people relaxing at tables on the pavements by the roadside where light refreshments are served, of tiny tots filling the air with their lisped syllables and merry chatter, of the water-fountain at play from the elaborate morif of the sculpture

in the centre of the square and of the very small shops and marts fringing the area.

The children were ruddy of complexion, like the tomato fruit and it was so enrapturing to watch their tottering gait as they essayed to walk and run. I fondled and played with the little ones and they too were completely at ease, with not a trace of diffidence or fear, at sight of an unfamiliar face.

An Instant Friend :

It was then that I observed a very young man, on one side of the pavement, who was easting quick and sweeping glances at the

buildings in the square and proceeding to record something on the inside of a metal he held, in the shape of a vessel. My curiosity was kindled further when I observed one or two youths and girls, walking up to him to watch him a while at his odd occupation, exchanging a few lines of conversation with him and then going their way. I was extremely eager to find out what exactly he was up to and when I approached him, I could see that the young man was a specialised painter who had the uncanny gift of being able to record his works on tiny strips of glass, on pieces of cardboard no broader than the palm of one's hand and on metal bits of the size of a finger-nail.

Among the objects he had delineated were the fountain in front of him and the exquisite buildings around. I found it almost impossible to grasp how the towering mansions, touching the very skies, could have been captured in paint and that too through strokes of such rapidity and without losing an iota of their natural grace, architectural elegance and splendour of colour. The youthful artist was indeed pleased at the eager interest I evinced in his work and he sought to ascertain my identity, from the Italian friends accompanying me. On being introduced he greeted me in a most heart-warming manner and I purchased a painting done by him. When friends explained to me that he had made it his calling to go from street to street, transform into sparkling sketches the scenes



of beauty unfolded before his eyes and sell his works then and there. I realised that the youths of the Western Countries were determined to a large extent, to find avenues of work somehow and secure the fruits of such labour. The young Italian artist was an eloquent example of this.

I had purchased only one painting from him but he was good enough to present another work of his to me, by way of memento. Then he asked my Secretary whether he could have a photograph of the Chief Minister. My Secretary obliged him with a photograph printed on the back cover of a book we had brought with us and after this exchange of gifts we took leave of the artist and went to a wayside restaurant nearby.

Within a few minutes, the young man sought me out and

this time he was accompanied by an acquaintance of his who could speak both Italian and English. The Italian speech of the artist was translated into English by this gentleman and thus we had an interesting conversation for a while.

Impelled by affection transcending spoken words, the artist produced my photograph he had obtained earlier and he requested me to autograph it. When hearts sensitive to Art understand and develop mutual respect for each other, could there be any limit to the surge of emotion!

Michelangelo :

The impromptu artist whom I met in the Square did not fail to recall to my mind an immortal and world-renowned painter who lived in Rome 500 years ago—Michelangelo of course. Born in a poor family of Caprese, Michelangelo who blossomed into a sculptor turned into a painter and evolved into an architect of international standing, was one of the unparalleled heroes of the Renaissance movement of Rome. As he himself has recorded in an autobiographical lore, "I drew the chisel under the mallet with which I carve statues in together with my nurse's milk".

Early in his artist-life, a strange desire arose in Michelangelo's heart. That was—to portray on sculpture the human feelings and movements in total fidelity. For the purpose, he wanted to have a direct view of the structure of the muscles and nerves motivating and conveying the feelings and movements in the human body.

A very odd ambition no doubt but legend has it that he did succeed in enlisting the aid of a caretaker of a church, for his macabre mission.

With a flickering candle held in his trembling hand, Michelangelo entered the mortuary during the small hours; placing the unshaded lamp on a table, he proceeded to open a coffin prior to embarking on a post-mortem study of its contents, using the knife he had brought with him. In the dim light of the candle, Michel then probed the heart embedded in the region of the chest and he made a rapid study of the thoracic bones, tendons, nerves and blood-vessels.

He worked under terrific pressure, for he had to complete his surgery before the candle dwindled to its last drops of tallow and gave up its life, and before some-one entered the grim-looking chamber on suspicion and caught him red-handed. Michelangelo's heart was beating fast throughout the gruesome session, since he was fully aware of the magnitude of his transgression in having tampered with a coffin deposited in the vaults of the church, when the mere cutting-up of a corpse was held to be against the law.

Michelangelo was hardly sixteen when he successfully embarked on such a hazardous task. But then, is it not a fact that work in the realm of Art is far from easy? Art has to be nurtured only through trials and tribulation and the task is verily like plucking the rose from amidst

thorns; like holding one's breath and diving into the deep sea to fetch the pearl; and like shielding the naked flame of an oil-lamp from buffeting winds!

Michelangelo lived at a time when his country was being swirled and churned about in a political tornado. He was indeed an Artist supreme who brought a single-minded devotion to his service in the cause of Art, undisturbed and undeflected by the unrest around him arising out of political hostilities, and by the strifes and struggles for which the *casus belli* was the frequent change of Popes.

Prohibition discussed

I was lost in reveries about the Artist Michelangelo of undying renown and the youthful painter of the present times whom I had met in the Square, when friends reminded me of my next engagement. Friends of the Indian Embassy were hosting a party that night, and the guests included many Italians, industrialists as well as Government officials. At the function we had a general discussion on the economy of Italy and India. The development plans of Tamil Nadu formed part of the subject. I was particularly pleased to learn that Thiru Vaidyanathan who works in the Indian Embassy there, not only belongs to Tamil Nadu but in addition, hails from the Thanjavur District. Naive and innocent of temperament, Thiru Vaidyanathan is outspoken; and although he seeks to emphasise a point, he is most keen to get things done at the appropriate moment. Notwithstanding the

fact that he is steeped in the habits and practices of Italy, he evinced unalloyed pleasure in receiving me, as would a Tamilian family, for the reason that I came from Tamil Nadu.

The manner in which Prohibition is being implemented in India came up for mention at the party and I need hardly explain the reason for the topic being brought to the fore. Liquor was served to the Italian guests and they were surprised not a little to notice our group keeping apart. As a direct result of our abstention, quite a few of them were content with fruit-juices, just like us, and it was in this context that the discussion got going on the subject of Prohibition. The Italian guests desired to know whether Prohibition was in force throughout India and my answer to them was, "To-day, Prohibition is a firm policy only in Gujarat State where Mahatma Gandhi was born and in Tamil Nadu, the State of Rajaji where he enforced the Prohibition Law first. In other States, Prohibition has been either done away with altogether, or the Dry Law is being liberalised. Tamil Nadu is losing substantial revenue on this account and at the same time it does not have sufficient financial resources for fulfilling many a development plan for the welfare of the people; and yet the State continues to implement Prohibition. But doubts have been raised as to how long this could be maintained and views are also being continually voiced by people belonging to several parties, to the effect that

Prohibition should be scrapped". I gathered the impression that those present were not quite satisfied with the explanation, for, whether it be work or excursion or drinking, they have evolved a regiment for themselves. That was what they sought to impress on me, in the course of the discussion.

Privilege of life-time

Among the places of interest that need to be visited in the environs of Rome is the Tivoli Garden. The bulk of tourists coming to see the spot happen to be Americans. We started from Rome at 4 p.m. and a visit to a factory had been arranged en route to the Tivoli Garden. After fulfilling that engagement, we proceeded towards Tivoli along a road bordered on either side by beautiful hills, groves and streams.

It was after we reached Tivoli that our friend of the Indian Embassy reminded us that we had to be present at an Embassy dinner at 8 p.m. The Tivoli Garden could be viewed only after that hour and it was an impossible task to return to Rome and later journey once again to the Garden. The question was whether to see and go round the Tivoli Garden or whether to attend the dinner at Rome. It was quick work for me to arrive at an answer and that was to plump for staying at Tivoli. We felt that feast for the palate could be had some other day even, but would it be possible to come by another occasion to secure such a banquet for the eyes and thought!



Widespread and of luxuriant charms, the Garden sported the stamp of history all over. A long queue had formed to enter the Garden but, thank Goodness, we did not have to take our place in the line.

Before passing into the Garden, one has to make one's way through many ancient buildings and also view hundreds of pictures in sequence. Every building has a tale to relate.

Light from the myriad lamps in the Garden, the grace and

beauty of the plants and creepers swaying in that light, the superb paintings adding to and adorning that beauty as it were, and the many water-fountains sounding steadily in merry tinkle like anklet-bells—all these made us gaze in sheer wonderment.

We keep walking, with no thought of the distance covered. A massive and magnificent waterfall and around it hundreds of people—young lovers and families in throngs, complete with children, lisping and chattering. One could keep looking at the

waterfall right through the night. How grand, the lamps arranged to light up the cascade!

From a high rock, water keeps pouring, on to a large stone, circular in shape. Between the Zone of impact of the falling water and the rock is a pathway. How exciting and exultant it is, to watch from outside, the scene of people walking along that path. We too strolled along the path, literally inside the waterfall. After some time, we saw some film-technicians arriving at the place, accompanied by artistes, for out-door shooting

in the vicinity of the waterfall. We watched the shooting for a while and then proceeded to other areas of the Tivoli Garden.

Some of those who take a trip to Rome from Tamil Nadu might have missed the Tivoli Garden. If they happen to visit Rome next, they should make it a point to repair the omission, for it is without doubt a rare privilege of a lifetime, to see Tivoli. As we were returning from the Garden, our eyes were drawn by the mini-shops located all around the place. Our feet followed the direction of the eyes and we purchased a few low-priced toys and also some specimens of Italian sculpture.

An advertisement caught our attention, as we were moving away from the shopping area. It was about an apparatus that would operate a photographic camera on its own. A booth is there on the roadside and all you have to do is



to get into it and insert a coin of a particular denomination in the slot intended for the purpose; the

camera thereupon clicks and photographs us. We then come outside and wait for about five minutes when the apparatus ejects our photograph much in the manner of the weighing machine yielding a card with our weight recorded on it. I got myself photographed by the automatic camera and my wife too followed suit.



In Tamil Nadu, would I be able to enjoy the liberty of getting myself photographed at a wayside booth? Wafted on the waves of such feelings and the unfamiliar joy flowing therefrom, we examined with interest the photograph yielded by the automatic camera, as we prepared to return to Rome.

(To be continued)

HOW TO BE A SUCCESSFUL INDUSTRIALIST

"Failure of management is one of the important and frequent causes of the failure of industrial projects" says Thiru C. D. Khanna, Chairman, Industrial Finance Corporation of India.

In the financing of 500 industrial undertakings, in 22 years, the Industrial Finance Corporation has accumulated some rich and valuable experience. His reflections on the subject are of immense interest to entrepreneurs :

The Industrial Finance Corporation has had first-hand opportunity of appraising many of the problems involved in establishing new projects and expansion of existing undertakings. I may pause to make a few observations based on our experience about the problems involved in the financing of industrial projects.

It has been the experience of the Corporation that the importance of adequate management for any industrial undertaking is frequently not fully realised. It has been observed that failure of management is one of the important and frequent causes of the failure of the project. Success in modern industry calls not only for complicated technical skills, efficient plant and equipment and up-to-date technology, but also executive management capable of dealing with complex problems of financial planning and control, marketing, taxation, labour,

public relations, sound organisational structure and adequate supervision and training of personnel. In modern business, financial management has become as important as technical management. The lack of sound financial management is reflected in the building up of fixed assets out of short-term liabilities and frequently at the cost of working capital. Internal cash flows are utilised on capital expenditure at the cost of sound liquidity. The importance of a sound capital structure both for new enterprises and for expansion is underestimated. Frequently a balanced and sound capital structure is sacrificed for an undue proportion of debt in order to improve future value of the equity. Optimism of the promoters in estimating the total financial requirements of a project is common. Over-runs in capital costs are a frequent phenomenon ; under inflationary conditions over-runs tend to increase. Another common error is the failure to provide for sufficient permanent working capital and for initial cash losses which usually occur before the project starts generating funds. Completion of projects is rarely achieved on schedule, resulting in over-runs. Obligations with

short-maturities become due before the projects start generating cash to meet such obligations and the period of such obligation is too short to be serviced out of the profits of the concern. Credits extended by suppliers of equipment often fall in this category. These observations emphasise the need for effective executive and financial management in addition to sound technical management for the success of an industrial project.

THE POET



The World Poetry Society Intercontinental honoured Thiru M. Karunanidhi with an award

for "meritorious service" to world poetry.

The Citation said, " Like a true poet laureate of Tamil Nadu, you have breathed into your magical poems all the splendour and glories of the Tamil language and 60 millions Tamils in six continents look up to you as the invincible contemporary leader of their 6,000-year old culture".

The World Poetry Society Intercontinental has been constituted by the world poets of six continents representing over 100 countries.

a CAPITAL opportunity!

start your small industry with

TIIC AID

TIIC
THE FINANCIAL
INSTITUTION
WITH A HEART

For details please write to us immediately.

The Tamil Nadu Industrial Investment Corporation Ltd.,

L. L. A. Building, 150-A, Mount Road, Madras-2

Criterion- TIIC-2451

METHODS MODELS

All in One Roof to Help Unemployed Technicians Start their Own Industries

From 25-10-'70 onwards, the Employment Exchanges in Tamil Nadu will be registering, unemployed technicians, engineers and entrepreneurs to give them a practical demonstration of ancillary industries they can usefully start.

The registering technicians will be taken round an exhibition of actual materials required by major industrial projects like Madras Refineries, Madras Fertilisers, Hindustan Teleprinters, etc.

This Exhibition which is coming up at the Guindy Industrial Estate from the 2nd week of November, 1970, will provide useful technical information on the range, quality and type of raw materials, semi-finished components and parts, ancillaries, etc., that our major industrial projects need.

This Exhibition will show our technicians, what is needed by industries so that they can match their talents to the needs.

The Tamil Nadu Small Industries Development Corporation is interested in the promotion of many such industries and the following are details of the Corporation's activities.

The Tamil Nadu Small Industries Development Corporation Limited (SIDCO) has been set up by the Government of Tamil Nadu to assist the growth and development of Small Scale Industries in the State. SIDCO will help from planning to production and marketing stage for small scale industrialists.

SIDCO is primarily a service organisation, helping the small

industrialist to find resources and to locate and construct his factory providing him with technical and marketing know-how and putting him in touch with agencies and organisations that can help his enterprise.

Raw materials

SIDCO has set up a raw materials division and taken over the raw material depots at Madras Madurai and Podanur from the Directorate of Industries. Under SIDCO's Raw Materials Division, these depots will now become the centres from where small scale industrialists can draw a wide range of raw materials essential for their industries. SIDCO proposes to procure and distribute a wide range of raw materials. This will include the items that are now being handled by the Directorate of Industries and also materials that are in short supply. In this regard, SIDCO will be working in close collaboration with the State Trading Corporation, Minerals and Metals Trading Corporation, National Small Industries Corporation and other agencies. SIDCO's distribution system is being streamlined to ensure that stocks are cleared without delay.

To assist the small scale industrialists in importing the materials required by them: By clubbing together the licences granted to

a number of small units, SIDCO intends to import their requirements in bulk and then distribute as necessary. This will help the small industrialist to import his requirements at competitive rates.

Indigenous machinery required by small industries will be purchased by SIDCO and then made available to the small entrepreneur on a hire purchase basis.

SIDCO will consider participation in the share capital of small scale units. It will also grant loans to small industries for acquisition of fixed assets.

With SIDCO's help, the small entrepreneur can now put up industrial sheds required to house his industry at a site that is most convenient to him.

What is a Small Scale Unit ?

A Small Scale Unit is defined as one in which the investment on machinery and equipment does not exceed Rs. 7.5 lakhs. The value of land and building and working capital is not taken into consideration for the purpose of this definition. In the case of Ancillary Units, i.e., those enterprises which supply parts, components or sub-assemblies to a Large Scale Unit, the limit of investment on machinery and equipment is raised to Rs. 10 lakhs.

The small industries programme does not include those industries which come under the purview of other organisations connected with development of Handlooms and Powerlooms, Khadi and Village Industries, Handicrafts, Coir, Silk, etc.

The SIDCO Office is at Kannammai Buildings, 122, Mount Road, Madras-6.



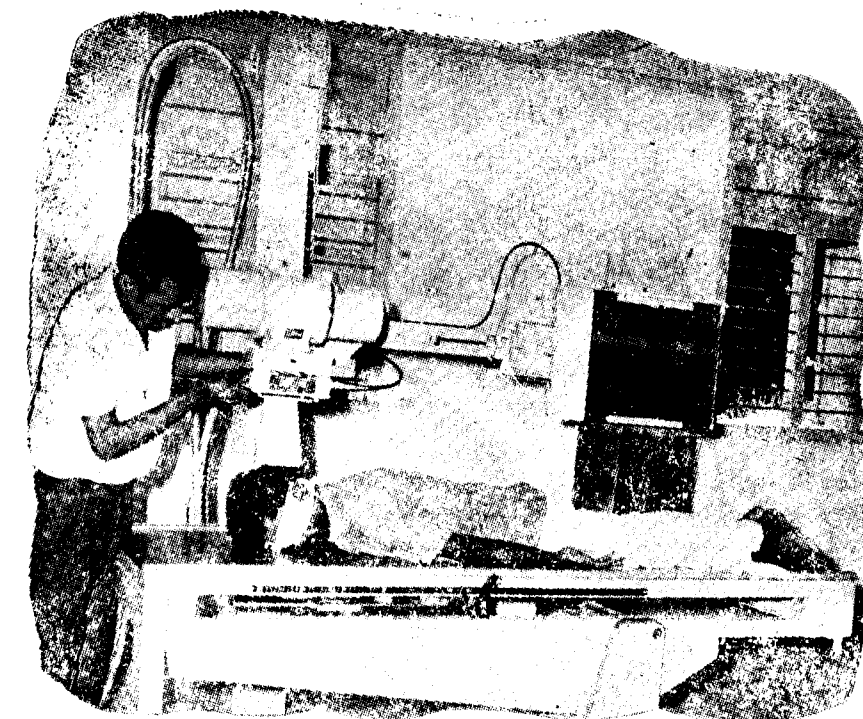
THE OPHTHALMIC HOSPITAL

SECOND OLDEST IN WORLD

The red brick building, veiled by a brownish green frieze of casuarina on the Marshalls Road, Egmore, which houses the Government Ophthalmic Hospital is a familiar land mark in Madras. It is the second oldest eye hospital in the world. It was established by the East India Company. The hospital had its humble beginning in 1819 at Royapettah as the 'Madras Eye Infirmary'. In the past 150 years the modest Eye Infirmary has grown into one of the biggest Eye Hospitals in the world.

Its Names

In 1858, the name 'Madras Eye Infirmary' was changed into 'Government Eye Infirmary'. In 1886, the Eye Infirmary was shifted to Marshalls Road, Egmore and in 1888 the name was changed to Government Ophthalmic Hospital. In 1920, the Elliot School of Ophthalmology was opened for the teaching of Ophthalmology.



Eye X-ray apparatus

Museum that he had set up in the hospital, ably assisted by Dr. K. Koman Nayar has earned a name as one of the best in the world. Many Ophthalmic research problems were taken up by him.

With the idea of decentralisation, Ophthalmic Departments were started in Royapettah and Royapuram. But this did not diminish the hospital attendance. The out-patient and in-patient attendance outstripped the sanctioned number of beds which remained at 170 for a long time.

In 1953, the New Block was opened which increased the bed strength to 282 and mitigate the congestion in the wards to a certain extent.

Special Branches

The last four years were crowded with activity. The growing demand for the special branches in the Ophthalmology were to some extent satisfied by the opening of Glaucoma clinic and Orthoptic Clinic in 1967. The year 1968 saw the addition of the 3rd operation theatre and all the three theatres began to function for six days in a week instead of two theatres functioning on alternate days. This supplied a long felt desideratum as every Surgeon could now have the use of a theatre to himself instead of sharing it with others to cope with the increase in the number of operation.

1969 witnessed the completion of the construction of a New Out-patient Block, a two storied building at a cost of Rs. 18.75 lakhs to accommodate the Out-patient Department, Casualty Theatre, Auditorium and Bacteriological, Pathological and Bio-Chemical laboratories, etc.

Improvements

It was felt that the provision of Air-conditioned accommodation for a premier eye hospital



Squint-eye being trained into proper formation

in the State is quite necessary. Two rooms hitherto used as Medical Officers' Duty room have been converted into two Air-conditioned wards.

The daily average number of in-patients treated in this hospital has been steadily mounting year by year and in 1969 it reached 712, more than double the

sanctioned bed strength of 326. Sanction has been accorded for the construction of second floor over the new out-patient block at a cost of Rs. 8.25 lakhs to accommodate 100 general ward beds and 100 special ward beds and two Air-conditioned theatres, to mitigate the overcrowding in the wards.

Teaching

The Government Ophthalmic Hospital has been for a long time a training centre for post graduates from all over India and from outside the country and was the first in India to institute a Diploma course in Ophthalmology.

Licentiate in ophthalmology (L.O.) was started in 1926. Diploma in ophthalmology (D.O.) was started in 1942 and Master of Surgery (M.S.) in Ophthalmology in 1948. Four

candidates are taken for the M.S. once a year. Six candidates are selected for the D.O. twice a year.

The Four-year M.B.B.S. student of the Madras Medical College, Stanley Medical College, Kilpauk Medical College and Chingleput Medical College are posted to this hospital for clinical instructions in Ophthalmology.



MORE FOOD IN LESS LAND

The banana which for long remained as a 'poor man's favourite fruit' has today attained more importance not only from the point of meeting the demand of the local market but also of competing in the international market to earn the much needed foreign exchange.

Apart from the food value of the banana on a close examination it is also one of the few crops which yield higher profit to the farmers.

The importance of banana is high-lighted when one examines the yield of food secured through banana cultivation. As against the maximum of 4,000 kg. of paddy per acre in a year from the best of lands, banana is capable of yielding over 20,000 kg. of fruit from the same extent of land. Again the importance of banana is heightend when one considers its food value. A person needs

140,000 calories of food per year. To meet this requirement in terms of wheat would mean 1.45 acres per head, but in terms of banana the land utilisation would mean only 0.09 acre.

The Government of Tamil Nadu has, therefore, drawn up several schemes for increasing the area under banana and also to improve the yield.

Banana Research

In 1949, a General Banana Research Station was established at Aduthurai in Thanjavur district for improvement of the bananas grown perennially in the 'Padugai' lands. Later in 1963, another banana research station for tackling problems associated with wet land cultivation of banana was started near Tiruchi. The year 1964 found yet another research station established at Mangalam Combu (Lower Palani hills) in Madurai district for working on the perennial hill

WE
CAN
GROW
MORE
BANANA

bananas. It was also realised at that time that for a speedy and effective development of this crop, the improved cultural and manurial practices found out by research, should be actually demonstrated in cultivators' fields. Towards that end, a special-scheme for organising demonstration trial plots of improved varieties and practices in North Arcot, Thanjavur, Tiruchi and Madurai districts was implemented in 1965. Thus, in all possible ways, the Government of Tamil Nadu with the financial assistance of the I.C.A.R. have been liberally supporting the research programme for improvement of banana which constitute the major Commercial fruit of this State. Due to this, the following important achievements were made under banana research.

- (i) Out of the many hybrids a tetraploid hybrid between

Neyvannan and the wild species *Musa Balibidana* and *Musa sapientum* of promise.

(ii) Among the many mutants, the semi-tall, mutant of Dwarf Cavendish 'Robusta' was established as a superior clone.

(iii) Under wetland conditions 'Robusta' and 'Lacina' (another Cavendish clone) performed well yielding bunches weighing about 33 kg. as against 25 kg. recorded by the Dwarf Cavendish.

(iv) The Culinary variety 'Kanch Kela' introduced from West Bengal was promising under wetland condition producing bunches weighing over 39 kg. which is double the weight of the local Madurai variety.

(v) In the scheme for organising demonstration plots, it was found that in North Arcot districts, the 'Robusta' variety yielded an additional production of about 7,500 kg. per hectare over Dwarf Cavendish with an additional income of Rs. 5,000 per hectare. Robusta bunches were found to satisfy 96 per cent of the export standards in respect of fruit length against only 63 per cent in Dwarf Cavendish. These demonstration plots have proved useful for rapid spread of the cultivation of Robusta variety in the Palar basin of North Arcot division.

Banana Package Scheme.

With the general rise in the prices of Agricultural commodities the cost of banana has also registered an upward trend. In order to arrest the price trend

and to increase the production, the Government of Tamil Nadu have initiated the package scheme for Banana. This scheme was introduced for the first time in the year 1964-65 in 2,000 acres in North Arcot District. During 1965-66, the scheme was extended to 2,000 acres in Tiruchirappalli, 4,000 acres in Madurai district and 4,000 acres in Coimbatore district. During the intervening annual plans, this scheme was extended to cover more acres in Chingleput and Tirunelveli Districts. At the beginning of Fourth Five-Year Plan (1969-70) the area under Banana Package Scheme was 22,000 acres being nearly 28 per cent of the total area under the crop. At present, there are five package units for banana in Tamil Nadu. Each unit extends over 4,000 acres and in-charge of a Special District Agricultural Officer. The Tamil Nadu Government has thus the unique distinction of running a package programme on an extensive scale in respect of a commercial export crop like banana.

Surplus Planned

The object of the scheme is to take vigorous steps to intensify the cultivation of banana particularly 'Mauritius' variety in North Arcot, Madurai and Tirunelveli districts and 'Poovan' variety in Tiruchirappalli and Coimbatore districts. Through this programme, it is aimed to produce marketable surplus of about 50,000 tonnes of banana per year at the end of the Fourth Five-Year Plan to make it available for export.

Banana yields in package area have registered increases ranging from 40 quintals to 62 quintals per hectare. The yield of the exportable variety Dwarf Cavendish ranged from 39.82 tonnes per hectare in North Arcot District to 45.3 tonnes in Erode Taluk in Coimbatore District.

Rich Dividend

The number hands per bunch increased from 7 to 9 in this variety and the number of fruits per hand from less than 12 to as many as 16 to 18 fruits.

The average weight per bunch of banana prior to the introduction of the package scheme was only 10 kg. in North Arcot district. From the crop cutting studies conducted during the year 1968-69, it is found that the average weight of bunch has increased to 16.5 kg. resulting in an average production of about 16 tonnes per acre.

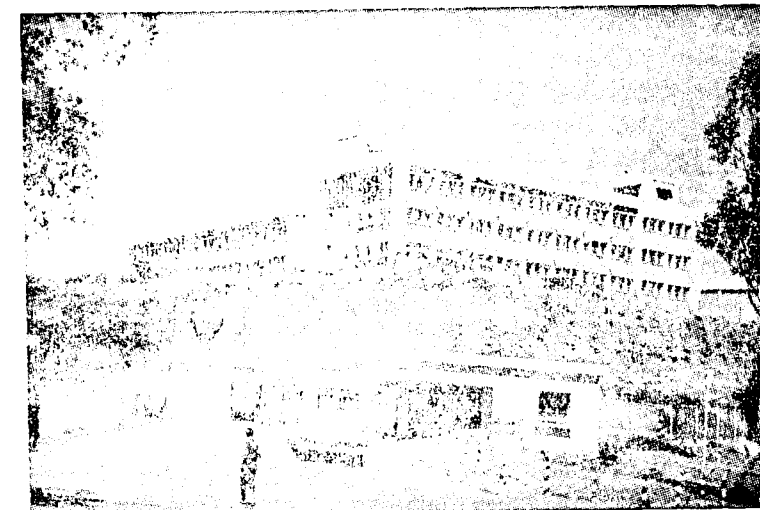
The Banana Package Scheme has also kindled considerable enthusiasm in cultivators' efforts in many new areas of Tamil Nadu such as Tirunelveli (Tuticorin), Chingleput and Thanjavur districts. The banana growers are more inclined towards scientific cultivation to-day.

Some novel practices like double planting has already started paying dividends to the progressive growers. Because of the double planting methods some fields have yielded high yields of 3,600 bunches per acre where hardly 1,200 bunches were harvested.

(Contd. on Page 18)

H.P.F. TO MAKE COLOUR FILMS

YEAR OF RECORD IMPORT SUBSTITUTION



Hindustan Photo Films Factory

The Hindustan Photo Films Ooty, during the year 1969-70 recorded a total output of 2.25 million sq. m., photo film nearly double that of the previous year. Manufacture of new products like Roll Films, 35 mm., Negative film and cine film (sound) commenced during the year. The commencement of manufacture of cine film is a matter of special pride since in respect of this product, only the technological operation documentation was supplied by the collaborators and the company had to start the production on its own with indigenous raw materials.

Although the production of bromide paper was to have been taken up only during 1970-71 the programme was advanced to 1969-70. But, this being a process involving various technical problems, production could not be stepped up and therefore there

has been a shortfall during the year. Steps have been taken to solve these problems and increased output of bromide paper has been planned. It is therefore expected that in the next year, total production will exceed that of the current year. The output during the year 1970-71 is expected to be of the order of 3.6 million sq. metres and according to present calculations the company should attain the break-even point in 1971-72.

The nature of this industry is such that a long gestation period is unavoidable, and the build up of technology has of necessity to be slow. Along with the build-up of technology the company also had to face a number of problems quite a few of which were due to its eagerness to commence production of some products earlier than scheduled and the efforts in the direction of

import substitution of raw materials. However, it is good that the challenge of these problems were faced in the initial years since it has given its men training and confidence in tackling them instead of being confronted by them at a later stage.

If today leading photographic manufacturers in the world have shown eagerness to collaborate with Hindustan Photos in its expansion plans, it is in no small measure due to the significant progress made by it in producing on its own materials conforming to international standards, thus proving that given the opportunity and training our technicians are second to none in the world in grasping the most sophisticated of technologies.

The turnover of the Company is steadily on the increase. In the current year it was Rs. 3.72

crores against Rs. 2.29 crores in the previous year. During the next year (1970-71) it is expected to be more than Rs. 6 crores. The Company continues to get a steady stream of orders from abroad.

Technology of photographic manufacture is continuously making rapid strides the world over, and the gap between its present techniques and those prevalent abroad is getting wider every day. Along with the implementation of the Project to manufacture colour films the company is also striving to effect modernisation of the present equipment and processes with a view to attain higher levels of efficiency even

in the existing range of products. The expansion schemes are therefore being drawn up in such a way as to include modernisation of the present equipment also. With programmes for expansion and modernisation, it will be well advised to take advantage of the latest available knowledge in technological development. To this end, the company is looking for collaboration arrangements on continuous and permanent basis. This will then enable it to have access to information on developments taking place abroad. The Company is on the lookout for collaboration both on permanent and partnership basis.

Banana—Continued

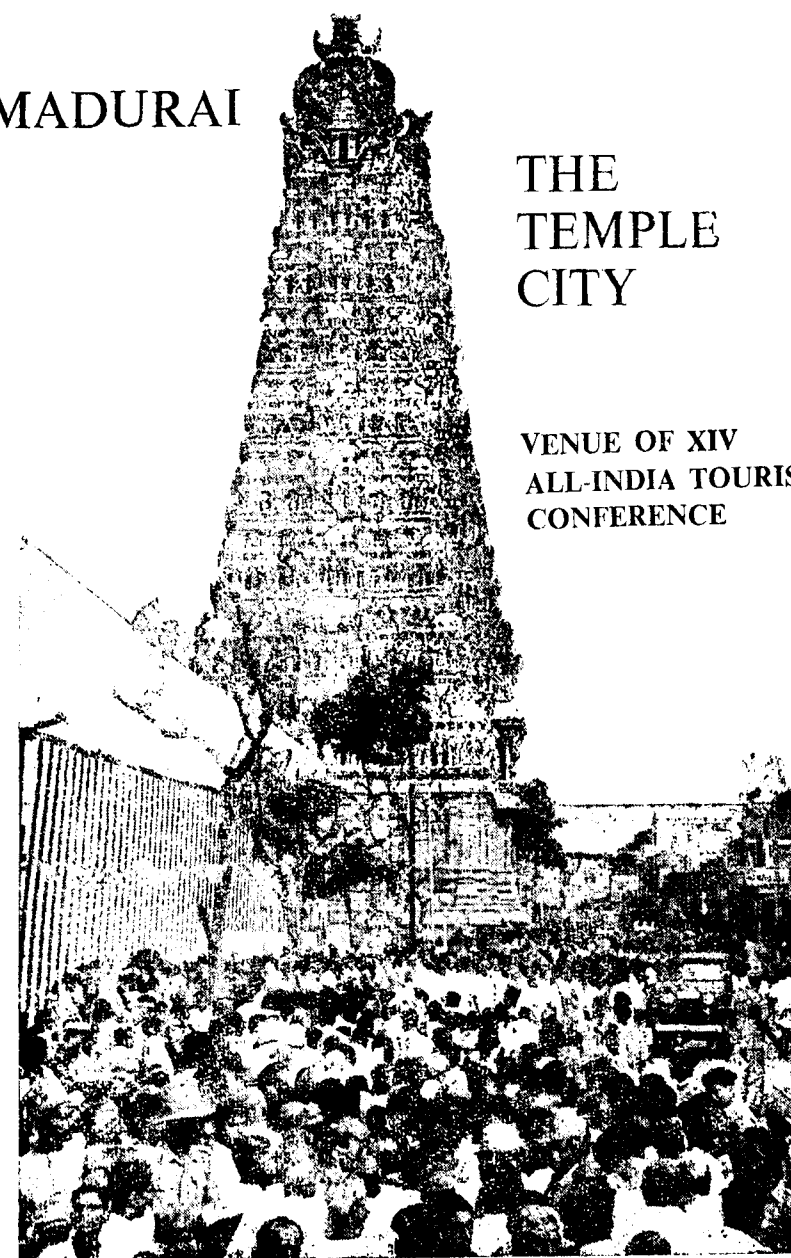
Among the search for newer varieties, the semi-tall mutant of Dwarf Cavendish called 'Robusta' has impressed the growers in many respects. Heavy bunch weight, compact placement of hands and longer figures are its commendable qualities. These qualities have placed it more suitable for export purposes than even the Dwarf Cavendish.



MADURAI

THE TEMPLE CITY

VENUE OF XIV
ALL-INDIA TOURISM
CONFERENCE



formations, the Yanai Malai (Elephant Hill) and Naga Malai (Snake Hill). Two miles long, the Yanai Malai of grey and pink granite looked at from Madurai does resemble an elephant lying down.

Madurai is the famous and ancient home of Tamil culture. As capital of the Pandyas it has been the centre of Tamil learning for centuries. The Tamil Sangam (Academy) flourished here nearly two thousand years ago. The Academy set the standards of poetic excellence and literary criticism. Great scholars and poets used to gather here and hold discourses and discussions. Recognition by the Academy was considered by the men of letters as the hall-mark of distinction. And Madurai continues to occupy even today a pre-eminent place in the Tamil literary tradition.

It was in Madurai that justice in all its unrelenting rectitude was rendered to the widowed Kannagi when she questioned the Pandya King in his Court about his impropriety in punishing her innocent husband Kovalan, without sufficient enquiry. It is said that Madurai suffered the consequences of her fury.

Madurai, is one of the ancient cities of India which has a continuous tradition extending well over 2,500 years. It seems as though culturally it had remained an open city throughout the ages. Otherwise it could not have survived so many vicissitudes—both social and political—with such charming serenity and undiminished vigour.

The invasion of Malik Kafur in 1310 A.D. is the only occasion when the outer structures of the Meenakshi Temple were almost razed to the ground. Even at this time the main temple was not touched by the Moslem invaders.

If one were to take a bird's eye-view Madurai appears to be shielded by two striking rock

The city had seen the rise and fall of several dynasties but it has lost none of its form or culture. It has had a series of rulers with an eye for art and a mind for culture, thanks to whom, magnificent and imposing structures like the Thirumala Nayak Palace, Puthu Mandapam and Sri Meenakshi Sundareswarar

With best compliments from

United India Roller Flour Mills Private Ltd.

1/4, SURYANARAYANA CHETTY STREET, MADRAS-21

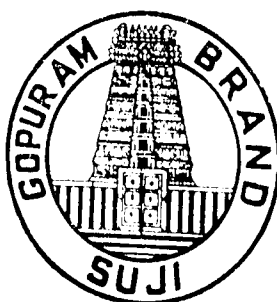


Manufacturers of Superior Quality

'Gopuram Brand' MAIDA & SUJI

AND

'Ship Brand' ATTA & BRAN

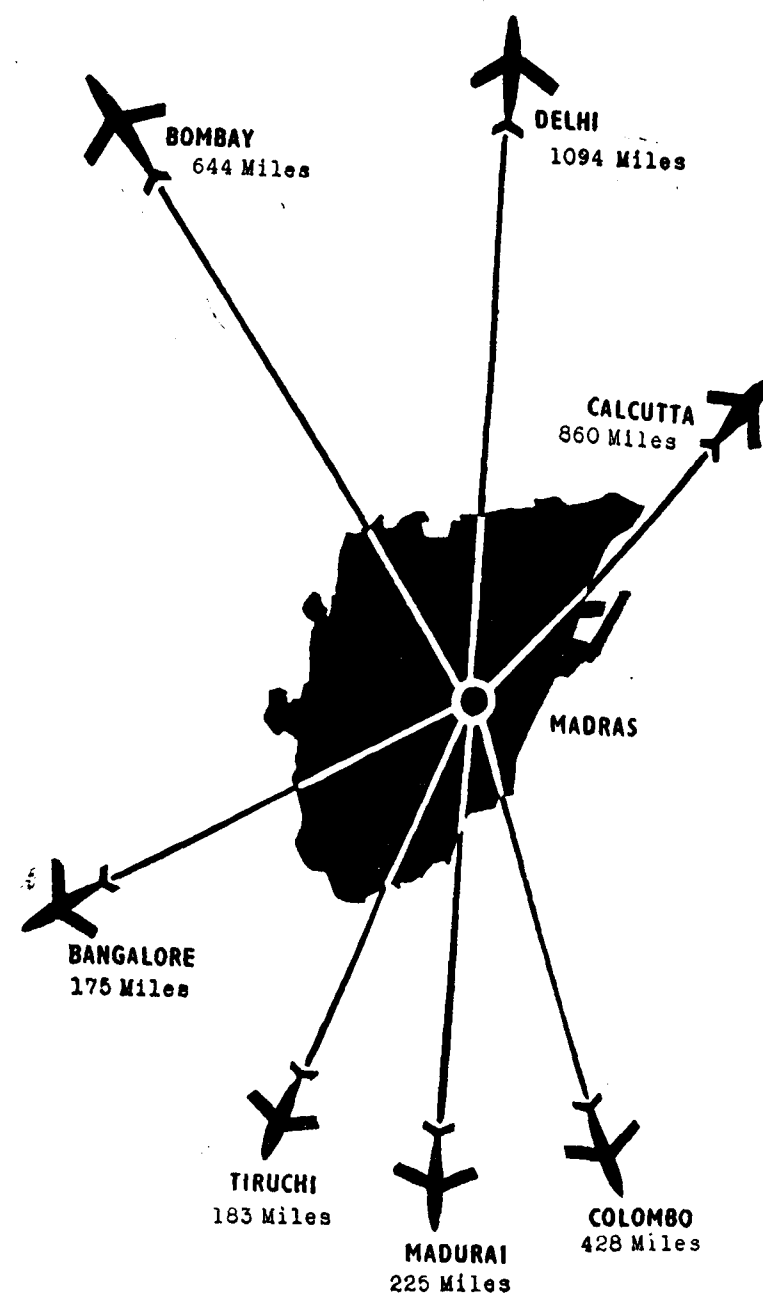


Telephone : 52670 - 52671 - 52672 - 52673

Telegrams : "MONARCH"

Temple itself came to be built. A Thirumala Nayak Palace or a Mangammal Chatram or even the unfinished Rayagopuram would be a proud adornment to any other town, but to this city they are

Madras to other cities by Air



so much parts of it that they are taken for granted. For that matter, Thirumala Nayak and Rani Mangammal despite the great deeds they have accomplished, are parts of the city's history and belong to it quite as naturally. It is only in the fitness of things that time has not subdued its rich tradition, nor the markings left on it by the vagaries of history affected its moorings. Its mythology, history and its recent industrial transformation with their respective markings left on it so exquisitely have given the impression of a metamorphosis that is at once graceful in growth and positive in character.

The Origin

The earliest historical account found in the Tamil literature attributes the founding of the temple and town to a Pandya King named Kulasekara. Historians believe Kulasekara must have ruled in about the sixth century before Christ. The temple and the towers as they now stand were however rebuilt about five hundred years ago and the Thousand Pillars Hall is only four hundred years old.

The Southern districts of Tamil Nadu had been ruled from the beginning by the Pandyas one of the three ancient dynasties of Thamizhagam. In the third century B.C. Megasthenes knew a Pandya King. Pliny mentions the Pandya King and "the Emporium of Modoura", in the first century A.D. Madurai was thriving when Augustus took the

throne to Rome. There are evidences, such as the Roman coins of the time of Augustus found here, to show that the Pandyan Kingdom had extensive trade relations with the Roman Empire. Ptolemy (140 A.D.) also mentions "Modoura the Kingdom of the Pandian".

This was perhaps the brightest period of ancient history of Madurai. The social life, administration and secular prosperity of this period is finely portrayed in the old Tamil classics Silappadikaram and Manimekalai.

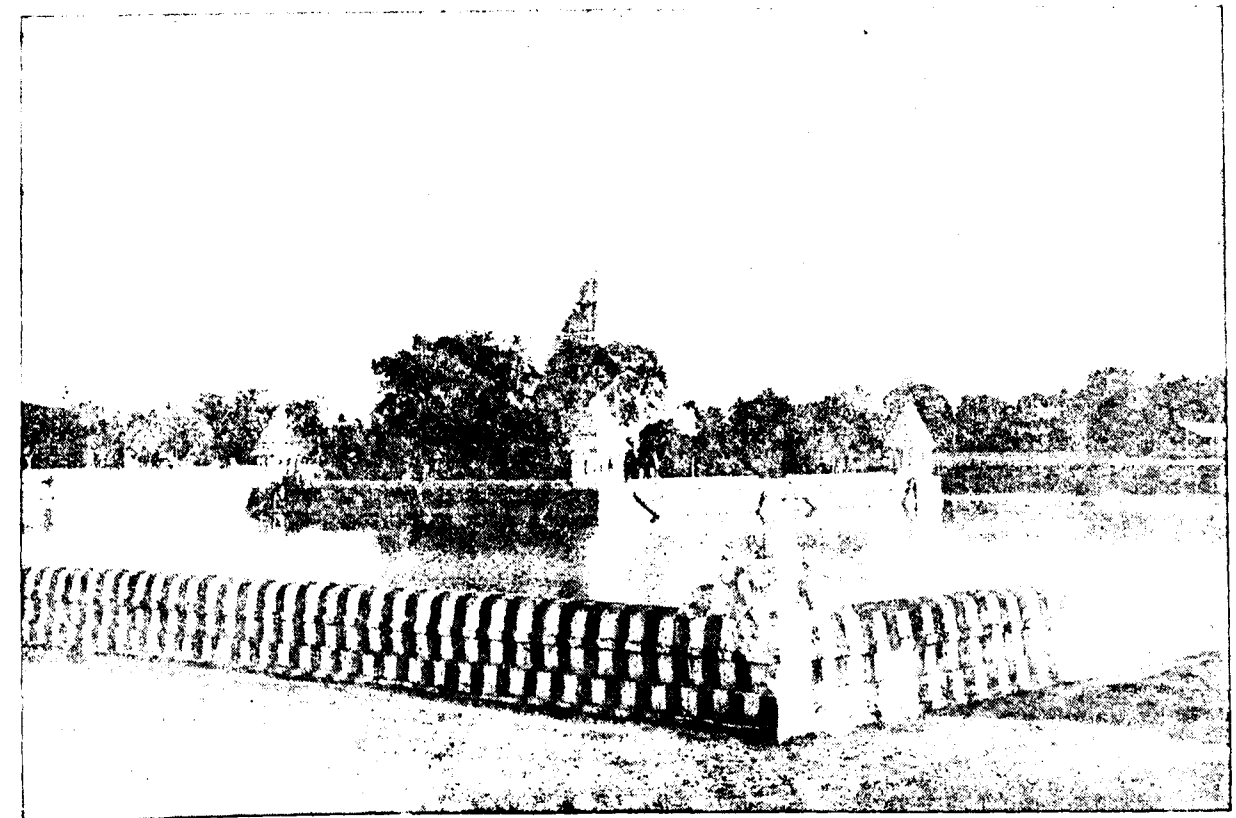
A CITY LAID OUT IN LOTUS FLOWER FORMATION

Pandyas ruled from here until the 14th century. The last of the Pandyan dynasty was Nan Maran.

The Lotus Pattern

Then came the Nayaks who ruled from Madurai from the middle of the 16th century till 1763 and their majestic imprint is still fresh. The Nayak dynasty founded by Viswanatha Nayak

in 1559 ruled Madurai for almost two hundred years. Under the fostering care of a succession of Nayak rulers Madurai once again flourished greatly. It was during this period that the modern City of Madurai was planned in the pattern of a lotus flower with the Meenakshi Temple in the centre. The lay-out was according to the rules of Silpasastras.



The Mariamman Tank, Madurai, the biggest in South India

The credit for these remarkable achievements must go to Viswanatha Nayak (1623-59) whose great energy and fine taste are reflected in the show places of modern Madurai, the Teppakulam, the Pudhumandapam, the Rayagopuram, Tamkam and his own palace later known as the Thirumala Nayak Mahal. The palace covered a wide area and European writers compared it to the ancient monuments of Thebes. Though this was pulled down by his grandson Chockanatha (1662-82) an open courtyard, survives today, around which runs a roofed arcade of great beauty, supported by tall stone pillars of 40' high connected by foliated brick arches of much elegance. The preservation and maintenance of this monument is due to the effort of Lord Napier who was the Governor of Madras in 1868.

The Nayak rule ended in 1736 when Muslims and Marathas appeared on the scene as rivals for power which the English had already acquired in South India. Direct English rule began in Madurai from the beginning of the 19th century and by the end of the century modern administration had been firmly established.

Madurai was made municipality in 1866. Railways came to Madurai in 1875.

Madurai the second largest City of Tamil Nadu has also witnessed considerable progress during the last few decades. Silk and cotton

PICTURE PAGES

Opposite Page :

1. Chief Minister Karunanidhi after unveiling a Statue of Periyar E. V. Ramaswami at Dindigul, pays his respects to Periyar.

2. Sardar Ujjal Singh, Governor of Tamil Nadu inaugurated the Fifth Conference of the State Ministers for Irrigation and Electricity at Ootacamund on 24-9-70. In the picture the Governor is seen with Dr. K. L. Rao, Union Minister, State Ministers and other delegates of the Conference.

3 & 6. Chief Minister presents trophies to the Leaders of the Soviet Cultural Troupe which visited the City in the last week of September.

weaving is traditionally the major industry of Madurai. It is still her staple industry. Spinning mills in and around Madurai feed the required yarn to the handloom industry that is unrivalled for quality and sheer size. Automobile ancillaries, electric appliances, furniture, needles for sewing machines, etc., are other items of important industrial units of Madurai. At Pudur three miles from Madurai is a flourishing Industrial Estate.

4, 5 & 7. Scenes from the performances given by the Soviet Cultural Troupe.

Centre Spread :

Views of Madurai and the surrounding shrines including Tirupparankundram, Kallalagar-koil as also the electric winch service to Palni Hills and the Vaigai dam.

Last Page :

1. Chief Minister conferring with Thiru Y. B. Chavan, Union Finance Minister at the Silver Jubilee function of the South Indian Film Technicians Association held at Rajaji Hall.

2. Thiru Lendum, Consul-General of New Zealand in India in earnest discussion with Chief Minister.

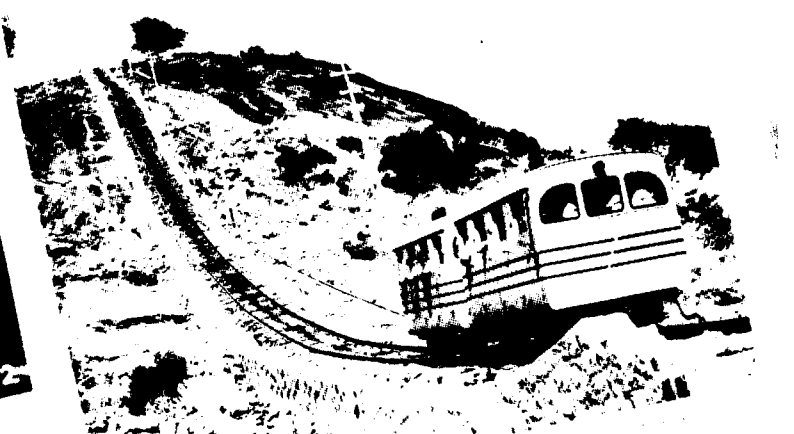
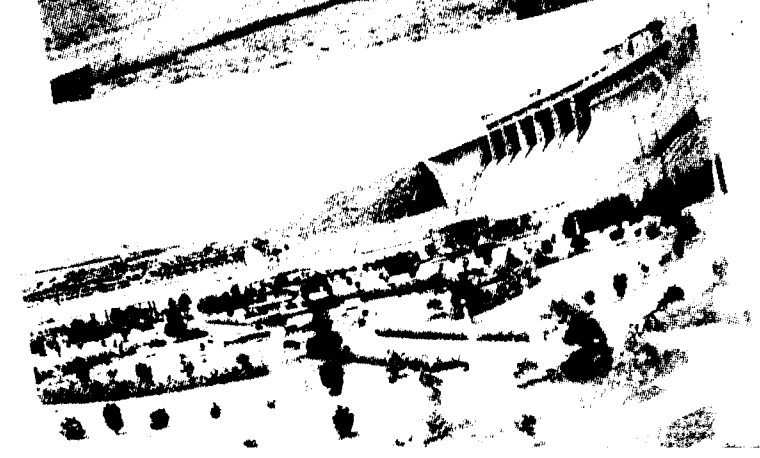
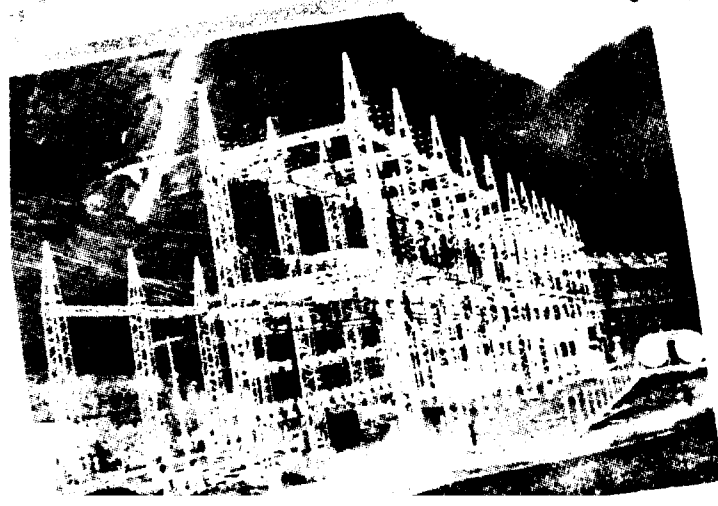
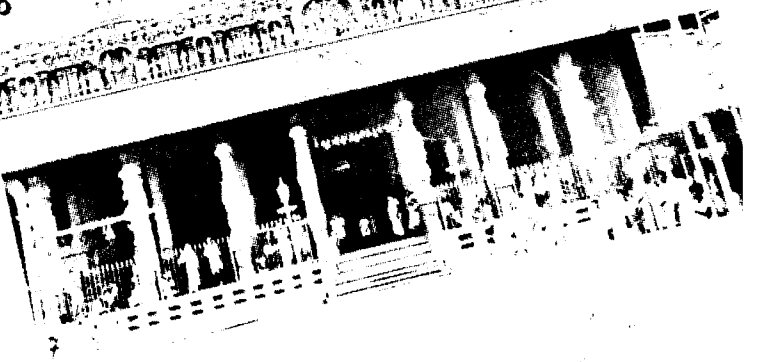
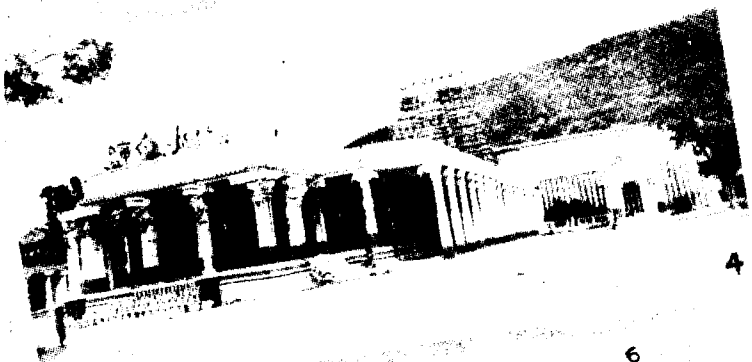
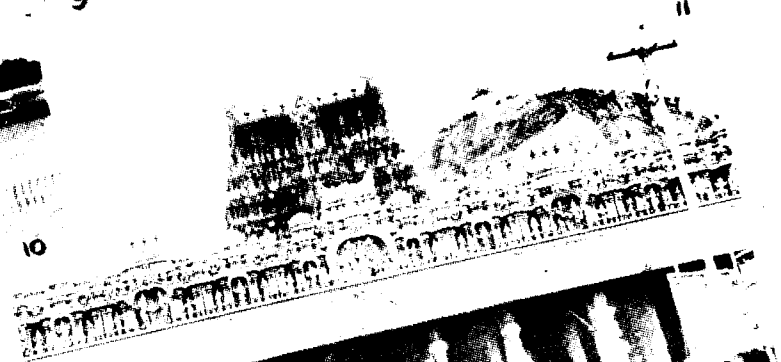
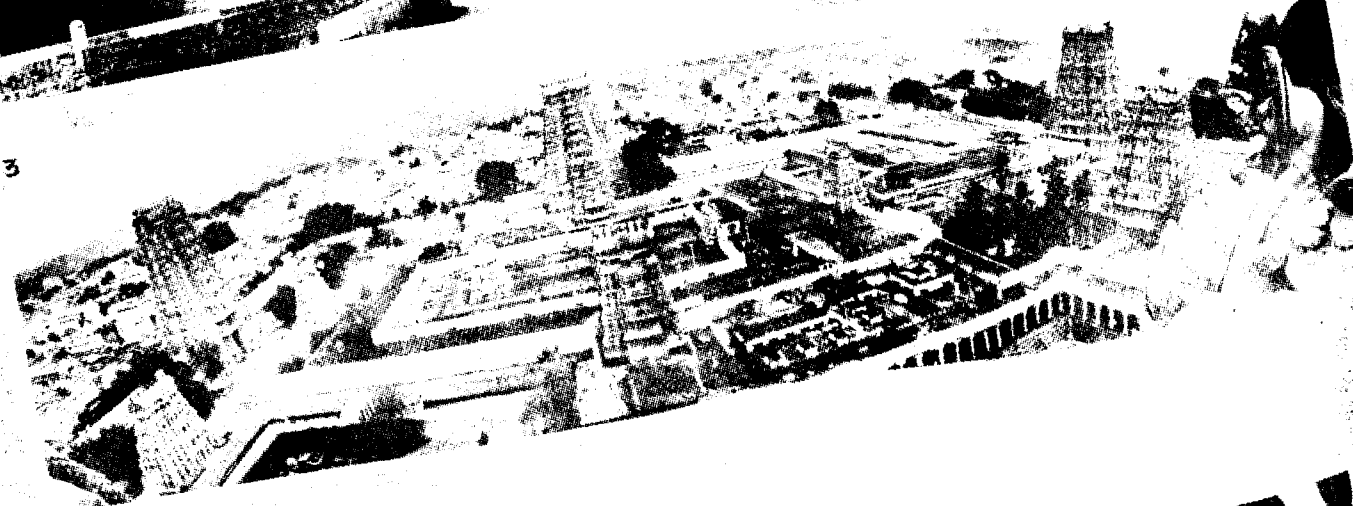
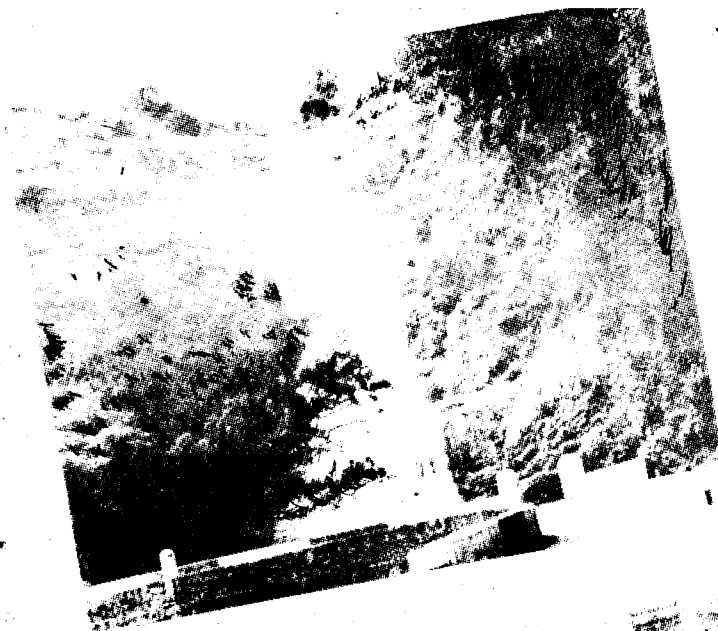
3. Thiru Tarlok Singh Riasthy, Punjab Minister for Public Relations and Tourism called on the Chief Minister for discussions.

4. Chief Minister distributing prizes at the Family Planning Fortnight function at Saidapet.

5. Thiru Harchenko, New Consul-General of U.S.S.R. called on the Chief Minister at the latter's residence on 29-9-70 and presented a memento.

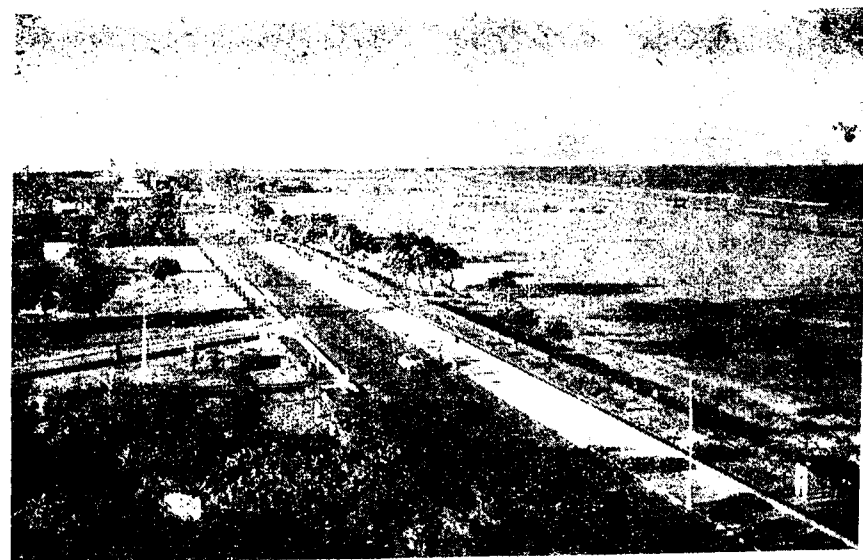
6. Chief Minister with Thiru Sunderlal Nahata at the function organised by Rajasthani Association.







THE URGE TO VISIT IS THERE



Our job is to fill the information Gap

"Next month we intend to visit South India, especially Madras and its adjoining area. But due to lack of proper information we are facing great hardship to finalise the programme. I earnestly request you to send me some 'Guide Book' containing

the general information of different tourist centres of your State."

This is an enquiry from a person in Jamshedpur. This is one such of innumerable letters received from persons far and near not to speak of the foreigners seeking information of various topics. From the volume and type of letters received daily by the

Information Centre of the Tamil Nadu Government at Madras, the importance and the great potential of intourism in Tamil Nadu can be realised. Time and again experts have emphasised that tourism in India will depend largely on the development of intourism. It is in this context that many of the schemes for low-cost accommodations for tourists have been constructed in all centres of tourist traffic in our State by the Government of Tamil Nadu.

Of Saints and Ashrams

Here is another typical enquiry from an Australian: "We are at present making preparations for an extensive visit to India covering many areas. The main objective is to tour the shrines and religious places of Saints and Ashrams, etc., in your local and surrounding areas. We have gone to the tourist offices in Sydney and Melbourne but they have not been able to furnish us with more concise information required by us, other than the usual type of



Tamil Nadu Abounds in calm hill resorts ideal for holding camp-sites for large-sized tourist parties. Development of such sites has been recommended by the Nineteenth Report of the Estimates Committee on Tourism.

tourist leaflets. We are requiring extensive information, Via Air Mail, of your area, in particular detailed maps showing villages and other historic places not generally shown on tourist folders. We would also be thankful for any addresses of Societies or persons interested in communicating with us, having an interest in the many wonderful Saints and Religious leaders of India, if you have any such information available."

Bus connections

One Thiru Asok Basu writes from Calcutta :—

"I am (with my wife) visiting the State of Tamil Nadu in October

1970. I would like to have all information regarding places of interest, transport—especially bus connection, their fares and their timings—accommodations facilities and all other material necessary for any tourist to know, in the route of Kanyakumari, Madurai, Rameshwaram, Tiruchirappalli, Thanjavur, Pondicherry and Madras." Difficult as it may seem, he was furnished a rough itinerary, but alas we could not give him any pucca guide for bus connections! It is time we devised a State-wide bus guide strictly enforcing bus timings.

So varied are the questions asked and information sought that only properly trained

personnel can answer them to their satisfaction. Speed is another important factor.

Another person from Calcutta intends to make a motor tour of South India and he desires a complete circular itinerary with details of distances between places, and a list of P.W.D. Rest Houses, Dak Bungalows, Circuit Houses, etc., and if possible road maps of the places. Because his mode of travel is his own car we could give him a more definite itinerary, but we had to warn him against placing too much reliance on P.W.D. Rest Houses and Circuit Houses for his accommodation!

As far as Tamil Nadu is concerned it is able to satisfy the urge for

travel and see new places that has been created among the people mostly by the cheap modes of transport such as Tourist buses and conducted tours. There are still unlimited possibilities to attract more and more people, from other States to Tamil Nadu especially our brethren from North of the Vindhyas. An imperceptible change though slow is taking place in important pilgrim centres like Madurai where a number of medium-priced lodging houses as distinct from cheap choultries are coming up with or without Government help. The tourist bungalows by themselves are not adequate to satisfy the large seasonal flow of such traffic and these lodgings are of help.

Tourism particularly intourism depends on the combined efforts of numberless entrepreneurs, from the smallest shop-owner to the most sophisticated hotelier. Everyone is involved, particularly those who benefit from our successful efforts. We lose most when organisational inadequacies limit tourist growth. The best example of interested persons putting up tourist accommodation is seen at Kancheepuram where the Silk saree merchants have built a choultry and a modern Guest House.

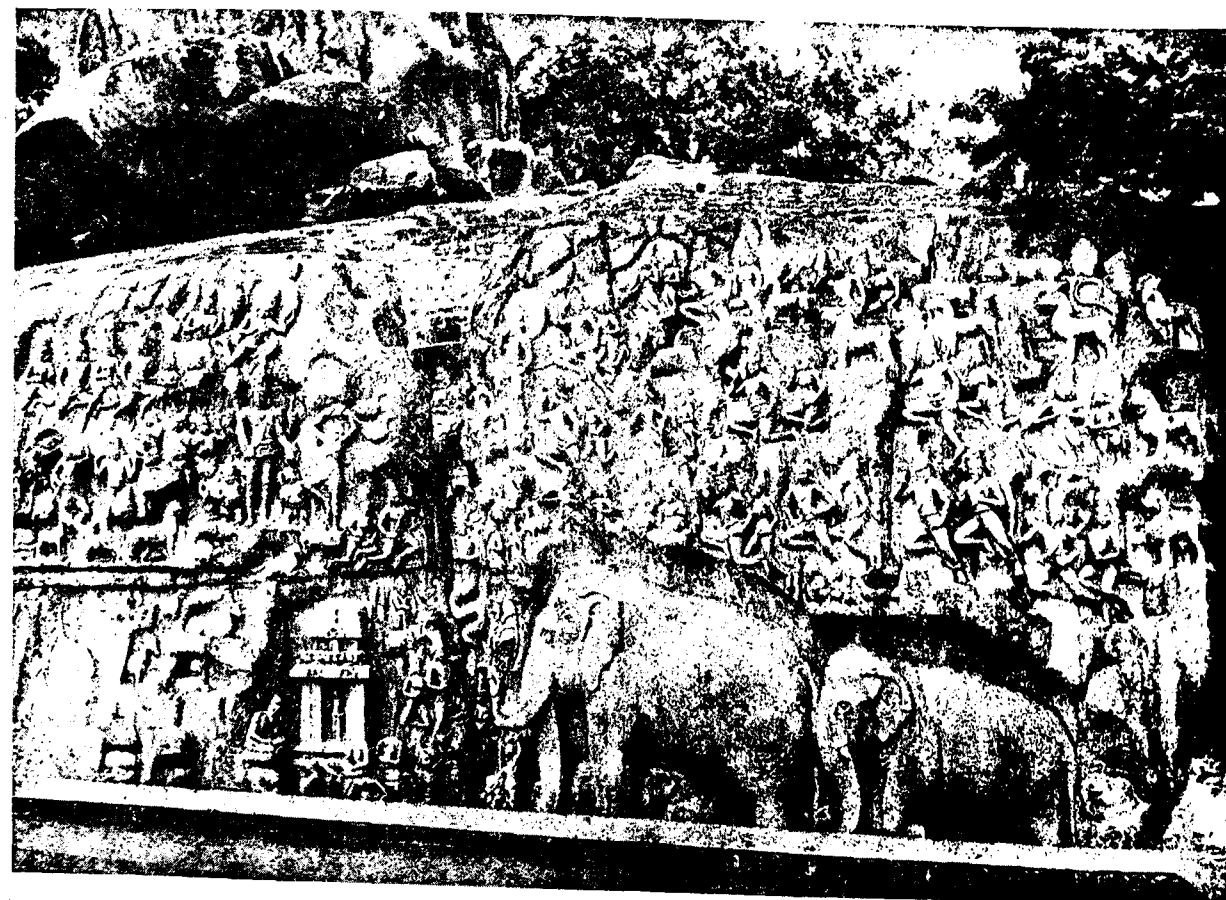
All Can Help

Furnishing information as requested by the tourists as above and assuring them that they can arrange a tour in the State to suit his or her pocket, is the first

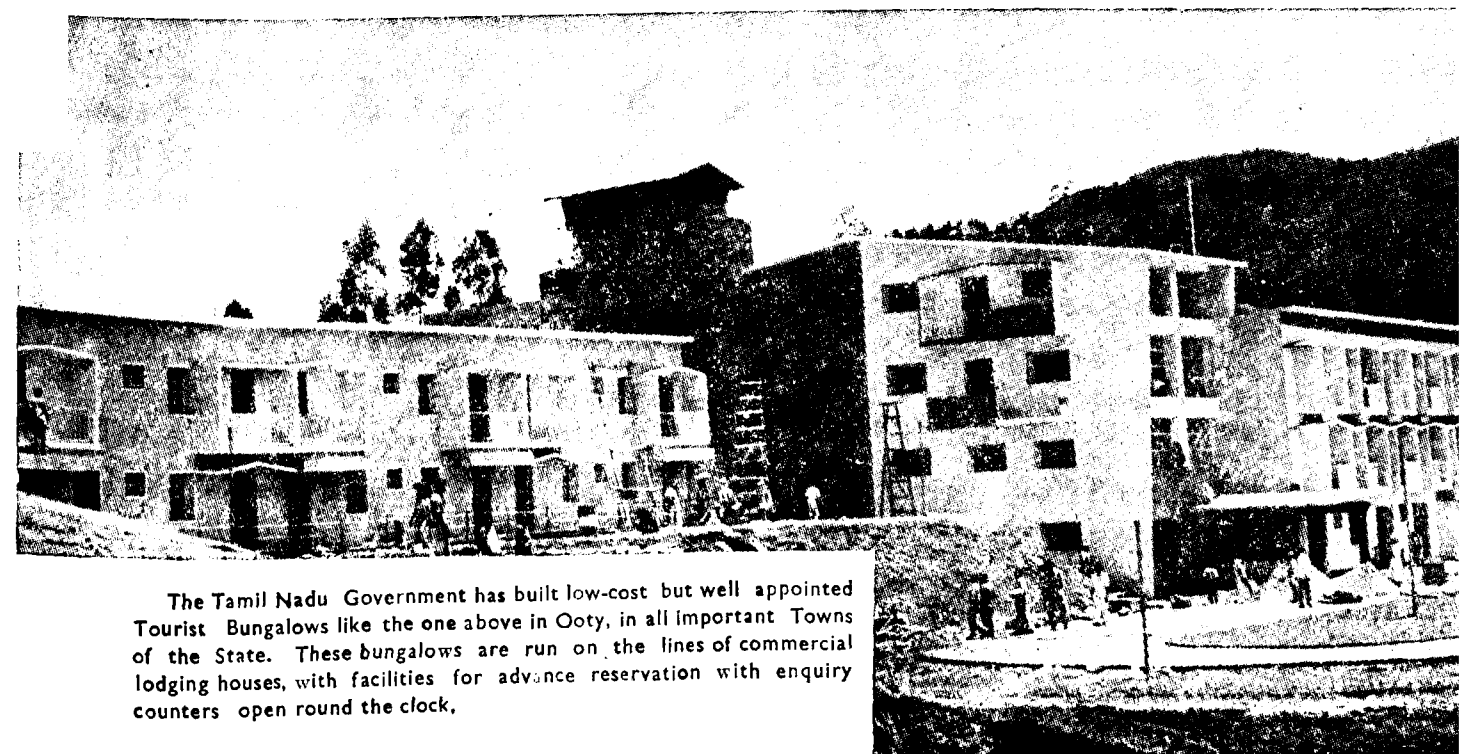
requisite of tourist development. The tourist must also be assured of comfortable accommodation, each according to his needs and pocket, and made to see as much as possible within the time at his disposal. This requires the rationalizing and streamlining of the information and administrative set-up to give them the right welcome and confidence. Literature containing general information as well as the special information sought by the tourists need to be produced.

Our Tourist attractions

The great temples, the sculptures and architectural wealth and the age-old festivals and customs and religious practices of Tamil Nadu are of perennial interest to



The bas-relief in stone at Mamallapuram shown above is but one of many tourist attractions in Tamil Nadu



The Tamil Nadu Government has built low-cost but well appointed Tourist Bungalows like the one above in Ooty, in all important Towns of the State. These bungalows are run on the lines of commercial lodging houses, with facilities for advance reservation with enquiry counters open round the clock.



Places of scenic beauty abound in Tamil Nadu

the people of other States and also to foreigners. The pristine beauty and glory of the culture of Tamil Nadu have something to offer to others.

A Tourist is not a nameless or faceless person but a unique advertisement medium who will send in his wake numerous others by talking about his experiences and the places he had seen with his own eyes. Therefore this is a continuing affair and needs to be built up from year to year.

With the growing awareness of the need for developing tourism as a foreign exchange earner, the need to provide the infrastructure for the development of in-tourism should not be overlooked. Because both are complementary to each other, urgent is the need for proper development of in-tourism in Tamil Nadu by meeting the growing demand for information and services.

A beginning can be made

The in-tourist traffic usually travels in small family groups by train, or by car. Tourist buses are availed by large batches. In all the cases the know-how about routes, timings and places of stay are only by hear-say. The Tourist buses, though they



296 Luxurious tourist buses are available in all parts of Tamil Nadu

are profitable business the owners don't bother to acquaint themselves with the know-how needed to be of help to their passengers, whom we look upon as tourists. A high degree of proficiency is however seen in tourist bus operators in Bangalore. The Police Department in Madras and some important centres in the State provide some minimal assistance by way of providing protected parking zones, etc. More positive approach on the initiative of other departments of the Government or local authority may help promote in-tourism to a larger extent. Even if we can think of protected bath rooms in parking zones meant for Tourist buses, it would make the beginning of an effort in this direction.

Tourism is developing so fast in the world, as a major industry that one has to keep pace with the developments on all fronts both abroad and inside the country.



If you happen to be in South India in mid-January, you will have occasion to witness a unique harvest festival. To the farmer and cow-herds in Tamil Nadu, Mysore and Andhra Pradesh it is a special occasion for community rejoicing, reminiscent of ancient pastoral traditions. Rice fields are harvested and sugarcane is ripe for juice-extraction. This is the time for the farmers to relax and enjoy the fruits of their year's labour. The air is crisp and cool and there is laughter and mirth in the simple homes of peasants, now looking brighter with their freshly white-washed walls.



The cattle, particularly the bullocks, are elaborately painted, covered with silks and ornamented with garlands of conch-shells, bells and flowers. In the evening, all the cattle are collected and taken in a grand procession to the beat of drums. In Mysore this ritual ends in an open field where they are made to jump over a long line of hay set on fire as excited crowds watch the fun.

Both in Mysore and Andhra Pradesh the festival is called Sankranti and as in Tamil Nadu cattle is the centre of attraction.

harvested rice is cooked into a special dish called "Pongal" and then offered to the cow. Golden paddy ears are bunched and tied to the roof prominently near the entrance, to the house. The domestic cattle are washed and the draught animals are given a complete two-day holiday. In the evening, all the cattle of the village are collected and led out in a procession to the beat of drums and music. In some parts of Tamil Nadu, particularly in the Tiruchi district, a peculiar kind of bull-fight is held in which unarmed young men try to wrest



In many villages in Andhra, cock-fights, too are held.

In Tamil Nadu where the festival is called Pongal, it is a two-day rejoicing in which age-old custom rather than religion plays the dominant role. The freshly



bundles of currency notes tied to the horns of ferocious bulls.



Places of scenic beauty abound in Tamil Nadu

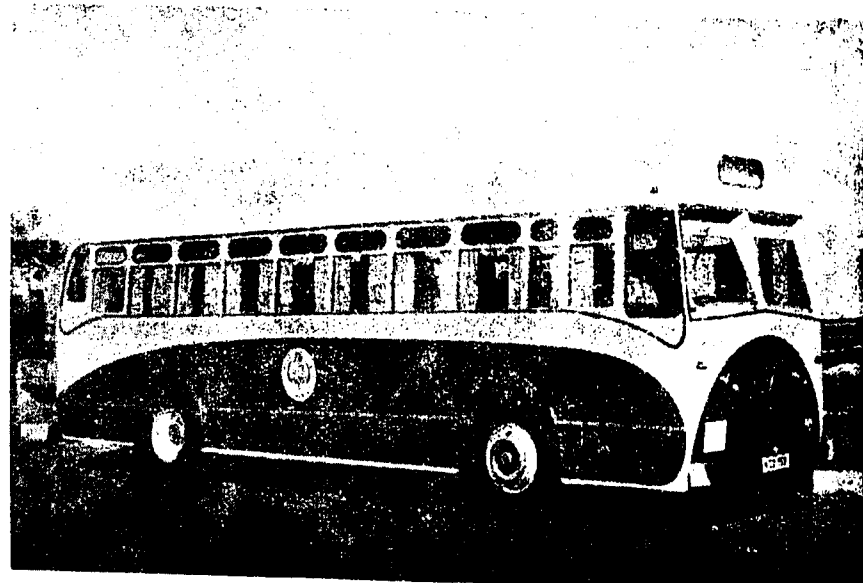
the people of other States and also to foreigners. The pristine beauty and glory of the culture of Tamil Nadu have something to offer to others.

A Tourist is not a nameless or faceless person but a unique advertisement medium who will send in his wake numerous others by talking about his experiences and the places he had seen with his own eyes. Therefore this is a continuing affair and needs to be built up from year to year.

With the growing awareness of the need for developing tourism as a foreign exchange earner, the need to provide the infrastructure for the development of in-tourism should not be overlooked. Because both are complementary to each other, urgent is the need for proper development of in-tourism in Tamil Nadu by meeting the growing demand for information and services.

A beginning can be made

The in-tourist traffic usually travels in small family groups by train, or by car. Tourist buses are availed by large batches. In all the cases the know-how about routes, timings and places of stay are only by hear-say. The Tourist buses, though they



296 Luxurious tourist buses are available in all parts of Tamil Nadu

are profitable business the owners don't bother to acquaint themselves with the know-how needed to be of help to their passengers, whom we look upon as tourists. A high degree of proficiency is however seen in tourist bus operators in Bangalore. The Police Department in Madras and some important centres in the State provide some minimal assistance by way of providing protected parking zones, etc. More positive approach on the initiative of other departments of the Government or local authority may help promote in-tourism to a larger extent. Even if we can think of protected bath rooms in parking zones meant for Tourist buses, it would make the beginning of an effort in this direction.

Tourism is developing so fast in the world, as a major industry that one has to keep pace with the developments on all fronts both abroad and inside the country.



If you happen to be in South India in mid-January, you will have occasion to witness a unique harvest festival. To the farmer and cow-herds in Tamil Nadu, Mysore and Andhra Pradesh it is a special occasion for community rejoicing, reminiscent of ancient pastoral traditions. Rice fields are harvested and sugarcane is ripe for juice-extraction. This is the time for the farmers to relax and enjoy the fruits of their year's labour. The air is crisp and cool and there is laughter and mirth in the simple homes of peasants, now looking brighter with their freshly white-washed walls.



The cattle, particularly the bullocks, are elaborately painted, covered with silks and ornamented with garlands of conch-shells, bells and flowers. In the evening, all the cattle are collected and taken in a grand procession to the beat of drums. In Mysore this ritual ends in an open field where they are made to jump over a long line of hay set on fire as excited crowds watch the fun.

Both in Mysore and Andhra Pradesh the festival is called Sankranti and as in Tamil Nadu cattle is the centre of attraction.

harvested rice is cooked into a special dish called "Pongal" and then offered to the cow. Golden paddy ears are bunched and tied to the roof prominently near the entrance, to the house. The domestic cattle are washed and the draught animals are given a complete two-day holiday. In the evening, all the cattle of the village are collected and led out in a procession to the beat of drums and music. In some parts of Tamil Nadu, particularly in the Tiruchi district, a peculiar kind of bull-fight is held in which unarmed young men try to wrest

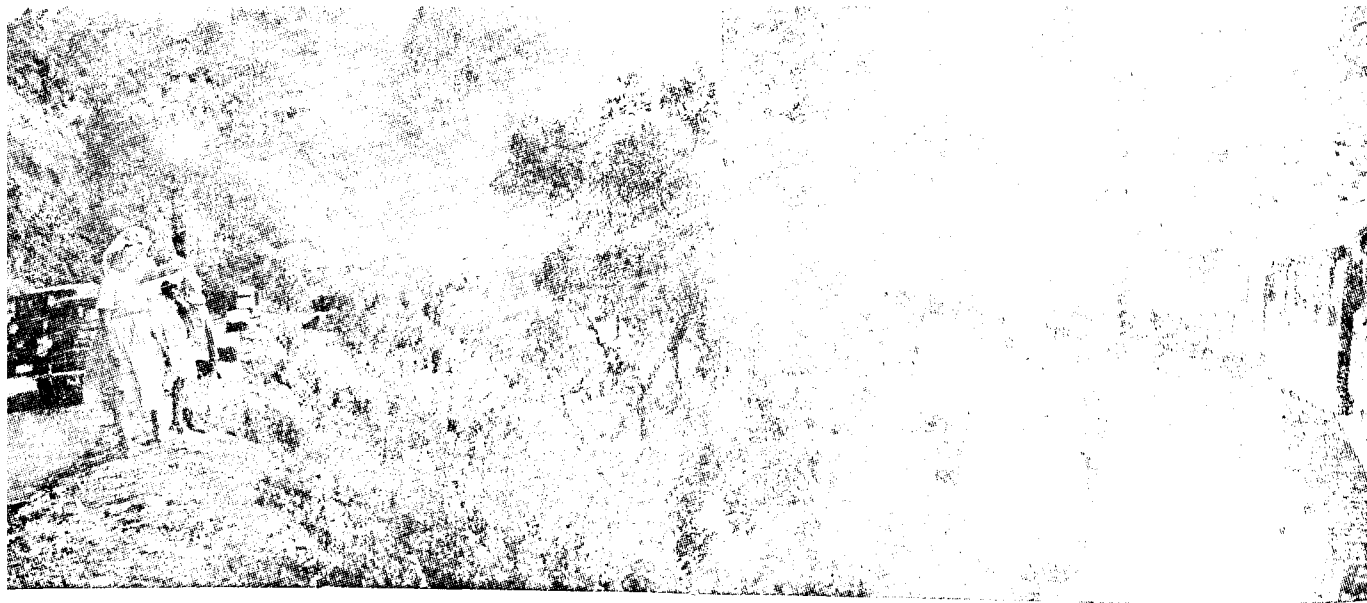


In many villages in Andhra, cock-fights, too are held.

In Tamil Nadu where the festival is called Pongal, it is a two-day rejoicing in which age-old custom rather than religion plays the dominant role. The freshly



bundles of currency notes tied to the horns of ferocious bulls.



There goes that unique mountain train of the Nilgiri Hills

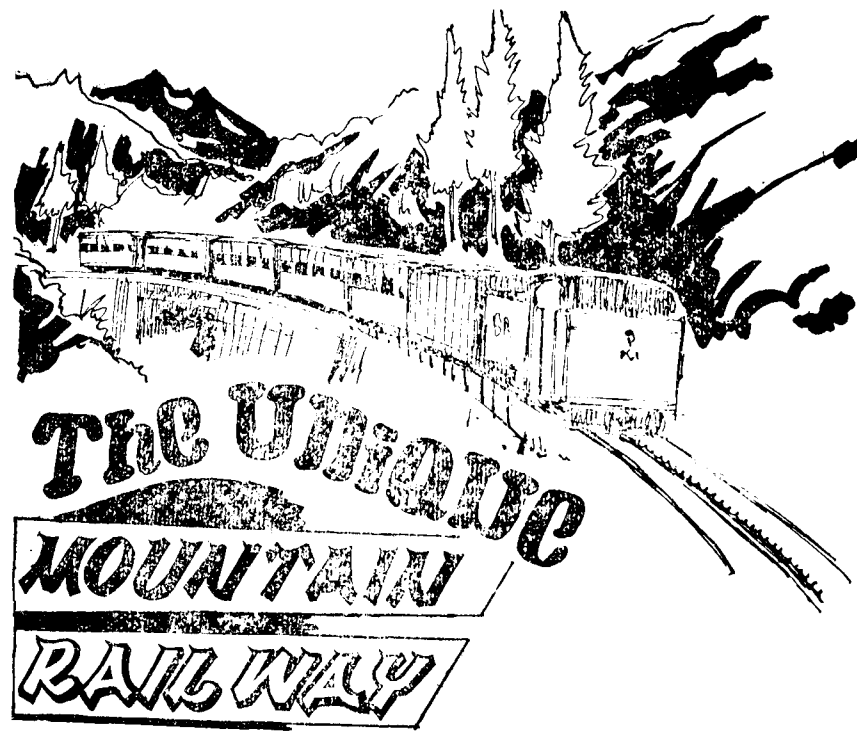
The Nilgiri Mountain Railway commences from Mettupalayam, the terminus of the broad gauge system of the Southern Railway, and runs to an altitude of 7,500 feet to Ootacamund, one of the prettiest summer resorts in South India. The Scheme for the construction of a railway from Mettupalayam to Coonoor, a distance of 16.75 miles, dates as far back as 1854, but it was not until 1891 that the work of construction was started by the original Nilgiri Railway Company. In 1894, the Nilgiri Railway Company went into liquidation and a new company was formed in 1896. The line was finally opened in June 1899. On 1st January 1903, the Government purchased the new company and work was taken in hand to construct the 11.75 miles from Coonoor to Ootacamund. The line was completed in October 1908.

Ootacamund is situated in the heart of the blue Nilgiri mountains. Unlike Darjeeling and

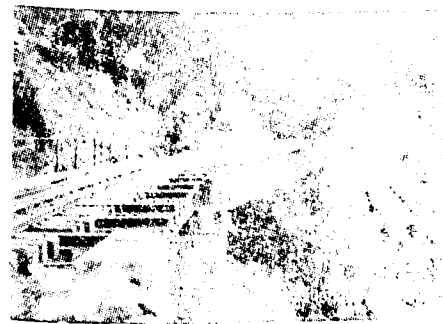
Simla it lies on a plateau giving the appearance of a vast park. To the north-west of 'Ooty' are picturesque downs. To the west, south and south-west rise ranges of lofty hills adding to the grandeur of the scenery.

From Mettupalayam to Kallar, the first station, a distance of

about four and three quarter miles, the line runs for the most part skirting the several hills, on a steep ascent the steepest gradient being 1 in 40. Beyond Kallar, the line takes a serpentine course through sloping hills necessitating sharp bends, which have, in many cases, a curvature of 17½ degrees. The steepest gradient between



Kallar and Coonoor, a distance of twelve miles, is 1 in 12.5, after Coonoor the steepest bits being 1 in 23.31. Over the 20 miles between Mettupalayam and Ootacamund, there are 16 tunnels totalling 3,090 feet in length, 14 of these lying between Kallar and Coonoor. The line passes over many girders and viaducts, of them with spans as long as 100 feet, constructed over deep precipitous ravines. The depth of these ravines has its bed at about 81½ feet below the rail level. A large number of the bridges are situated at entrances to tunnels



and on sharp curves, involving great engineering skill.

Special Devices

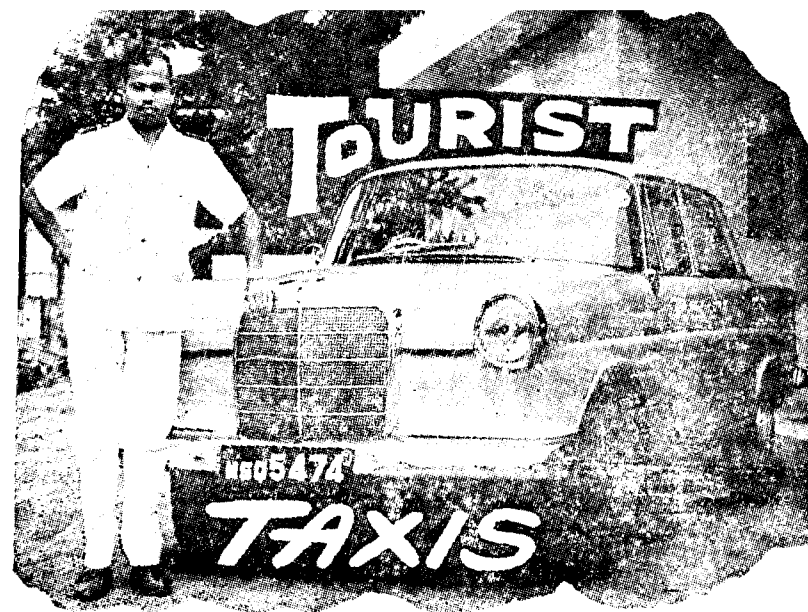
Owing to the extraordinarily steep character of the railway line between Kallar and Coonoor, rack bars on special chains, have had to be provided at several places centrally between the track rails. These rack bars are laid on the slope of the railway line itself and form a sort of ladder up which the engine climbs and pushes the train. These racks are laid on a double row about one and three quarter inches



apart and two and half inches above the running rail so that the tooth of one is directly opposite the gap of the other to ensure that the engine pinions do not work off the rack when negotiating curves. The teeth of the rack are spaced 4.72 inches centre to centre, and correspond to the pitch of the cogs of the driving wheel fitted to the locomotives. Special rack entries are provided for enabling the engine to enter the rack portion smoothly and to ensure proper meshing of the cogwheels of the engine with rack bars.

The locomotives are tank engines of the four cylinder compound type, the high pressure cylinders working the adhesion engine and the low pressure cylinders superimposed to work the rack engine. Steam acts through a separate set of cylinders and drives a special crankshaft connected by spur gearing with the axle whereby oil is forced by steam through a pipe on the pinions and thereby to the rack bars. This oiling is very essential to prevent undue wear on the rack bars which are subjected to heavy strain when engines are ascending.

Trains are pushed up and hauled down the track, thus obviating the danger of vehicles escaping by parting, as a result of couplings giving way. In view of the steep gradients the locomotives are provided with four independent brakes for controlling them. They are the hand and vacuum brakes for adhesion, the hand brake for the rack, and the air-compression brake. The hand brake operates on the rack wheel much in the same way as the brakes of a motor car. The air compression brakes are for use on descending trains. On such trains the engine is in front but with chimney trailing. But the engine is kept in forward gear and air is allowed into the cylinders and compressed by the pistons. The braking effect of the air compression brakes is controlled by two receiver valves 'low pressure' and 'high pressure.' By shutting these valves gradually, the braking effect is brought to a maximum, and by opening these valves gradually, the braking effect is reduced to a minimum. Besides, all coaching and goods vehicles are provided with separate brake both for the rack and adhesion. A vacuum brake lever is provided on each vehicle and for operating these in emergencies a brakesman travels on each vehicle. The speed of the train is generally maintained between eight and nine miles an hour on steep gradients of the track, and 20 miles an hour on comparatively easier sections.



Special tourist taxis—all four-seater, 14 h.p. vehicles—have been introduced in Madras City and in important towns for the benefit of tourists who prefer travelling in private, chauffeur-driven cars. These cars do not have the usual double-colour and meters.

The Government of Tamil Nadu have amended the Motor Vehicle Rules to empower officials of the

Tourist Department to inspect these taxis and report on their working. In Tamil Nadu 619 such taxis are plying. In addition, inter-state permits have been given to 20 taxis to ply in each of the States of Andhra, Mysore and Kerala.

The conditions for licensing these taxis are that the chauffeurs

should be able to speak English well. Before they are engaged, they are given a three-day re-orientation course at the Government of India Tourist Office, Madras, where they learn how to show small courtesies and be of real help to the tourist. They are all given trim, white uniforms and are enjoined to maintain high standards of personal hygiene. A Code of Conduct has been drawn up by the Department, to which they should scrupulously adhere. They are forbidden to indulge in touting on behalf of shops, hotels, restaurants, etc., or to accept commissions or favours from the tourist. They cannot act as tourist guides. Every tourist taxi is required to maintain a log-book and a complaint book.

Tourists are made aware that they could lodge a complaint against the car drivers if they are dissatisfied with his service or behaviour, with the local Tourist Centre.



Painted Stork

THE VEDAN- THANGAL BIRDS SANCTUARY

In the village of Vedanthangal in Madurantakam taluk of Chingleput district nestles one of the most unique and fascinating Bird Sanctuaries in India. It is 54 miles from Madras. The approach to it is along the well maintained, Grand Southern Trunk Road up to the 41st mile-stone; where it branches off west to Vedanthangal for a distance of 13 miles. The last thirteen miles of diversion from the main road make a very pleasant drive through a wooded country.

This water birds sanctuary has been in existence for over one and a half century. The lake, about 74 acres in extent, situated amidst sylvan surroundings and nurturing a mass of sturdy Barringtonia acutangula trees with large spreading crowns in its centre, attracts every year between September and March, thousands of water birds to its trees for nesting and breeding. The lake bund supported by tall semi-evergreen trees on either

side is ideal for visitors, at the same time the lake waters protect the birds from its enemies, specially wild cat and mangrove who cause enormous damage to eggs and chicks. Coupled with this security, the care and interest evinced by the villagers in protecting them seems to have endeared the birds to this lake. The birds droppings are very good manure; hence the villagers give the birds all manner of protection.

In short, immunity from danger, facilities to nest and breed, availability of food in these waters and the adjacent numerous lakes are considerations which appear to weigh with these feathered visitors to congregate at this lake from distant centres during the breeding season. Year after year, the birds have been colonising these trees and deserting them when the lake gets dry and the fledgelings are able to take to wing.

Here the handsome snow white egret is quite at ease with its neighbour, the cormorant, a jet black ugly looking bird. They all live together, nest together breed together on the same tree and feed together in the same lake. The Barringtonia trees are seething with "millions" of birds. There is always a stream of fresh arrivals and departure seemingly purposeless. Some are seen hovering, some sliding, some flapping, some rolling, some preening, some diving and some slashing the water chasing fish. Egrets, herons, cormorants and ibises form a major portion of the bird population in the lake.

There is perfect orderliness, harmony and punctuality in the movement of the birds. The first to arrive at the breeding ground are the male adult birds. They are followed by female birds. The immature birds come last. The order is reversed on



Little Egret

the return journey. The young birds about a couple of months old, not capable of long and sustained flights, fly first with several halts on the way and the parent birds follow them. It surpasses one's imagination how the young birds which fly for the first time (without the aid of charts, maps and compass) know the exact flyway sometimes spread over thousands of miles and reach the correct destination.

The Darter

This is popularly known as the snake bird, on account of its long slender neck, when it swims, only its head is visible over the surface like the hood of a snake and the rest of its body is completely under water. It is of the size of a small duck with silvery streaks on the back and brownish head and neck. Its long bill is

as sharp as a javelin. This bird is found throughout the Indian Union, Africa, Malay region, Australia, and South America, haunting river banks and swamps singly or in pairs and sometimes in immense flocks.

Spoonbill

This bird, of the size of a full grown duck but with longer feet and neck, is so called on account of its spoon-shaped bill. It is of an Australian species of family related to storks. It is found throughout the Indian Union, Burma, Ceylon, Iraq, Japan and Amsterdam. With its broad flat bill it is able to sift small animals from the mud of ponds and lakes. Spoonbills are supposed to be dumb as not a note or sound escapes from them. They look solemn and dignified.

Pelican

The largest bird seen in the Sanctuary is the pelican though few in number. It is about the size of a goose but short and stumpy with the lower half of the beak developed into a deep pouch, in which fish are carried to the youngsters in the nest. Its wing spread is about eight feet. Being a huge bird it takes off with effort to begin with and when settled down in the air it is capable of sustained flight, not inferior in majesty to that of the Eagle, the lord of the air. These birds have perfected an efficient method of fishing in flocks as wolves and wild dogs do. The birds form themselves into a crescent formation, each bird stationed a yard from its

neighbour and swim together from deep waters to the shore driving the terrified schools of fish before them. When the fish reach shallow waters, and start leaping about desperately they lower their massive and commodious bills and scoop their pouches full.

Apart from the water birds, there is quite a good collection of the common resident birds on the trees around the lake such as king fishers, king crows, India robin, wagtail, ashy crowned finch-lark, copper smith, koel, ring dove, bay-backed shrike, pied bush-chat, babbler, purple sun bird, brahmyny mynah, common mynah, hoopoe, the green bee eater, weaver bird, red vented bulbul, golden oricle and blue jay.



Spoon Bill



Mudumalai wild life sanctuary

There is only one place in the whole of India where one can view with ease at one time a single herd of more than four hundred spotted deer, seventy to eighty Gaur (Indian Bison) or forty to fifty elephants—and that place is Mudumalai Wild Life Sanctuary in the Nilgiris District, Tamil Nadu.

This sanctuary is 124 square miles in extent. Here the animals wander as they like in perfect peace and freedom. Herds of Gaur (Indian Bison), the largest of the bovines now surviving in the world are the greatest attraction. Many biologists from foreign countries visit Mudumalai to study the behaviour of the Gaur.

Mudumalai can be reached by bus either from Ootacamund or Mysore. The Ootacamund-Mysore road passes through the Sanctuary. It is 42 miles from

WILD LIFE SANCTUARIES IN TAMIL NADU

Ootacamund and 58 miles from Mysore. The nearest Air Port is Coimbatore and the nearest Railway Station, Ootacamund. A number of buses ply daily between Ootacamund and Mysore. The bus stops at Abhayaranyan Rest House and also at the office of the Range Officer, Wild Life No. 1, Kargudi.

There are three Rest Houses in the Sanctuary, each with two suites of rooms. There is a cook attached to each Rest House who serves both vegetarian and non-vegetarian meals. Reservations for accommodation and joy rides on elephants, can be made by advance booking. The charges are moderate.

Tamed elephants of Mudumalai Sanctuary



To enable visitors to view wild life with ease and comfort, tree-top machines and observation towers have been built in suitable places amidst natural surroundings over-looking salt flats and water holes frequented by wild animals.

The best period to visit the Sanctuary is between February and June when the tall elephant grass dries up increasing visibility considerably. The most suitable time to go round the Sanctuary is between 6 and 9 in the mornings or 3 and 5 in the after-noons.



A bison herd

involving change of train at Thiruthuraipeondi. There is a Forest Rest House right in front of Point Calimere Railway Station facing the sea.

As the winter sets in, a huge wave of insectivorous birds roll down to winter at Point Calimere attracted by the abundance of insect and vegetable food.

Very frequently a shoal of dolphins visit the sea-shore. As many as fifty dolphins were seen in a single school.

A sanctuary for the tiger, the first of its kind in India was constituted at Mundaathurai in Tirunelveli district. The extent of the sanctuary is 200 square miles.

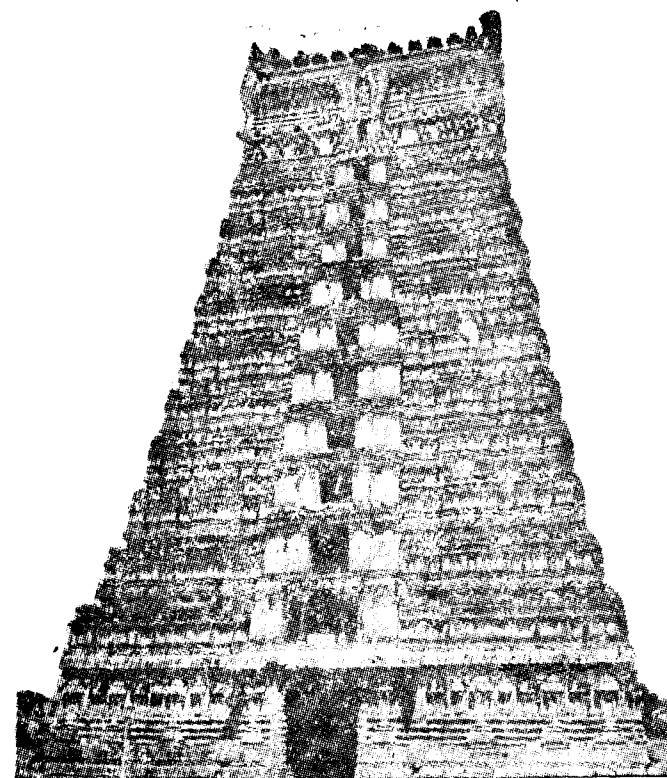


Madras deer park

The Deer Park 595 acres in extent, adjacent to Raj Bhavan, Guindy, is extremely popular both with the home and foreign tourists. This park with a network of roads, foot-paths, nature trails, lakes and ponds, all situated amidst sylvan surroundings offer good opportunities for viewing wild life. The main attraction of this park is the Indian Antelope popularly known as the Black Buck, found nowhere in the world except India. The Park also affords shelter to spotted deer, and white buck.

Point Calimere in Thanjavur district is noted for its incredible congregation of Black Buck, Spotted Deer, Wild Pig and heavy concentration of migratory waterfowl particularly flamingoes which is the chief attraction of this place.

Point Calimere is a night's journey from Madras. The most convenient train is Rameshwaram Express



These lofty and lovely gopurams which are still in excellent state of preservation, were constructed many hundred years ago at the instance of various rulers who had an eye for beauty.

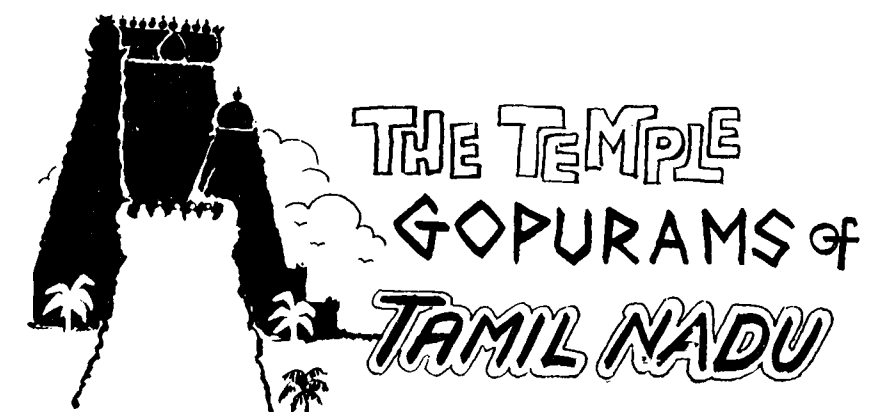
The most striking feature of a South Indian gopuram is that it is full of minute, intricate and ornamental carvings, depicting vivid scenes from domestic life, figures of gods and goddesses, animals, birds and snakes. In many cases, the hair, eyes, noses, mouths and sometimes even the teeth and the nails of the fingers and toes are executed with remarkable accuracy and precision. The gopurams of the South are distinctly a class by themselves and have no parallel elsewhere. Commenting on the architecture of the gopurams, an art critic, Fergusson writes : " These gopurams both in form and purpose, resemble the Pylons of Egyptian temples".

Srirangam, otherwise known as Bhuvaikuntam, is the proud possessor of many artistic gopurams which amaze a visitor. The main entrance to the town is through a gopuram named Rayagopuram, constructed by Achuta Raya of Vijayanagar Empire. It is in an

A visitor to the South will be awe struck at the sight of gigantic gopurams or monumental gateways, which are a marked feature of the South Indian temple architecture. These gopurams, which dominate the skyline for miles around, often rise to a height of nearly 61 m. (200 feet). They represent the rich and artistic heritage of South Indian art and architecture and symbolise the ancient Dravidian culture and civilisation.

In a temple architecture, there are gopurams on all the four sides, which are mainly entrance to the shrines. In the infinite diversity of their details and the minute variety of the carving lie the magnificence and grandeur of these astounding edifices. The super-structure of a gopuram consists of

several storeys, each becoming smaller in size as it goes up. The early examples of gopurams are of stone, but the later structures are invariably found to be made of bricks. To reach the top there are steps inside and one can have a panoramic view of the surrounding area from the top. Conversely people bound for these temples either by walk or by carts are guided by these gopurams from miles away.



unfinished state. It had been built purely of huge granite stones, and no mortar has been used in its construction. It stands 46 m. (150 feet) high and 40 m. (130 ft.) broad, and the gateway measures 14 m. (45 ft.) by 7 m. (22 ft.). The granite stones were brought to the place from hills many miles away from the town. It is difficult to imagine how those responsible for the construction of this edifice were in a position to lift such heavy boulders to a height of 46 m. (150 ft.) when cranes were not even invented!

Yet another majestic gopuram in Srirangam is the Vellai or the white gopuram which is embellished with figures of various deities all over it. This gopuram is now under renovation by the UNESCO team.

Tanjore has a good number of temples of which the most important one is that of Sri Brihadeeswara

— a magnificent monument to the power and glory of the Cholas. The temple was conceived by Raja Raja Chola, one of the prominent rulers of the Chola dynasty and built by his master architects. The pyramidal tower

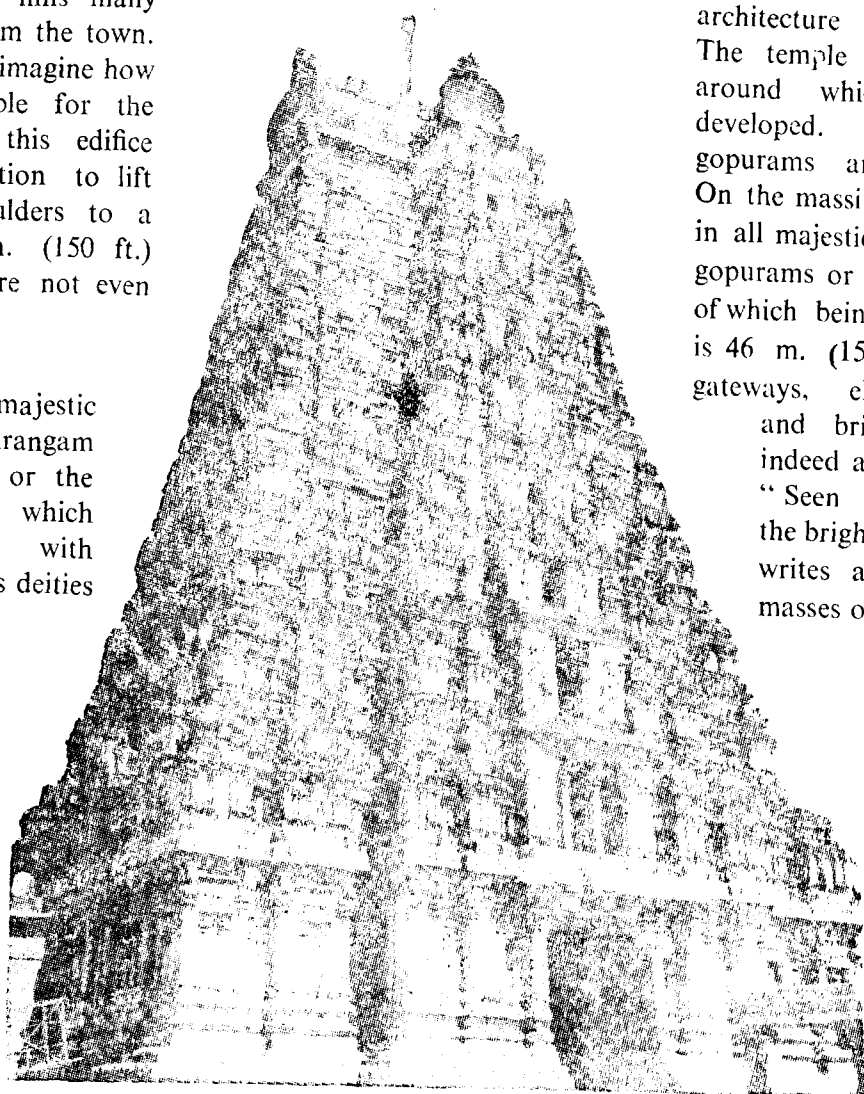
or gopuram, built in the purest Dravidian style, rises to a height of 67 m. (220 ft.). It presents an imposing appearance, dwarfing as it does everything else in the vicinity. It contains fourteen storeys all of which are richly embellished on the outside with stone carvings portraying various

it never casts a shadow on earth despite its great height.

Among the numerous monuments of archaeological and antiquarian interest in Madurai, the most striking is the famous Meenakshi temple, which is an exquisite example of Dravidian architecture and sculpture. The temple is the focal point around which the city has developed. There are nine gopurams around the temple. On the massive outer walls stand in all majestic grandeur the four gopurams or gateways, the tallest of which being the south which is 46 m. (150 ft.) high. These gateways, elaborately carved and brightly painted are indeed a feast for the eyes. "Seen at a distance with the brightness toned down", writes an art critic, "the masses of colour thrown on the brick-work of these pyramidal towers are peculiarly effective and even when seen close the general result is very striking."

R a y a g o-
puram, here is
also a magnifi-
cent structure,

though unfinished, is another noteworthy tower in Madurai. The lowest storey of this structure occupies more than twice the space covered by any other gopuram and the sculptured figures are deeper cut



and richer in design, thus giving the tower a prepossessing appearance. The door-posts are monoliths, 15 m. (50 ft.) high and 1 m. (3 ft.) square, carved with exquisite scrolls of foliage. "It is obvious" says an author "that had all the storeys been built on the same scale and design, that would then have been the most magnificent temple tower of India."

Chidambaram, the seat of the Saivaitic cult, is sanctified by the famous temple of Nataraja or Siva who is worshipped in the form of Akasa or ether. The inner walls of the temple have four gopurams which are noteworthy. They face the four points of the compass. Of the four great towers the northern one is the tallest, while the other two contain perfect sculptural representations of the 108 postures relating to Natya Sastra or the science of dancing. The fine carvings, which arrest one's attention, are on the niches of the four main gopurams. These towers when lighted at night are visible from afar and in ancient days, served as beacons to mariners.

Kanchipuram, the Golden City of a thousand temples and one of the seven sacred cities of India, is a great centre of Hindu pilgrimage drawing thousands of devotees from all parts of the country. The temple of Varadarajaswamy, the biggest shrine in Kanchipuram, is built on a hillock and Lord Brahma is said to have performed a great sacrifice here. The two gopurams over the eastern and western entrances are prominent landmarks for miles around. The south gopuram of the Ekambara-

natha Temple at Kanchipuram is one of the largest in the South. This massive tower has ten storeys and is 57 m. (188 ft.) high.

The temple gopurams of the South, which are monuments of human patience, intelligence and skill, have withstood the ravages of time and stand as eternal landmarks of a glorious heritage. They

are a rare combination of grandeur, beauty and grace. They captivate the mind by their profusion of detail and perfection of outline and there is no suggestion of superfluity in the endless course of figures and designs. These great edifices, which bear eloquent testimony to the supreme genius of the architects of yore, are to be seen to be appreciated.



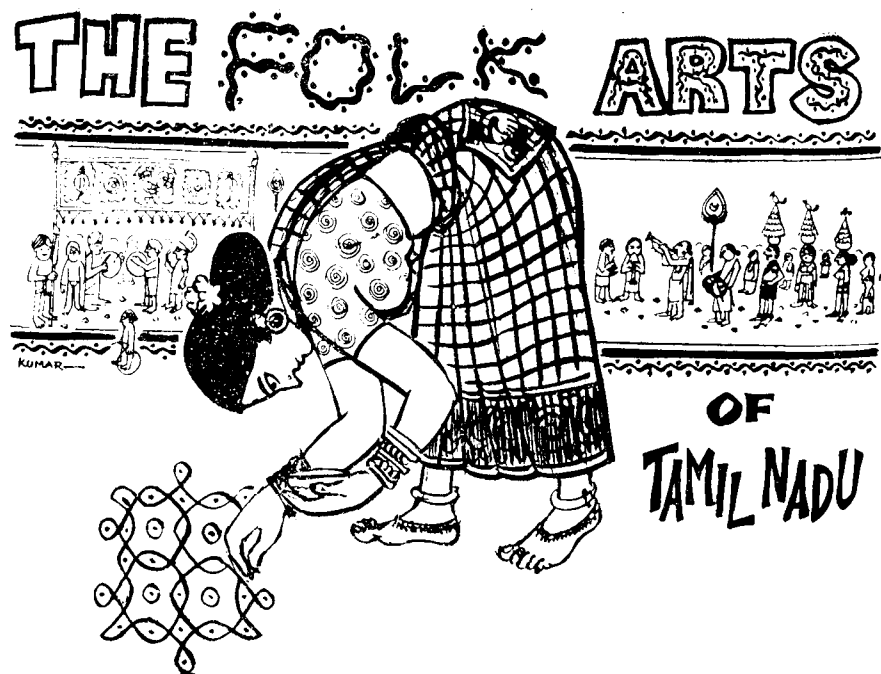
The first impact of a Bharata Natya performance on an audience which has never seen it before is one of surprise at the diversity of delicate and rather extraordinary movements.

A nation is best known through its plays and pas-times. The rustic folk of Tamil Nadu have their own recreational programmes to spend leisure hours in an artistic manner. They sing and dance in some central place of the village. To watch them perform a Kummi or a Kolattam on a moonlit night is a feast to the ear and eye.

Besides these entertainments provided by the people themselves, there are professional artists who give ballad music concerts and dances either in groups or solo, and stage dramas, especially during festivities that usually fall during summer months. Simplicity is the notable feature of these programmes. They are natural and free from inhibitions.

A deep reverential study of the folk arts of our people is bound to enrich our "Classical" arts, for the latter are as much a culmination of the former as they are products of aesthetical laws propounded by thinkers and seers.

The rustic folk are Nature's Children. The folk artists' imagination is spontaneous, daring and without preconception. It is elemental. The main difference between folk arts and classical arts is that



the former, unlike the latter has not been systematised and has no supporting theory or grammar. It is an unschooled art. The beautiful terracotta dolls made by the villagers, their simple drawings on the walls of houses, the pretty, though seemingly—complicated designs of 'Kolams' in the front-yard of their houses are all not only reflections of their wonderful imagination, but are indicative of their easy, natural approach to music and dance as well.

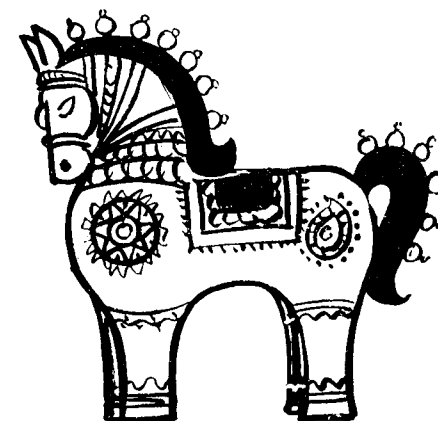
This glorious land of the Tamils, besides its hoary traditions in architecture, sculpture, the

classical arts and literature, is also the repository of a rich heritage of folk songs and dances. The ancient Tamil classics; Tholkappiyam, Silappadigaram, Agananooru, Purananooru, all contain numerous references to fine arts of the folk type. Rural life has been a spontaneous and perennial song from time immemorial. Its arts have always been deeply associated with all social and religious functions, with all festivities of happiness and joy. People irrespective of caste, colour or creed, men and women, young and old, have found joy in participating in these

cultural events and are profoundly familiar with the happy life that they promote.

Folk arts may be broadly classified under three heads, viz., Folk Music, Folk Dance and Folk Drama. Folk music includes songs of work and worship, marriage and ceremonial songs, children's songs and play songs and folk concerts like Villupattu, Lavani, Kaichilambupattu by professional troupes, etc. Folk dance includes Kummi, Kolattam, Pinnal Kolattam, Oyilkummi, Karagam, Kavadi, Poikkal Kudirai, Kaniyan Koothu, Chakkia Attam, Pulivesham, Vinindanai, etc. Drama includes Therukkoothu, Bommalattam and Pagalvesham. All these comprise both the rustic and the refined types.

Despite the boons of technology, the task of an agriculturer or a labourer still remains at laborious one. Yet, he cleverly manages to relieve the burden of his work and increase his productivity and efficiency with the help of song. It is by song and chant that his labour is regulated and stimulated. Evidently, labour set to music is labour lightened. However hard and monotonous the work may be, whether it be



the various agricultural operations fishing, load carrying or mixing mortar, his motto is "sing while you work and work while you sing."

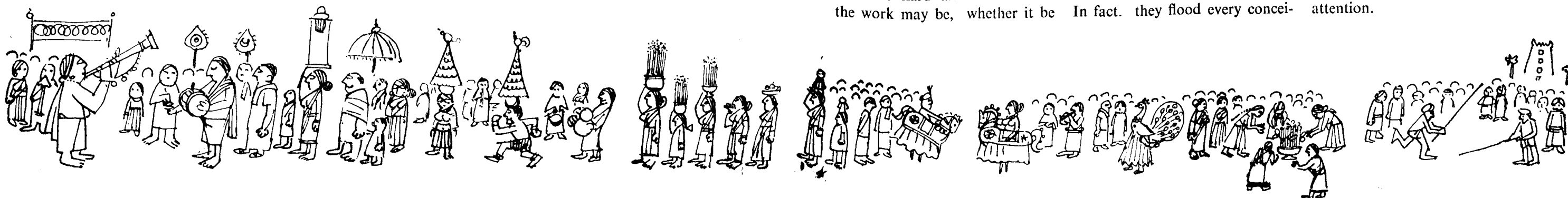
They Steal the show

A large number of folk songs is meant to be sung by groups, for most of the work is turned out of collective effort. There are some that are sung exclusively by men, others exclusively by women, and a few by both. However, it is the women, who sing the first song to the new born child, who get the lion's share. Numerous ceremonies and functions mark their lives, and not one is allowed to pass without music. They sing and lull the child to sleep, they sing to greet her coming of age, they sing to celebrate her marriage and nuptial. In fact, they flood every concei-

vable occasion with song. Their "nobus" and "vratas" are many, and each is marked by song. When inevitable Death comes, they have a song ("Oppari") for that too!

The professionals who put up Therukkoothu or sing ballads are itinerant and avail the seasonal leisure of the farmers. With minimum effort, the maximum effect is produced, be it ballad singing, instrumental music or the dance and drama both of which involves costume and other stage aids.

These professional troupes are also engaged to provide entertainments to the people, particularly during festivals when villagers from far and near attend the celebrations, some walking long distances, and others arriving by canopied and decorated bullock-carts. They camp in shady groves, cook their own food and offer worship to the deity in whose honour the festival is held. They attend all night shows of folk entertainments and return to their homes with a sense of exhilaration. Ballads on Puranic themes are staged in drama form for nights in succession and crowds sit under the sky and listen and watch them with rapt attention.





Folk Festivals

Folk festivals abound in dances also. Besides the main attraction of the ballad or the drama, there are always attractive dance items such as Karagam, Kavadi, Poikkal Kudirai, etc. The line of distinction between the amateur and professional dances is thin. Even so is the difference between the secular and the religious. In the beginning, perhaps, there were no professional or dancing groups. Everything was in the nature of community dancing or the religious rite. Gradually, however, specialisation by a few led to professional troupes who, on account of the greater organisation and orderliness of their performances found favour with the people.



Work and Worship

Generally, all folk arts have a rich spiritual atmosphere which is sometimes subtle and sometimes strong. They are full of gods and goddesses and incidents and stories from their lives are the constant theme.

The untutored village children play about in the field, reciting sweet rhymes that describe their family deities. The labourers at work in different quarters sing in the name of the Sun God, the Rain God, the Elephant God and all the other deities they worship.

The beggar wandering from place to place sings not only devotional songs but often tells pastoral tales in rhythm. The villagers whose life is one of hard toil has constant vigil in the Universe be he in the field or at



any other work. Thus his work becomes his highest form of worship, though of course, he formally attends a function in his tiny village temple once or twice a year.

It is of special interest that one is able to experience the vitality of folk music and dance, only when they are heard and seen in their natural setting. The peasants can sing only when they are at a particular piece of work and in the customary environment. To join them in their work is a thrilling experience.

As a collector of folk music and dance, I had the experience of actually taking part in their various activities, recreational music and dance, and felt the thrill of it while doing extensive research on the subject throughout the Tamil Nadu for a thesis, and later on as the Research Officer for folk arts for the Madras State Sangita Nataka Sangam.

Temple Culture

The temples of Tamil Nadu have been greatly responsible for a continuous interaction of cultural forces between the classes and the masses, the refined and the rustic. These temples provided periodical festivals in which music—particularly of the nagaswaram—

occupied a prominent place. The masses greatly benefited by it. Many of the great musicians of the past lived in villages, keeping their ears and mind open to all healthy influences, they did not think it beneath their dignity to assimilate in their music, such artistic forms as came to them from the masses. Whatever they felt would add to the beauty of their own art, they incorporated without hesitation.

There has thus always been a continuous process of free exchange. There is evidence of this in the fact that the 'chayas' (melodic contours) of many of the important ragas of carnatic music are seen in the folk melodies

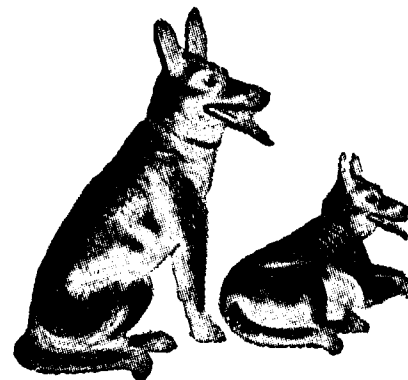


high thinking was the way of life and wherein the classes and the masses lived together and shared everything.

Folk music is rich in its variety of musical forms like kummi, Kanni, odam, kavadi-chindu, nondichindu, vazhinadai-chindu and lavani. In the sphere of instruments also folk arts has its own contribution to make; take udukkai for instance, which has developed fine styles of play. Udukkai is an example of compound musical instrument. And folk music drums are found in so many varieties!

Our villagers have always had a good deal of artistic creative faculty and they still have it. Most of their tunes and texts are all their own. They have enjoyed dance, drama and music for they were also participants. When they are impressed by something new, they are inspired by it and not merely led to imitate it. These talents and virtues must be kept alive and the folk arts preserved in all their vitality and gusto.

of Tamilnad : a typical example of this interaction of culture. Kuravanjis and other dance dramas staged in temples especially during festivals are midway between the rustic and refined types of arts and contain the essence of both. All these traditions add up to a social background wherein simple living and



KURALAGAM
KHADIKRAFT EMPORIUM ESPLANADE
Phone: 26742-21552-21553

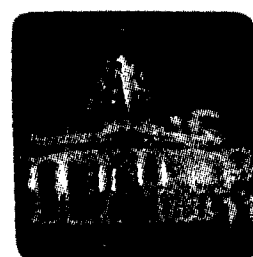
*The one place
for
all things*

A MUST FOR EVERY
TOURIST VISITING
MADRAS

Registered No. M. 8656

TAMIL ARASU

WELCOME
TO THE LAND
OF GLORIOUS
CULTURE



Come to the land of the Tamils where ancient culture and civilization have been preserved in myriad forms... Bharata Natyam...rich Karnatic music...great literary classics...imposing temples...sculptural and iconographical masterpieces...And Nature's charms of tropical vegetation and lush rivers are as hospitable as the people.

For an unforgettable holiday come to the south.
Places of interest

Madras - Mahabalipuram - Kanchipuram - Chidambaram
Tanjore - Srirangam - Madurai - Courtallam - Kanyakumari
Rameshwaram - Ooty - Kodaikanal - Yercaud.

Contact:
The Director of Information, Publicity & Tourism,
Government of Tamil Nadu, Madras-9.

R.R. 482 / 170
P
Tamil Arasu

FORTNIGHTLY 5th NOV 1970 35Ps

9853/55

P



KHADI and VILLAGE INDUSTRIES

MADE IN INDIA

PATRONISE KVIC PRODUCTS
FOR WELFARE OF FOOD
PRODUCING PEASantry

KHADI AND KHADI SILKS
SOAPS, BRASSWARES MUD
& CERAMIC UTENSILS
MOULDS & LEATHER
HANDICRAFTS, PURE HONEY &
EDIBLE OILS AND A HOST OF
OTHER DELICATE HANDICRAFT
ITEMS.

AVAILABLE AT
ALL
KHADI & VILLAGE
INDUSTRIES SALES
Emporia

Issued by:

Tamil Arasu

Vol. 1

NOVEMBER 5, 1970

No. 9

CONTENTS

	Page
Those Twenty Days	5
Functional Literacy Project	9
Madras City Administration	11
Ophthalmic Hospital's Clinics	15
Tuticorin Fertiliser Complex	19
Man-power needs of Electronics Industries	20
Electric Typewriter—Manufacture in Madras	21
Yercaud—Poor Man's Ooty	27
How to grow Banana	29
Concessional Finance for Industries in Backward areas	31
The Vachakkarapatty Highway Robbery	33
CARE-assisted School Meals Project	37
Kendal awards for Tamil Nadu Police	39
Schemes for Ceylon Repatriates	41
The Jamia Millia	43
The Agaram Project	44
Children's Painting Competition	46

Cover Page:

Thiru V. R. Nedunchezian on return from a month's global tour was profusely garlanded and greeted with warm affection by a large gathering of well wishers, including the Chief Minister at Air Port on 28th October 1970.



THOSE TWENTY DAYS

M. KARUNANIDHI

7. GOLDEN AGE OF ROME

Scanning with interest our photographs yielded by the automatic camera at the Tivoli Garden, we returned by Car to Rome. And during that return journey, the camera of my mind unfolded before me some of the portraits of the heroes in Roman history.

How strange, and how spicy too, is the story of that soil famed as the "Eternal City" by the authors of European history! The record of the life and deeds of ancient Romans like Julius Caesar, Mark Antony, Brutus,

Pompey, Augustus, Claudius, Nero and Marcus Aurelius; the biographies of Garibaldi, Mazzini and Benito Mussolini; the spectacle of the Envoys of the Pandyan King in the court of Rome; and the hoary ties and trade relations between that country and Tamil Nadu—all these flashed and faded away, on the screen of my mind.

My memory also recalled the splendour of the trade of ancient Tamil Nadu, as recorded graphically in *Pattinappalai*: "Steeds from across the seas and loads

of pepper delivered by barges from inland; gems and gold from the northern hills, sandalwood and *akhil* from the western ghats, pearls brought from the southern sea and coral from the eastern sea; goods from the plains of the Ganga and produce from the banks of the Cauvery itself—a resplendent sight, the scene of active prosperity

Reverend Father Beschi, fondly called Veeramamunivar here, hailed from Italy known for its "twin ways of life, prosperity of three kinds and joys seven in number". Dedicated to Tamil language and literature, he is eulogised to this day for his masterly "dissertation on Tamil grammar in its five aspects". Before him, had come to Tamil Nadu the savant Robert de Nobili. These two great men were precious pearls presented to Tamil Nadu by Italy. Perhaps they were in the nature of return-gifts sent by Mother Italy to Mother Tamil, in exchange for the pearls of Korkai that had reached Rome in the earlier times!

Idea-pictures such as these swept through my mind, to be followed by the thought-impression of the statue of the author of "*Chathuragaradhii*", installed on the sea-shore of Madras by a grateful Tamil Nadu, in respectful token of appreciation of his yeoman service.

Plato on Republic

Greece and Rome are acclaimed as the cradles of civilisation. It would be apposite here to recall

what Plato, the towering intellectual of Greece has said about a Republic—that a country which has adopted the republican form of Government is verily like a ship afloat in the midst of buffeting waves; and that the Government therein would keep changing according to the will and wishes of the people, much in the manner of the vessel swaying to the rhythm of the waves.

The history of Rome provides a vivid example of this theory of Plato. The Romans founded their Republic in the year 509 B.C. The influence of the Senate steadily increased from then onwards and it so happened that the Senate came under the domination of the Lords. So the citizens forgathered and established a forum of the people, known as the *Consugium Plebeium*. On behalf of the Senate, two Consuls administered the affairs of the country. The House of the people in its turn, created "tribunes". The *Consugium Plebeium* was little more than a name to start with but in course of time, it grew in strength, through the courage and wisdom of the tribunes, until its influence came to be equal to that of the Senate. The consuls and the tribunes secured substantial victories for Rome, in foreign lands but as success swelled, the quality of the Senate suffered a diminution. During the 3rd century B.C. the Senate turned into a citadel of self-seekers whereas the *Consugium Plebeium* gave the appearance of being an abode for those who had no work.

The power-tussles between the two Chambers came to a head in the 2nd century B.C. and the question was, which of the two should operate the steering-wheel of the Government. One Gracchus was a baron by birth but that did not prevent him from rising in righteous indignation, to defend the cause of the oppressed Plebeians. The House of the people lent him

youth, battled on behalf of the Senate. These two warriors were of equal prowess and so the entire land was drenched in blood. It was at this time that a supreme hero who had none to equal or excel him rose on the political firmament of Rome. This unique personality was none other than Julius Caesar.

Julius Caesar

Just as Alexander comes to shape in our vision when Greece is mentioned, it is Julius Caesar who looms large on the screen of our thoughts when we hear the name "Rome". The history of Caesar's political career commenced at his 17th year when he got married. Caesar's wife was the daughter of Cinna and the wedding brought the wrath of Sulla on his head, for the reason that Cinna was in the camp of Marius who was opposed to Sulla. Sulla demanded that Caesar should divorce his wife and send her to her father's house. But Caesar would not agree to this and as a consequence, he had to leave the country itself.

Caesar went to Greece where he studied Logic. He also mastered the art of oratory to the extent of being able to bind his friends to himself and ever making his enemies desire his friendship. Those were the times when oratory was learnt and practised as an art.

Sulla pardoned Caesar after some days; and returning to his



Rev. Father Beschi known to Tamils as Veeramamunivar.

support and he planned to get a land ceiling Law enacted so that surplus land may be distributed to the poor. But the lords ganged up against him and deprived him of his life. Riots and infighting resulted throughout the country.

Another warrior called Marius stood up for the House of the people while one Sulla, also a

motherland, Caesar entered politics in stages. Appointed administrator of public works and recreational games of valour, Caesar's fame grew rapidly and he was elevated to the post of 'praetor' which was next to that of the Consul.

It was at this time that the power of two other individuals was in the ascendant in Rome. One was Crassus of excessive wealth and the other Pompey who had earned substantial renown as a warrior on the battlefields of Asia Minor. Collaborating with these two strong men, Caesar formed the "First Triumvirate" which soon cornered for itself the power of the Senate. The trachea of the Senate was throttled to the extent of that House accepting Caesar as Consul.

During the next decade, Caesar came in triumphant procession through Britain and France. After eight years of military action, he also subdued the barbarians between the Atlantic coast and the Rhine river.

Caesar's successes in a string came as a shock to Crassus and Pompey and they were getting afraid that if Caesar's stature were to rise further, it would mean a threat to their career. Crassus, however, passed away before his plot could get into action. But Pompey bided his time and he was ever on the *qui vive* for an opportunity to topple Caesar.

Victorious Caesar

Laden with magnificent victories secured in incessant battles,

Caesar is returning to the motherland in the year 49 B.C.

What would the people of any other Country have done on such an occasion? They would have strewn flower-petals along the path, hung out festoons, cleaned the streets, decorated with colourful designs the front-yards of their homes, played auspicious tunes on myriad musical instruments and displayed a festive mood all round, while damsels rendered ballads of welcome and lyricists composed verses of martial glory appropriate to the atmosphere of general exultation over the prowess of the ruler who was returning after conquering the world.

But what actually occurred in Rome was far different from all this. The Senate started wondering: "He comes in grand triumph. Could the thought be lurking in his mind that he may become monarch? Could the arrogance have sprouted in him that he is invincible?" Similar fears came to the boil in the House of the people too. So intense was their love for the Republic! Pompey who had been waiting for just such a chance, lost no time in utilising their suspicions.

And thus it came about, that the order went forth to Caesar that he should disband his army before crossing into the motherland. But was Caesar one to yield? He marched towards the Capital, with his army in

full array. After a sixty-day battle with the Senate, the country was his and a tumultuous welcome awaited the conqueror striding in like a lion. The Senate became a puppet in his hands and Caesar converted it into a mere advisory body, while appropriating all the powers to himself. Behind the garb of a Representative of the people, Caesar was virtually an uncrowned monarch. He ruled only for five years but within that period, he had left undying marks of fame. Eradicating corruption and extravagance, he gave jobs to those rendering genuine service. Annexing more territories, he was in a position to send the grandiloquent message to the Senate "I went, I saw, I conquered!"



Cleopatra

Pompey who had been defeated in the civil war was fleeing from country to country; and determined to wipe him off the face of the earth, Caesar pursued him to Alexandria. It was while Caesar was staying at a mansion there that Cleopatra was introduced to him. There are many number of instances such as this in Roman history of a warrior—who remained undaunted by the menacing sword of maniacal hordes of aliens bearing down on him in a manner

to set heaven and earth atrembling—falling before a damsel with sparkling eyes sharp as spears. Caesar restored the Egyptian Crown to Cleopatra whose throne had been annexed by Ptolemy and at the same time Caesar gave her a place in his heart and brought her with him to Rome.

Thou, too Brutus?

Caesar's hour was drawing near. Rumbblings were there on one side, to the effect, "what,

a Government that is contrary to the Republic"? And on another side were the mutterings, "Alas, he has mortgaged the honour of the motherland to a woman for whom he has fallen!" On yet another side were the conspiracies of the traitors who had suffered defeat at his hands but had been pardoned by him later were now pretending to be his friends. In the midst of all this, Caesar walked with footsteps firm and without a trace of fear in his demeanour.

One day—to be exact, Monday, the 15th of March, 44 B.C.—Caesar went to the Senate after brushing aside the fears of his wife who had had a bad dream. There he was set on by enemies who had their weapons concealed in the very hands they raised in greeting and worship.

Caesar who sought to defend himself and fight back, stood aghast when he looked around him. The members of the Senate were like graven images even at the sight of Caesar being stabbed, and right in front of him was Brutus with sword drawn. "Thou too, Brutus," exclaimed Caesar in mortal agony, "then Caesar, you may die!"

The swords pierced Caesar in not one or two spots but twenty and the blood of the supreme hero who had seen innumerable fields of battle itself presented the sight of a battle field!

Caesar was dead all right but what Brutus and his comrades had asserted they would achieve



Caesar

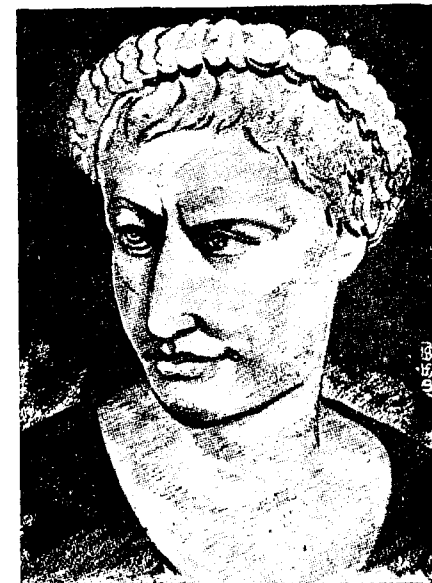
through his death, did not at all come to fruition up to the end. The historic oration delivered by the eloquent Mark Antony, with the corpse of Cæsar on the dais, helped to collect and consolidate the sympathy of the people for Cæsar.

True, the precious lamp that was the Republic was burning low and yielding only dim light during the time of Cæsar. But after his death, it was extinguished altogether.

It was monarchy that emerged in Rome after Cæsar. The first King was only an heir of Cæsar. He was Cæsar's adopted son, by name Octavian. Thus Cæsar's long shadow continued to fall on the history of Rome even after his time.

Octavian got his sister Octavia, married to Mark Antony, who was an extremely influential personality in politics then. But in the third year after his marriage Antony fell a prey to the charms of Cleopatra, Queen of Egypt. When Cæsar was alive, it had been Cleopatra's ambition to sit by the side of her spouse and rule over Rome and now she made Antony an instrument to realise her dream.

Infatuated with Cleopatra, Antony neglected totally his duty towards Rome and thus alienated public sympathy and support. Led by Agrippa, the forces of Octavian administered the *Coup de grace* to the armies of Antony and Cleopatra at a place called Actium. The vanquished Antony was forced to flee.



Augustus

Cleopatra addressed a poignant epistle to Antony: "A few years back I rode to Rome in regal splendour. But now Octavian would summon me to come there as a vassal and slave. My dear, by the time this message reaches you the life of this unfortunate woman would be extinct."

Antony fell upon his sword but the wound did not kill him. He was imploring those around him to put him to eternal rest when news was received that Cleopatra was still alive. Antony thereupon bade his soldiers carry him to the Queen and resting his head on her lap, he breathed his last.

It was now Cleopatra's turn to woo death and legend has it that she chose a live weapon to put an end to her life. She ordered her servants to bring to her an asp and after they had left her alone, she allowed the reptile to bite her and inject its fierce venom into her veins.

It was a ghastly spectacle that met the eyes of the victorious Octavian. He ordered the bodies of Antony and Cleopatra to be interred, with full royal honours.

When Octavian returned home he was only 33 years of age. The Senate of Rome received him with acclaim and gratitude, he was accepted as the first monarch and the name "Augustus" was also conferred on him. The reign of this Augustus is extolled as the Golden Age in Roman history.

(to be continued)



Thiru V. R. Nedunchezian being interviewed by B.B.C.

THE FUNCTIONAL LITERACY PROJECT

During his tour abroad Thiru V. R. Nedunchezian, the Tamil Nadu Education Minister, has drawn UNESCO assistance for the Functional Literacy Programme of the Tamil Nadu Government. The Functional Literacy Programme is a sort of work-oriented adult education. This was first organised in Udumalpet taluk of Coimbatore district in March 1969. Exclusively for imparting functional education to the farmers participating in the high-yielding varieties of crop seeds programme in that taluk, sixty centres were run. Again, in March 1969, a similar course was run in the same area. With the experience gained in Udumalpet, the Tamil Nadu Government, wishes to extend the work-oriented adult education to the whole State. It was for this programme that Thiru

Nedunchezian made a bid to draw up on the UNESCO assistance while he was in Paris on 22nd September 1970. When he told the UNESCO that the scheme would be tried in the whole district of Thanjavur, it was greeted with appreciation. The UNESCO has promised two lakhs literacy prompts for this project.

As a step towards eradicating illiteracy among adults in the State, the Government sanctioned in 1969-70, the opening of 500 adult literacy centres enrolling in all, not less than 10,000 adults for four months as a pilot scheme. Orientation courses were conducted during 1969-70 for teachers to plan and start the work and the districts of Madurai, Tiruchirappalli, Chingleput, Tirunelveli, Ramanathapuram, North Arcot, Dharmapuri, Thanjavur and South Arcot were covered under this programme.

FOREIGN AIDS FOR TEACHING SCHEMES

Fruitful Results of Tour

In London Thiru V. R. Nedunchezian was received by the British Council. He availed the occasion to discuss improving English teaching methodology in the training colleges in Tamil Nadu with the co-operation of the British Council. The Council on its own also promised the implementation of the improved science teaching scheme in the primary schools of Tamil Nadu. While in America, Thiru Nedunchezian contacted the CARE Organisation to urge that the mobile science-teaching Laboratory van now in operation in Thanjavur district be extended further. Two mobile Laboratory vans, each fitted with a trailer with all necessary physics and chemistry apparatuses for high schools has been introduced as a pilot scheme in Mayuram Educational District. These laboratory vans have been fitted out by CARE to serve all the high schools in Mayuram Educational

district by a turn system. Thiru Nedunchezian discussed the expansion of this project with Mr. Frank Goffio of CARE in New York.

Another scheme for the qualitative improvement of Science teaching in schools has been adopted with the aid of UNESCO-UNICEF. This scheme provides for the supply of Science equipment in training colleges and schools and will be outside the plan. It is also proposed to set up with the assistance of UNESCO an Institute of Science Education as a wing of the existing Institute of School Education to give In-service-training to teachers of high schools for teaching Science subjects.

In order to maintain a high standard of education in the schools it is necessary that teachers should be given periodic training to keep them in touch with modern developments in teaching methods. A number of schemes continue to be implemented towards this end.

The scheme of conducting Refresher courses, special training courses and seminars is being continued during 1970-71 to keep the teachers abreast of the latest techniques of teaching and thus improve their professional competence. The courses are being organised and conducted by the State Institute of Education in co-operation with the Chief Educational Officers, District Educational Officers and Inspectresses of Girls Schools.

With a view to improving the methods of teaching English in schools, the Madras English Language Teaching Campaign for the training of teachers of Education Department was introduced in October 1965. The scheme is being continued during 1970-71. It is proposed to run 40 courses to train 1,600 secondary school teachers of standards VI to VIII in modern methods of English teaching. Rs. 2.80 lakhs has been provided for this purpose in the Budget Estimate for 1970-71.

For qualitative improvement in the standard of instruction in Teacher Training Institutions, it is necessary that the personnel employed in the training institutions have special training in the latest methods of teaching the various subjects, and also possess qualifications which are higher than the ordinary first degree in teachers training. It is, therefore,

proposed to depute some school assistants every year for M.Ed. training so that they will keep themselves abreast of new ideas in Education.

For improving Science Education, the National Council of Educational Research and Training, the University Grants Commission and the National Council for Science Education in collaboration with the Science Foundation of U.S.A. organised during the summer of 1969, Summer Institutes at various centres for the benefit of the teachers drawn from high schools in this State. The duration of the course was for a period of six weeks. The subjects for the courses were Biology, Chemistry, Mathematics Botany and Physics. During 1969-70, as many as 170 schools participated in the Summer Institutes in various subjects.

The Nedunchezian with Lord Aberdare, U.K. Minister.



Madras City and its Administration

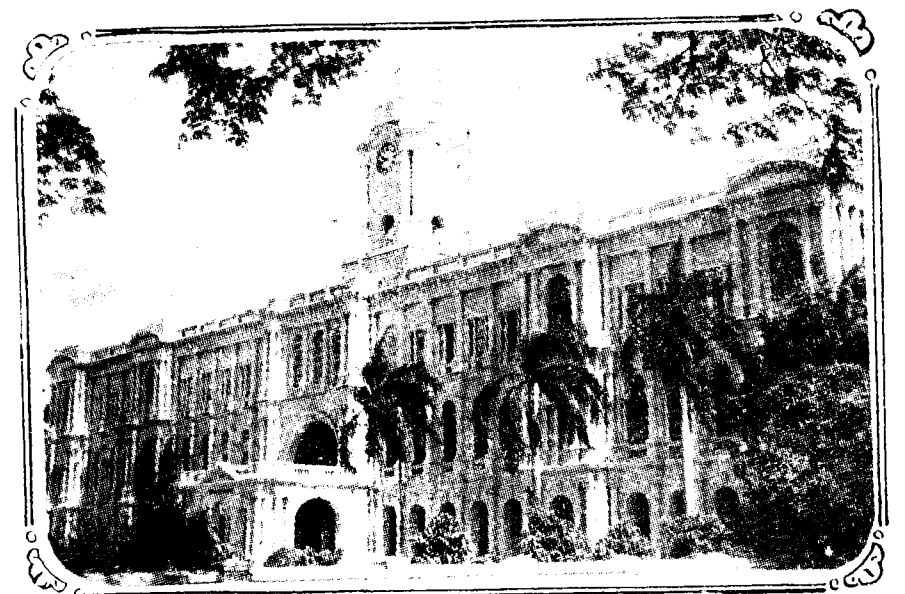
The total area of the City is now about 50 sq. miles as against 31 square miles originally contemplated. The estimated mid-year population of the City for the year 1969 was 2,048,000. There were 96,567 births and 39,250 deaths registered during the year 1969.

In recent years, there has been a spurt in building construction. A number of new colonies have sprung up with the help of the State Housing Board. Many main roads have been realigned and several over-bridges and subways have been constructed. New cut-off lights in the thorough-fares of the City have come as a boon to the traffic and pedestrians.

Despite all the difficulties with which it is confronted such as paucity of finance, ever increasing population, increased traffic, mounting cost of establishment, etc., the City Corporation administration with its vast team of executives, supported by expert staff has been playing a notable role in keeping the City beautiful and humming with profitable activity.

Sir Josiah Child, one of the Directors of the East India Company, was responsible for the formation of the Corporation on the model of the Dutch Government in the East Indies. On 29th September 1688, the Corporation was inaugurated with powers to decide petty cases, levy rates upon the inhabitants for building of

THE CORPORATION OF MADRAS



schools, a Town Hall and a Jail. Mr. Nathaniel Higginson was nominated as First Mayor with 12 aldermen and sixty burgesses.

The Office of the Corporation was functioning from a building in Errabalu Chetty Street. It was only in 1913 that the Corporation moved its offices to its present imposing building, the Ripon Buildings, named after Lord Ripon, Viceroy.

The Administration

For the purpose of Municipal Administration, the City of Madras has been divided into

two parts, one part called North Madras and the other called South Madras, each part comprising six Circles and each Circle consisting of ten divisions, 120 divisions in all.

Each of the above 120 divisions, elects a Councillor to represent it on the Council of the Municipal Corporation of Madras. These 120 Councillors constitute the elected representatives of the citizens on the Council. If no person belonging to a Scheduled caste is elected as Councillor from any of the divisions in a Circle,

then the elected members of the Council co-opt to the Council as its Councillor, for such Circle, a person belonging to a Scheduled caste. Thus, the Council consists of 120 elected Councillors and not more than 12 co-opted Councillors.

Besides the Council, there are 12 Circle Committees, a Central Committee, a Corporation Accounts Committee, a Licence Appeals Committee, a Contracts Committee, an Appointments Committee and a Taxation Appeals Committee.

The Councillors elect annually, in the month of November, from among themselves a Mayor (who is the first citizen of Madras) and a Deputy Mayor. The Mayor, the Deputy Mayor and the Chairman of all the Committees except the Taxation Appeals Committee are elected for one-year terms.

Water Supply

Till about 1870, Madras obtained its water-supply solely

from shallow wells and tanks within the City. As they were subject to serious pollution, the Government adopted the proposals of Mr. Fraser to tap water from the Kortalar river and its tributaries Kattangal and Busikal. The water is led into the Cholavaram Lake and from there into the Red Hills Lake. Madras Water Supply is drawn directly from Red Hills Lake.

The distribution system designed for supplying 25 gallons of water per head per day for an anticipated population of 6.6 lakhs in 1931 was found inadequate and construction of another Dam across the Kortalar river at Poondi was initiated. This Reservoir, named Sathya-moorthy Sagar, was completed in 1944 and doubled the water storage. Rapid Gravity Mechanical Filters (10 m.g.d. capacity) were installed in 1957 at an estimated cost of Rs. 29.50 lakhs and 30 m.g.d. capacity Rapid Gravity Mechanical Filters are

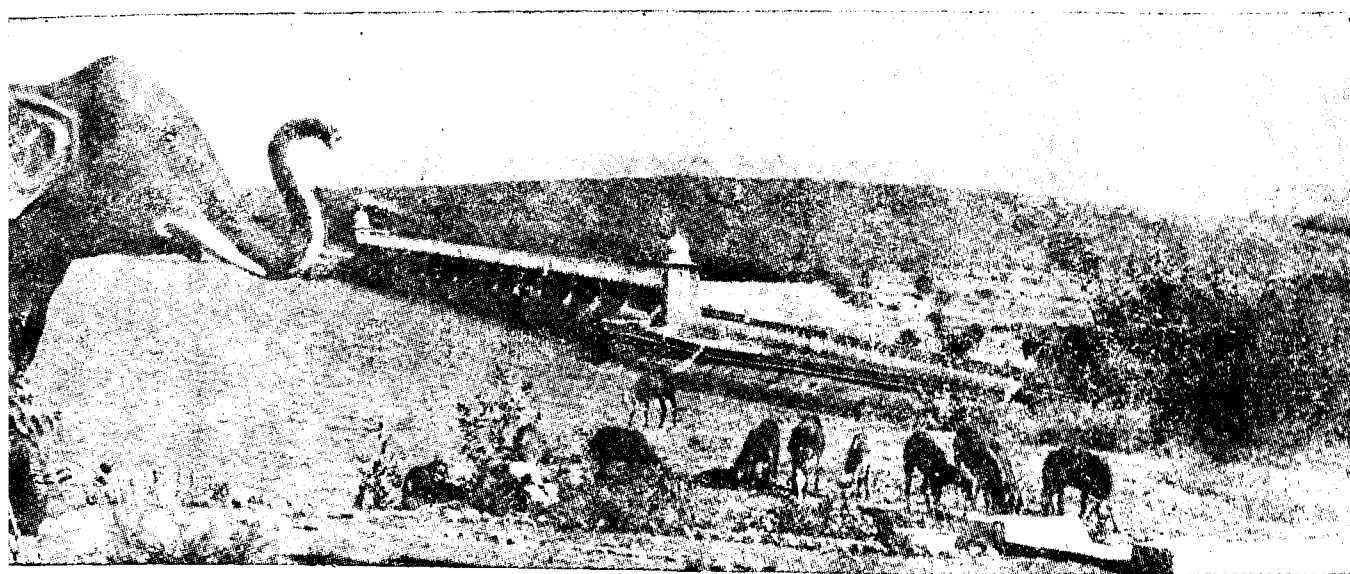
under construction and nearing completion.

The Veeranam Scheme

A scheme costing Rs. 21.30 crores for bringing 40 million gallons per day of Cauvery water from Veeranam Lake has been sanctioned by the Government of Tamil Nadu and the work has been taken up for execution by the Public Works Department.

Increasing the storage capacity of the reservoirs, tapping of underground sources and construction of open lined channel from Poondi to Tamarappakkam are some of the measures considered to conserve the available water. About 550 million cubic feet of water is expected to be saved by this scheme. Acquisition of adjacent lands under Cholavaram and Red Hills tanks will save annually 550 million cubic feet of water now issued for irrigation to those areas.

The total number of house service connections is 82,880.



The Rs. 65-lakh Poondi Reservoir.



The Mercury discharge lamps which light up main roads.

There are 7,941 public fountains and 3,699 hydrants.

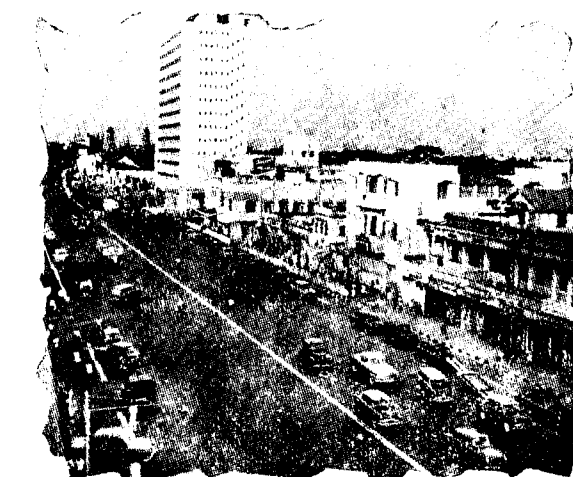
Conservancy and drainage

The main task of the conservancy is to maintain a clean city and it involves the duties of cleaning of streets, foot-paths, water tables, removal of sullage water from cess-pools, disposal of rubbish and filth; cleaning of public conveniences and latrines, etc. About 11,000 employees attend to conservancy work. Lorries are used for conservancy work in the city, while sewage vans are utilised for emptying the cess-pools in the extended areas of the city.

At present there are 33 Drainage Pumping Stations functioning all over the city of which 15 are electrified, 15 are partially electrified and 3 are with oil engine units. The pumping stations are functioning on a relay system with 3 main pumping stations from where the sewage is pumped out for disposal ultimately. The total length of sewer laid and maintained by the Corporation

now is about 963 K.M. So far a total length of about 276 K.M. of storm water drains have been constructed in the city.

As the existing sewerage system was found inadequate, a comprehensive system based on a water supply rate of 40 Gals. per head per day has been prepared and sanctioned by the Government. For this purpose the city has been divided into 5 zones. The total value of the 5 zonal schemes is Rs. 13,02.26 lakhs and works are in progress simultaneously in all the zones.



Street lights

There are at present 29,551 street lights with various types of fittings such as tube lights and M.D. lamps in main roads and bus Routes, ordinary electric lamps in interior roads and extended areas. Flood lights in by-lanes and hutting grounds ornamental cluster lights at the junctions, post-top lanterns in parks and short M.D. lamps and top lanterns in other places are used. There are 12,117 M.D. Lamps, 2,056 Tube Lights, 15,342 ordinary electric and flood lights and 36 ornamental cluster lights.

Electricity for the street lighting is taken at two points from the Madras Electricity System at Basin Bridge, and at Kellys. The 11 K.V. supply received from M.E.S., at the Main Controlling

Station, Basin Bridge and 33 K.V. supply at 'Kellys are stepped down to 5 K.V. and distributed to other street lighting sub-stations. There are about 32 Sub-stations in the City.

Low Tension underground cables to a length of 1,803.58 K.M. and High Tension Cables to a length of 111.025 K.M. have been laid so far, for street light. Recently 'cut-off' system of lighting has been introduced over a stretch of 13.5 kms. This will be extended gradually to other important roads in the City.

Taxes

The Corporation of Madras is levying all the taxes enumerated in Section 98 of the Madras City Municipal Corporation Act. They are levied at the maximum rates prescribed in the Act.

Property tax is the main source of revenue. It is levied on all lands and buildings situated in the City other than the buildings belonging



Planned Improvement of Congested roads.

to the Union Government. The total number of houses assessed for the year 1968-69 was 1,14,434.

Health Services

The Corporation of Madras started its first maternity and child welfare centre in the year 1917 at Triplicane and today there are 51 maternity and child welfare

centres. Of these, 31 are warded centres with a total bed strength of 379 and the remaining 20 are subcentres where domiciliary services alone are rendered. There are 39 Assistant Surgeons, 71 health visitors, 16 staff nurses, 26 pharmacists and 314 Midwives in the Child Welfare Scheme. The services rendered are institutional care, domiciliary care, Health Education and Family Planning.

Triple Antigen injections are given to all children below one year in all the 51 maternity and child welfare centres on all days. Neo-natal B.C.G. vaccinations are also being given on an experimental basis in 5 centres, while the routine neo-natal vaccinations are made available in all warded centres.

Creches

For the benefit of the working mother, the Corporation is running 7 creches. In the creches, the

(Contd. on page 35)



New Colonies of houses and flats have sprung up recently.

THE OPHTHALMIC HOSPITAL

AND ITS
VARIOUS CLINICS



Eye Bank and Corneal Transplantation

An Eye Bank was started in Government Ophthalmic Hospital in 1948, to provide donor material for Keratoplasty or corneal transplantation. There is a popular misconception that corneal transplantation can be done, to restore sight in all cases of blindness. This is not correct. Corneal transplantation or Corneal grafting can be done only to patients who have lost the vision due to the cornea turning opaque. The operation involves the removal of the central portion of the opaque cornea of the patient and replacing it by a clear piece of cornea of equal size, from the eye of a dead person (donor).

In our country corneal opacities are extremely common. There are many who are blind or

partially blind from this cause. Keratoplasty is a great benefit in such cases. Unfortunately sufficient donor material is not available for doing more number of corneal grafting operations in this hospital. General apathy and superstitious antipathy are the main reasons for the paucity of donor material. Many may not know that the removal of the eyes from the dead can be made without disfigurement. There is a Government order permitting donation of eyes while living so that the eye could be removed soon after death. The co-operation of the next of kin is most important for the utilisation of this source, for corneal transplantation operation.

The Mobile Ophthalmic Unit

The villages have long been a happy field for quacks and charlatans. The helpless

villager who could not go to a hospital in the City or town for cataract operation, sought the services of the itinerant quack who practised couching to cure cataract. Couching is an ancient discredited surgical procedure wherein the lens is displaced from its position. Couching often resulted in complication and in total loss of vision and much pain.

Further outside agencies also entered the field and volunteered to do a large and fantastic number of operations in a day with inadequate pre and post operative care which invariably resulted in complications in an appreciable number of cases.

The mobile Ophthalmic Unit was set up in 1961 to treat the poor in the villages and to prevent the activities of the quacks and outside agencies in the rural parts of our State.

Cataract forms the majority of the operations done by the Mobile Ophthalmic Unit in the eye camps. By doing cataract operations in the villages, number of people suffering from temporary blindness due to cataract, could be greatly relieved. They would, otherwise be, a burden socially and economically.

The Mobile Ophthalmic Unit conducts four eye camps a year in villages within a radius of 100 miles or more from Madras. It follows the same procedure that is followed in the hospital in the selection, operation, and postoperative care of patients in the eye camps. The eye camp is conducted for a period of 15 days. Operations are done for 4 days and not crowded into a single day. The Superintendent and one Civil Surgeon of Government Ophthalmic Hospital perform operations on two days at the eye camp. Operated patients are admitted in the eye camp and provided with free diet. Patients are given cataract glasses free of cost at the time of discharge. Out-patients are also treated at the eye camp, for minor ailments. Propaganda work is also done and cine films on preventable blindness are shown in the adjacent villages.

Opticians' School

A School for Opticians was built in 1962 under the Second

Five-Year Plan. The objective of the school is to train candidates in refraction and dispensing of glasses, so that in course of time all the dispensing opticians will be qualified people. The training course conducted at the School is of two years duration.

Glaucoma Clinic

Glaucoma is one of the major causes for blindness in our country.



Tests for Glaucoma

The disease was known to the Greeks Hippocrates the famous Greek Physician has described it with admirable clinical precision. Down the ages, it has been a dreaded disease.

The term glaucoma is applied to a number of conditions of the eye having one common sign, i.e., a persistent elevation of intra-

ocular tension. The eye being non-rigid structure, a certain amount of pressure is required to maintain its shape without which the production of a distinct image on the retina would be impossible. This function is carried out by the ciliary body which is a gland-like structure with a rich supply of blood vessels. This structure secretes a water fluid called 'aqueous humour'. When for some reason, there is an excess secretion of this fluid or there is obstruction to the out-flow channels, the pressure within the eye balls rises. The rise in intra-ocular pressure leads to reduced blood supply to the eye which in turn leads to the destruction of the optic nerve.

It is of paramount importance that glaucoma should be spotted and diagnosed early. But the disease to be detected in its early stages, when treatment is most helpful and rewarding the symptoms are few and signs difficult to elicit. The most important requirements for early detection and treatment of glaucoma are the knowledge, on the part of the patient of such a condition and a high index of suspicion on the part of the doctor. Glaucoma requires prolonged and regular follow-up treatment.

A separate glaucoma clinic was opened in Government Ophthalmic Hospital in May

THE SQUINT EYE CAN BE SET RIGHT



Before Treatment

1967 to facilitate early diagnosis and treatment.

Orthoptic Clinic

An Orthoptic Clinic was opened in Government Ophthalmic Hospital in 1967 for correction of squint and treatment of muscle imbalance. An Assistant Surgeon and a qualified Orthoptist attend to the patients, in this department.

The Department is equipped with all the instruments necessary for carrying out the ordinary tests.

Squint is not believed any more to bring good luck to the individual. It disfigures a handsome face and disqualifies an otherwise eligible young man or woman from service. Vision may be lost in one eye and the patient loses all the advantages of binocular vision and depth perception.

The squint can be broadly classified, as either non-paralytic (con-committant) or Paralytic.

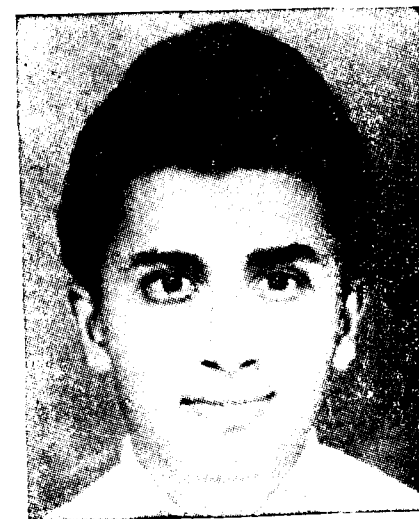
Paralytic squint are easily diagnosed by means of the ocular movements and compensatory head postures. Con-committant squints may be either manifest or latent. If the patient has a high refractive error, correction itself helps to correct the squint. This may be followed if necessary by Orthoptic exercises. In cases not responding to the orthoptic treatment, surgery is resorted to, which brings back the eyes in position but the fusion faculty has to be trained by a course of post operative exercises.

Two photographs of one patient who was operated for squint are reproduced here.

Detachment of Retina

A number of patients suffering from Detachment of retina are referred to this hospital by private Practitioners and Government Hospitals all over South India for treatment. Detachment of retina is a catastrophe—a progressive condition which will end in blindness unless treated early by surgery. The short sighted are more prone to get this than those with normal vision.

In March, 1970 the hospital imported a Photo-coagulator from West Germany at a cost of Rs. 1,21,250. It is used in the treatment of certain types of detachment of retina, Tumours and bleeding condition of the eye. For want of this equipment many a patient had to go to North India at great inconvenience.



After Treatment

Intense light is utilised in this equipment to seal the openings or holes in retina and also destroy tumour-cells.

Intense cold is also used in the treatment of diseases of the eye especially for cataract and for detachment of retina. Such an equipment—the Cryo—Unit is expected shortly.

Research

The following Research work are being done in this hospital :

“Mycotic Keratitis” under the auspices of Indian Council of Medical Research.

“The Research on Cataract with Primary Glaucoma” under the auspices of Tamil Nadu State Research Scheme.

“Aflatoxin as the Carcinogen to the eye” under Loganathan Tarapore Research Scheme.

“Aetiology of Uveitis” under the auspices of Tamil Nadu State Research Scheme.

MORE PLEASE

Thiru C. Rajagopalachariar made a charitable donation of Rs. 1,000 to the Corporation of Madras for supplying spectacles to poor pupils having poor eye-sight. During the last several years many pupils found, after due tests, having defective vision were provided with spectacles from the donation which Rajaji made while he was Governor-General of India. The latest Administration Report of the Corporation of Madras says that this amount is coming to a close.



Compliments from

MIDLAND TYRES

Retreaders and New Tyre Dealers



POST BOX No. 42

Pudukottai Road, TIRUCHIRAPALLI-1.

Tel.: 'TYRELAND' Phone { Office: 5641
Res.: 5433

With best compliments from

UNITED INDIA FLOUR MILLS PRIVATE LTD.

1/4, Suryanarayana Chetty Street
MADRAS-81



Manufacturers of Superior Quality

'Gopuram Brand' MAIDA and SUJI
AND
'Ship Brand' ATTA and BRAN

Phone { 52670
52673 } Telo.: "MONARCH"

THE TUTICORIN FERTILISER COMPLEX

A public limited company known as Southern petrochemical Industries Corporation has been set up to implement the Fertiliser and Chemical Complex at Tuticorin.

The Tamil Nadu Government will contribute Rs. 2 crores towards the company's capital formation. All infrastructure arrangements like port, roads, water and power supply are also being provided by the State Government for the benefit of this project which will mean an investment of Rs. 75 crores. The company has been formed on the pattern of management similar to the most modern companies in America and England. The professional group will have firm grip on executive management on the one hand and will be thoroughly responsible to the share-holders on the other. In short, this is the first of such socially responsible company organisations to be formed in India. The Company will be in a position to supply fertilisers by 1973.

The Government of Tamil Nadu hopes that with such excellent advantages, the Corporation would supply fertilisers to the farmers 10 to 15 per cent cheaper than at present and substantially contribute to the "Improvement in Agricultural wealth and the economics of the peasants of South India".

After submitting an elaborate Techno-Economic Feasibility Report to the Government of India and other concerned agencies including the Foreign Credit agencies, as advised by the Government of India, detailed international firm bids (firmed up for a period between 1971-73) were called for by the Southern Petrochemical Industries Corporation in April, 1970. These bids included proposals for production of Ammonia through the Steam Reforming as well as the Partial Oxidation routes. The Corporation has finally selected in August 1970, the competitive

The Atomic Energy Commission is considering a proposal for the establishment, in collaboration with Southern Petrochemical Industries Corporation, of a 70 tons per year, Heavy Water (Deuterium Oxide) plant at Tuticorin. The cost of this project is expected to be around Rs. 17 crores including working capital, town-ship, contingencies, etc. The Government of India in the Atomic Energy Department and Petroleum and Chemicals Department have under consideration the early implementation of this project and to integrate the same with Southern Petrochemical Industries Corporation's Fertiliser-cum-Chemical complex. It is likely that the work on the Heavy Water Project would also start simultaneously with the Fertiliser Complex.

HEAVY WATER MANUFACTURE

contractors, who should implement the firm foreign exchange part of the obligations in the complex.

This Fertiliser-cum-Chemical Complex has attracted the interest of Atomic Energy Commission, for locating the manufacture of Heavy Water as is done in Nangal.

The Atomic Energy Commission has programmed augmentation of heavy water production to about 400 tons per year in order to utilise our large natural uranium resources in power reactors as in the Kalpakkam Atomic Power Project. There are only five large-scale heavy water plants in operation in the World now, including the one in India, at Nangal.

Man Power Needs of Electronics Industry

The manpower requirement of the Electronics Industries to be developed in Tamil Nadu at all levels, deserves serious consideration, says the Study group appointed by the Government of Tamil Nadu. For however sophisticated and automatic may be the machines and meters that are installed, an adequate number of men fully trained for the job of designing, testing and operating machines and reading delicate instruments and interpreting the results, is a highly important factor, which needs immediate consideration.

The type of men required for an electronic industry is of four categories :

Category I—Design, Research and Development Engineers.

Category II—Testing and Senior Supervisory Engineers.

Category III—Routine Testing and Inspection and Junior Supervisory Engineers.

Category IV—On the floor technicians (for production).

Broadly, those having a Doctor's Degree or a Master's Degree are required for Category I.

Those having a Bachelor's Degree in Electronics/Electrical Engineering/Mechanical Engineering are required for Category II.

Those having a Licentiate, Diploma in Electronics/Telecommunications/Radio Engineering/Electrical Engineering/Mechanical Engineering would be required for Category III.

Those trained by the Industrial Training Institutes or Institutions like V. Rajagopalan's Radio Institute, and those who pass the Government of India Trade Test for 'Radio Mechanics' or Radio Servicing, would be needed for Category IV in fairly large numbers on the production branch or on the shop-floor.

Location of Trained Hands

In other words, the following institutions should be able to supply the men of the above four categories in the Southern Zone and particularly in Tamil Nadu.

The Indian Institute of Science, Bangalore; Indian Institute of Technology, Madras; Engineering College, Guindy; Regional Engineering College, Trichy; P.S.G. College of Technology; Institute of Technology, Coimbatore. These would be able to supply men for Categories I and II.

The Polytechnics in this State (both for boys and girls) giving L.R.E. (Licentiate in Radio Engineering) should be able to supply personnel for category III.

The Industrial Training Institutes in the State should be able to supply men in this Category of Radio Mechanics

(Category IV). The Three Industrial Training Institutes at Ambattur, Coimbatore and Theni and Industrial Training Centre at Shree Seva Mandir, Madras (for Women) provide craftsmen training in Radio and T.V. Mechanism.

Training Facilities

As far as the training facilities are concerned, we should, in the initial stages train our nucleus Staff at one or more of the following places in India, where it is known that excellent training facilities do exist.

1. **BARC** : The Bhaba Atomic Energy Centre, Trombay (Environmental Testing Laboratory for Electronics Components).

2. **C.I.E.**—Chief Inspectorate of Electronics, Bangalore—Environmental Testing Laboratory, specially for testing electronic equipment and components, set up by the Defence Department, Government of India, in July 1970.

3. The Indian Institute of Technology, Madras.

4. The College of Engineering, Guindy, Madras.

5. The Indian Institute of Science, Bangalore.

6. The Central Electronics Engineering Research Institute, Pilani.

7. The National Physical Laboratory, New Delhi.

In particular, the first two will be of the utmost importance to us in the initial stages.

Only if specialised training facilities, which do not exist anywhere in India are required, we may think of sending a few selected candidates for training in highly sophisticated areas abroad, in such places as the N.P.L., England (Radio Research Laboratory). The National Bureau of Standards, Washington, Messrs. Philips Laboratory, Eindhoven, Holland, Messrs. Hitachi, Japan, etc., for precision calibration and testing work and for training in industrial processes.

The Report of the Electronics Committee of the Government of India (February 1966) which foresaw an annual production of Rs 300 crores in 1975, with a corresponding wage-bill of Rs. 115 crores, estimated the task-force requirement to be around 330,000 of which 250,000 will be in the category of skilled workers, technicians and engineers. It was also estimated that the Electronics Components Industry would require 40,000 men, inclusive of 35,000 in the skilled variety. For research and development efforts outside the manufacturing units, the requirement envisaged was 15,000 scientists and 30,000 supporting staff. The Report stated that the Electronics Industry, if nurtured and brought up as proposed, would have the capacity by 1975, to engage, 400,000 workers of whom 300,000 will belong to the class of engineers, scientists and skilled workers. This will be geared to an investment of Rs. 170 crores, leading, to an investment per man of

ELECTRIC TYPEWRITER

Production Planned in Hindustan Teleprinters

The Hindustan Teleprinters has made substantial progress in developing an electric typewriter. The Company is also currently engaged in developing other new products like power cubics also.

A great deal of emphasis is being laid by the company on Research and Development so as to keep pace with the latest developments in Telecommunications and allied fields. The Research and Development Department of Hindustan Teleprinters developed during last year new products like Arabic teleprinters, Intele Switch Board required for international telex equipment. The operators and supervisory consoles to be installed at the International telex exchange in Overseas Communication Centre at Bombay are being manufactured here. These consoles when installed will facilitate the establishment of direct

Rs. 4,000 to Rs. 5,000 (as against a figure of Rs. 150,000 which applies to the Steel Industry). The Report urged that, from the national view-point, there was everything to be gained by developing the Electronics industry on a priority basis and pointed out that the pace of development would be largely determined by the rate at which skilled scientific and technical man-power could be marshalled.

telex connections between India and other countries of the world through the Satellite Communication Centre at Arvi. In developing and producing these equipments the Department has had close consultations with similar organisations in the country.

No Imported Parts

The Hindustan Teleprinters has successfully overcome the need for imported parts. The teleprinter motor was one of the last items to be taken up for indigenous manufacture by the factory and there has been a substantial saving of foreign exchange on this account. The Company has entered the export field in a big way with the development of Arabic and Persian Teleprinters.

The Company has secured orders worth about Rs. 47.99 lakhs from various countries. This includes orders worth about Rs. 26.54 lakhs received from Kuwait, a letter of intent of Rs. 20.00 lakhs received recently from the Iranian State Railways for the supply of Persian teleprinters and other ancillary equipments and a few orders from Bhutan, Ceylon, Yemen and Nepal. Compared to the export order of Rs. 2.38 lakhs only during the year 1967-68, the company's current export achievement is a matter for pride. This is all the more significant in view of the fact that the company secured Iranian and Kuwait

orders by successfully competing in global tenders and in all cases it had to face keen competition from other well established and leading manufacturers of teleprinters in the international market.

In price reduction, the company has registered praiseworthy achievements. The price of a unit teleprinter has now been fixed at Rs. 5,300 with effect from 1st September 1970 compared to the price of Rs. 7,000 prevailing before 1st April 1968. The cumulative price reduction works out to as much as 25 per cent.

INDIAN SPINNING PLANT FOR CEYLON

Lakshmi Textile Exporter Private Limited, Coimbatore, have set up a spinning plant of 12,500 spindles in collaboration with Asian Cotton Mills Limited, Ceylon. The technical knowhow, machinery and other equipment required for setting up the plant was supplied by the Indian partner, who will manage the enterprise for the initial period of 2—3 years, and then hand over the management to the Ceylonese partner. Lakshmi Textile Exporters, who act as technical consultants, Collaborators, importers and exporters of textile and other machinery, are also planning to set up a weaving plant consisting of 240 automatic looms and other necessary equipment under the collaboration agreement.

PICTURE PAGES

Opposite Page:

1. Mr. Pierre Paul Schweitzer, Managing Director, I.M.F. at Raj Bhavan party in conversation with the Governor, the Chief Minister and the Industries Minister of Tamil Nadu.

2 & 3. Thiru S. Jagannathan Governor, Reserve Bank of India was apprised of the financial needs of agricultural and industrial schemes of Tamil Nadu.

4 & 7. The XIV Meeting of the All-India Tourist Development Council was held in Madurai. The Governor of Tamil Nadu inaugurated the Meeting which was presided over by Dr. Karan Singh, Union Minister for Tourism. Dr. Sathyavani Muthu, Tamil Nadu Minister for Tourism, hosted the Meeting.

5. Thiru C.P. Chitrarasu Chairman, Tamil Nadu Legislative Council on his return home from Australia was received at the Air Port on 19—10—70 by the Chief Minister and other Ministers of the Cabinet.

6. The Tamil Nadu Slum Clearance Board was inaugurated by Chief Minister. The L.A. Minister Thiru P.U. Shanmugam, Thiru Arangannal, M.L.A., and Thiru Murasoli Maran, M.P. were present. The Chairman, Housing Board is seen welcoming the gathering.

Centre Spread

Yercaud Views:

1. A typical mansion of old-world charm.
2. An ornamental statue at Anna Park.

3. 5, 6 & 9 Bathing and Boating in the Yercaud lake.
4. A cluster of flowers.
7. Plucking of coffee seeds.
8. From Lady's Seat, tourists take a panoramic view.
10. The Anna Park.
11. The Lady's Seat view-point in its old form.

Last Page

1. At the inauguration of the Agaram Co-operative Lift Irrigation Society the Governor is seen exchanging pleasantries with Thiru C.V.M. Annamalai, M.L.A. while Chief Minister looks on.

2. At the Tamil Poets' Meet, Chief Minister honoured the poets with a 100-rupee purse each. Picture shows Maha Vidwan M.V. Venugopal Pillai receiving the purse.

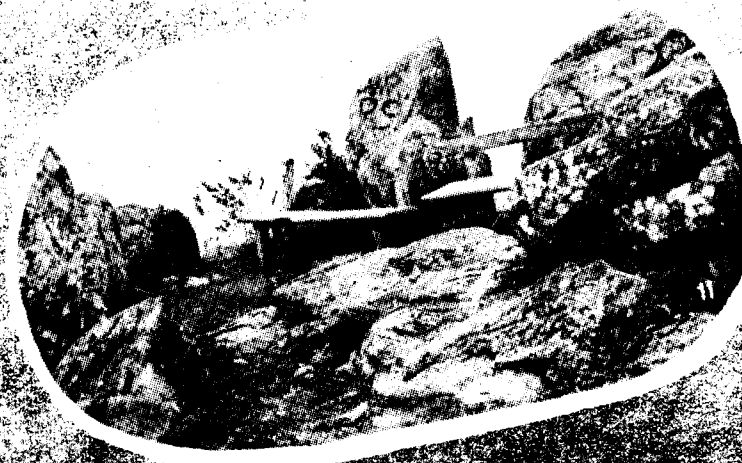
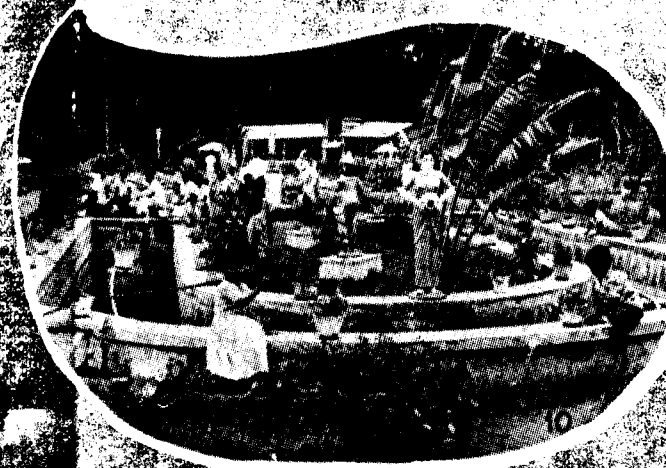
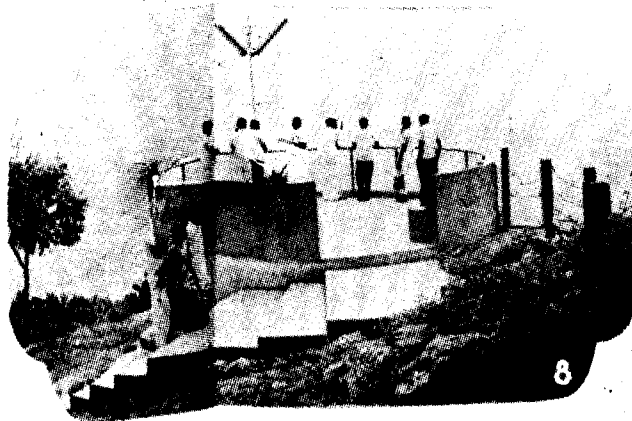
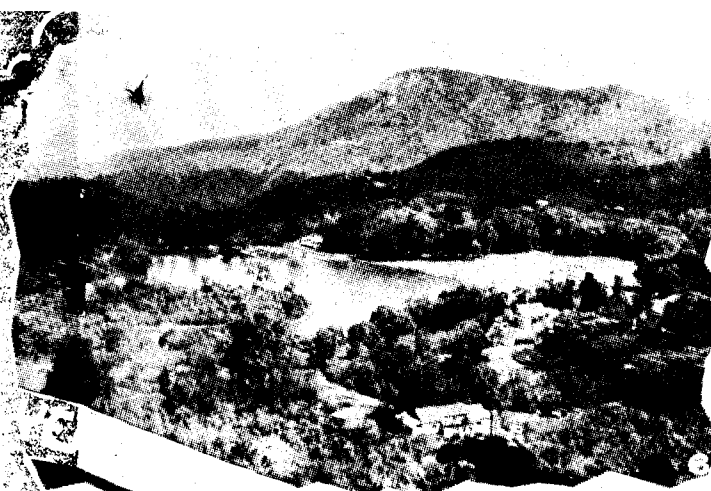
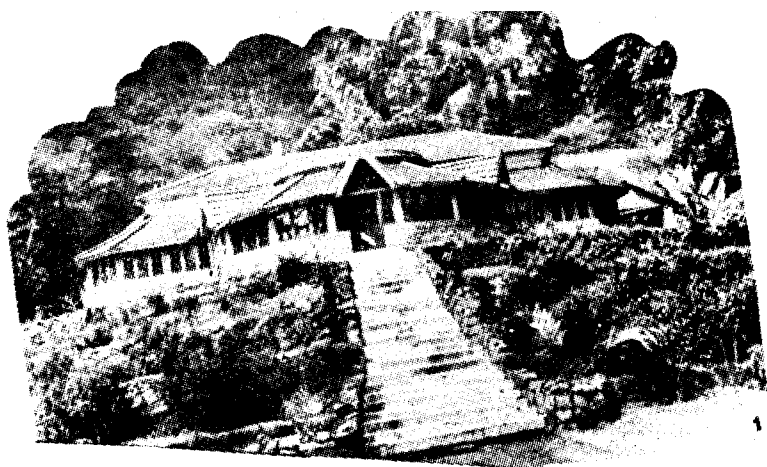
3. The Governor inaugurated the World Standards Day on 10—10—70, at Rajaji Hall.

4. Thiru Sadiq Pasha declared open the Kottur branch of The St. Louis Church Social Service Centre on 10—10—70.

5. The XVIII session of the All-India Homoeopaths Conference was held in Madras on 19—10—70 along with an exhibition of Homoeo medicines. The Chief Minister and Dr. Sathyavani Muthu evince keen interest in the medicines shown.

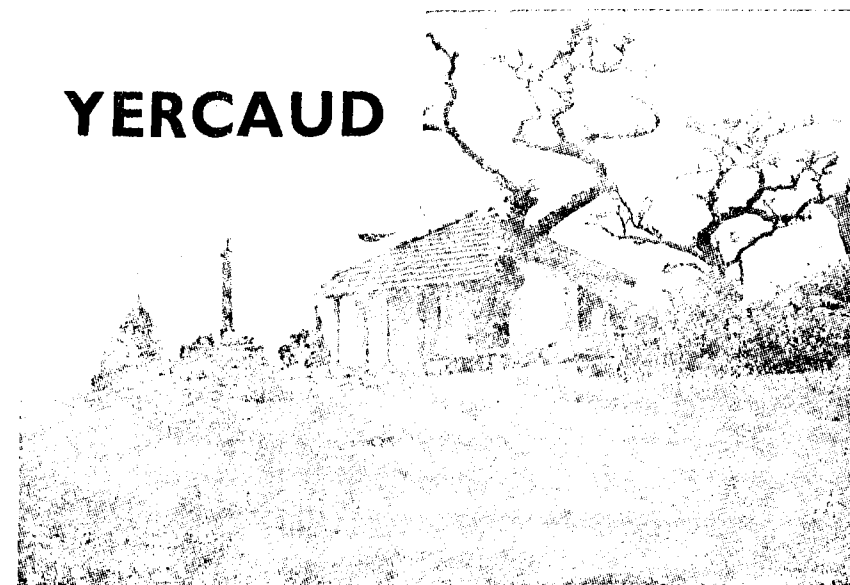
6 & 7. Thiru Si. Pa. Aditanar, Minister for Co-operation declared open at Thimmavaram a modern rice mill. Close by him is Thiru Mannai Narayanaswami, M.L.C.







YERCAUD



The Poor Man's Ooty

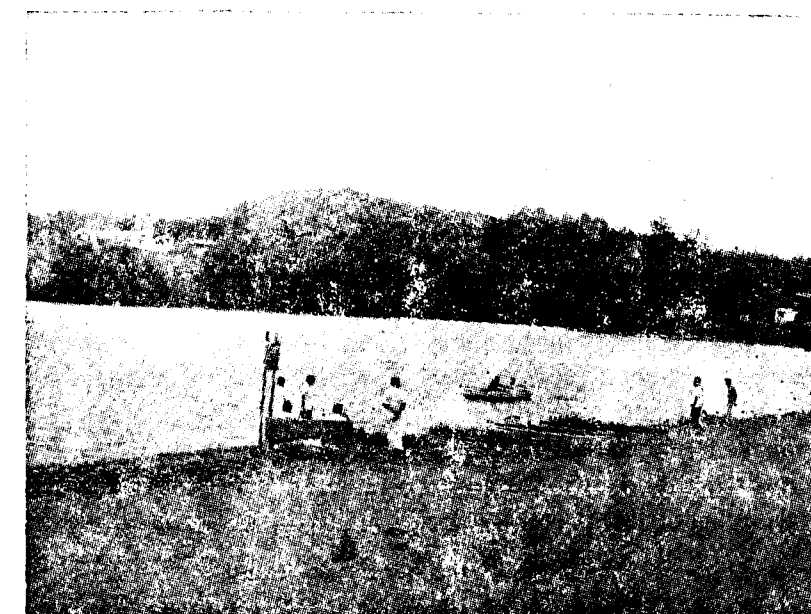
THE YERCAUD derives its name from two Tamil words Eri-Lake and Kadu-forest ; is situated at a height of about 5,000 feet above sea level and has most equable climate, the temperature never rising above 85° F or below 50° F and by its virtue of having such a salubrious climate all round the year, it can be easily developed as a tourist centre and attract visitors throughout the year.

by the main road. The fourth approach from the foot of the hills very near the ghat road, is the nine miles bridle path which poses a delightful challenge to hikers in steep climbing. It was the bridle path which served as means of communication to Yercaud to early settlers and explorers until 1900 when the ghat road was laid.

Yercaud has many tourist, and picnic spots like the Big lake, Kiliyur falls, lady's seat, Cauvery peak, the Grange, Shervaroyan Temple, Taylor's Saddle, Arthur seat, Swiss view, etc. Boating in the ice-cool waters of the Big lake will soothe any visitor to Yercaud while the breath-taking view of the steep cliffs and winding ghat roads from Lady's seat will

Boating in Yercaud Lake.

A unique feature of Yercaud which covers about 170 square miles is that it has four approaches ; two from Salem and one each from Danishpet and Bommidi. While approaches from Bommidi and Danishpet are mainly used by tribal and people of Nagalur village, the most important approach is from Salem. An important aspect of this hill station is that it is just 8 miles from Salem, five miles of which is level road and 13 miles ghat road. It is just about an hour's drive from Salem





Coffee Plantations bound in Yercaud.

leave a lasting impression on any tourist. The light of Salem town will beckon tourists in the night from Pagoda Point and not far away one can see Kanjamalai where the Salem Steel Plant will spring up in the next few years. Kiliyur falls is a popular resort for picnickers. It is situated in sylvan setting and the 75 feet falls, with rocky ridges and small caves will provide an ideal diversion to the visitors. The Shervaroyan temple is situated in the third highest point in the Hill range; and the view from the top of the hillock is superb showing deep gorges and green valleys all round; with the gleaming Mettur Reservoir at a distance. The annual festival in Shervaroyan temple in the month of May is a colourful event and several hundred tribal people from different parts of Shevaroy take part in the festival.

The Cauvery peak is north of the Shevaroy hills and it takes its name from the beautiful view one obtains from the peak of the river Cauvery in the plains below. The circular 21 miles loop road is an adventurous route for young men and women keen on hiking or driving. The Montfort School and the Girls Convent at Yercaud have earned worldwide reputation and

many students from African and West-Asian countries are studying in these educational institutions.

Yercaud and the entire Shevenroy range of hills are

Well-laid out parks hold visitors in thrall



packed with Coffee plantations. Plantains are also grown on a large scale here and these plantains are prized for their unique taste. Flowers of all varieties come up well here and in such exciting colours that they take one's breath away on sight. ☉

International Rest House for Yercaud.

Yercaud in the Shevaroy Hills will soon boast of an international rest house. A site has already been selected in this summer resort for construction of the rest house overlooking the Yercaud lake.

The rest house is being constructed with international funds collected mainly by the efforts of Thiru C. D. Deshmukh. An international association will advance funds and the proceeds from the rest house will be utilised for the welfare of blind children.



GROWING BANANA

SOME TIPS

Banana can be grown throughout the year. But very hot weather and rainy season should be avoided for planting. Planting may be taken up during February-March for better yields. The best time for planting bananas in the wet lands of Thanjavur district is August, so as to avoid the damages likely to be caused by cyclone during the months of October and November. In hill slopes planting may be taken up during April-May.

Varieties

Cultivate Poovam, Robusta, Mauritius, Rasthali and Monthan in wet lands and garden lands of plains. Grow Sirumalai and Viruppakshi varieties in hill slopes.

Propagation

Select 3 to 4 months old good, disease-free sword suckers with the corn size of 10 to 15 centimetres in diameter from healthy plants which will produce big and better bunches. Sword suckers can be identified by their narrow pointed leaves. Lopp the pseudo-stem of the suckers

at 9 to 12 inches height from the rhizome and prune the roots.

Dip the suckers in 0.1 per cent wet ceresan solution for about 5 minutes before planting to control 'banana wilt'.

Dig pits of $1\frac{1}{2}' \times 1\frac{1}{2}' \times 1\frac{1}{2}'$ size 6 feet apart on either way for Mauritius and 8 feet apart on either way for others and allow to weather for 15 days. Apply 12 kg. of well decomposed farm yard manure per pit at the time of planting. Apply 57 grams (2 ounces) of BHO 10 per cent per pit so as to control rhizome beetle. Plant the pre-treated and selected suckers in the Centre of the pit. Press the soil well around the suckers after the planting. Irrigate after planting.

Manuring

Apply 110 kg. of Nitrogen, 35 kg. of Phosphorous and 330 kg. of Potash per acre. This dose may be applied in two split doses. First dose should be applied at the third or fourth month after planting. Second dose should be applied at the 5th month after planting. To supply

the above nutrients manuring may be done in the following ways. Apply 285 grams of ammonium sulphate, 285 grams of super phosphate, 240 grams of Muriate of potash, 285 grams of groundnut oilcake, 12 kg. of farm yard manure per tree at the 3rd or 4th month after planting for Mauritius or Robusta variety. Apply 142 grams of ammonium sulphate, 240 grams of Muriate of potash and 1.42 grams of groundnut oilcake per tree in the fifth month for Mauritius or Robusta.

For garden land and wet land bananas apply 285 grams of Ammonium Sulphate, 285 grams of Superphosphate, 340 grams of Muriate of Potash, 285 grams of groundnut oilcake, 12 kg. of farm yard manure per tree in the 3rd month after planting; then apply 285 grams of Ammonium sulphate, 340 grams of Super Phosphate, 285 grams of Muriate of Potash and 285 grams of groundnut oilcake per tree at the fifth month after planting.

For perennial hill bananas apply fertiliser during January, April, July and October. Apply 1.13 kg.

(40 ounces) of 40 : 30 : 40 mixture along with 0.397 kg. (14 ounces) of Muriate of Potash per tree per time.

Remove the weeds after 4 to 6 weeks after planting. Earth up suckers at the time of weeding. Dig up soil once in two months for perennial bananas to break soil compaction and to conserve moisture. But in the wet lands dig up soil 4 times a year for poovam and 6 times a year for Monthan. Don't dig lands after banana flowers.

Irrigate periodically

Soil should not be allowed to dry up at any time during the growing period of the crop. In plains during hot weather, irrigate the banana garden when 2 to 3 inches of the top soil is dried up. Form trenches in between rows and drain the beater during the rainy season.

Inter crops

Raise vegetables as inter crops during the early stages of banana crop. Sow green manure crop like sunhemp in between rows of plants and plough them into the soil before flowering. This practice was found to hasten the production of bunches.

Remove the side suckers systematically during the early stages of crop. Allow 1 to 2 suckers on hill areas and only one sucker in the plains after the plant has flowered. Remove the dried leaves once in 4 months. In hill slopes, dig contour trenches and put the cut portions and the dried leaves of banana. Remove the male bud a week after the formation of bunches. Prop the

DRY LAND FARMING

Out of a total cultivated area of 160 lakh acres in the State about 100 lakh acres are dry land (without any irrigation). According to the conventional classifications based on the agro-climatic conditions, the dry land areas of Tamil Nadu, excepting in the coastal districts of Thanjavur, Chingleput and South Arcot, come under the arid low rainfall zone receiving 50 to 100 c.ms. Most of the farmers owning lands in these belts are comparatively poor and have small holdings. Since these dry lands represent more than 60 per cent of the total cropped area of the

plants during heavy rains and cyclone.

Plant protection

Drench the soil with 0.1 per cent wet ceresan solution (1 kg. in 1,000 litres of water) to control banana wilt. Repeat the drenching once in 7 to 10 days. Spray 1 per cent Bordeaux mixture to control banana leaf spot diseases. Cut completely the affected plants. Spray the garden with combination of insecticides and fungicides.

Banana comes to harvest in 10 or 12 months and the harvest is completed in about 4 to 5 cuttings. After the harvest of the bunch, lopp the pseudo-stem of the banana plant in the middle to ensure better health and performance of the next generation plant.

State and since a substantial proportion of our farmers are dependent on these lands, the Department considers that urgent steps should be taken to improve the productivity of these areas.

The Central Government have also realised the need to mount a special effort to revolutionise farming in dry regions. They have announced that special schemes will be taken up in low rainfall districts in seven States, of which Tamil Nadu is one.

The concept of dry land farming is not altogether new in this State. One method of improving dry land farming is by undertaking soil conservation measures and encouraging infiltration of rain water and preventing evaporation of soil moisture. So, far, the Department has covered 6 lakh acres under the soil conservation scheme. The Department has also introduced package programmes for dry land crops like groundnut and cotton over an area of 6.26 lakh acres. But these measures are considered inadequate in the changed context of Agricultural Development. It is proposed therefore to take up during 1970-71 a crash programme for cultivating the high yielding and drought and disease tolerant H.B. 3 cumbu over 1.50 lakh acres in Tirunelveli and Ramanathapuram districts. The question of granting the ryots in these dry areas some concessions in the supply of inputs is also under Government's consideration.

CONCESSIONAL FINANCE FOR INDUSTRIES IN BACKWARD AREAS

NEW SCHEME OF INDUSTRIAL FINANCE CORPORATION

In consultation with the Industrial Development Bank of India, the Industrial Finance Corporation announced on the 23rd July 1970, a scheme of concessional finance to small and medium sized industrial enterprises to be located in the industrially underdeveloped districts where the infra-structural facilities for industrial development exist, in the various States and Union Territories selected for such assistance by the Central Government in consultation with the concerned State Governments. The concessions include reduction in the normal lending rate of the Corporation, longer initial grace period, longer amortisation period, reduced margin of security, lower contribution from the promoters to the financing of a project, larger participation by the Corporation in the share capital of the industrial concerns by way of underwriting or otherwise, and reduction in the Corporation's service and legal charges. These concessions will normally be applicable to cases where the total project cost does not exceed Rs. 1.00 crore; concessional finance for bigger projects will be considered on a selective basis.

It has been accepted as an objective of national policy to

encourage new entrepreneurs in the industrial field. The recent changes in the industrial licensing policy of the Government are also calculated to achieve the same objective. Accordingly the Industrial Finance Corporation has been encouraging new entrepreneurs by according special consideration to applications received from them. Besides, the Corporation has also been extending the necessary guidance to the new entrepreneurs and technologists so that the projects sponsored by them become technically and economically viable, thereby qualifying for assistance from the public financial institutions.

STATE GOVERNMENT NOTIFIES BACKWARD AREAS

In Tamil Nadu, the areas declared as "Industrially underdeveloped", are as follows :—

Kanyakumari District.

1. Vilavancode Taluk.
2. Thovala Taluk.

Madurai District.

3. Nilakottai Taluk.
4. Melur Taluk.

North Arcot District.

5. Arni Taluk.
6. Arkonam Taluk.
7. Polur Taluk.
8. Thiruvannamalai Taluk.

Ramanathapuram District.

9. Ramanathapuram Taluk.
10. Mudukulathur Taluk.
11. Kamuthi Sub-Taluk.
12. Sivaganga Taluk.
13. Manamadurai Sub-Taluk.
14. Paramakudi Taluk.
15. Ilayangudi Sub-Taluk.
16. Devakottai Sub-Taluk.
17. Tiruvadanai Taluk.
18. Tirupathur Taluk.
19. Karaikudi Sub-Taluk.

Salem District.

20. Sankari Taluk.
21. Athur Taluk.
22. Namakkal Taluk.

South Arcot District.

23. Tirukoilur Taluk.
24. Kallakurichi Taluk.
25. Vridhachalam Taluk.
26. Gingee Taluk.

Thanjavur District.

27. Sirkali Taluk.
28. Nannilam Taluk.
29. Mannargudi Taluk.
30. Orathanad Taluk.
31. Nagapattinam Taluk.
32. Thiruthuraipoondi Taluk.
33. Aranthangi Taluk.

Tiruchirappalli District.

34. Lalgudi Taluk.
35. Udayarpalayam Taluk.
36. Thirumayam Taluk.

Tirunelveli District.

37. Thiruchendoor Taluk.
38. Nanguneri Taluk.

Dharmapuri District.

39. Krishnagiri Taluk; and
40. Dharmapuri Taluk.

In addition to the entitlement for concessional financing, for its part the State Government has decided

that new industries to be set up in the above industrially under developed areas may be given a reduction of 15 per cent in electricity tariff with consequent reduction in tax. The Government have also agreed to reimburse to the Electricity Board the loss on account of the concessions given to these areas.

TAMIL MEDIUM—FREE SCHOOL FOR CALCUTTA

A Tamil Medium free school, the first of its kind in Calcutta, has come into being on October 14, to mark the 62nd birth anniversary of Mr. C. N. Annadurai, former Chief Minister of Tamil Nadu.

The school, “Arignar Anna-Netaji-Muthuramalinga Thevar Tamil Medium Free School” will be inaugurated by Mr. Ajoy Kumar Mukherjee former Chief Minister of West Bengal.

Sponsored by the “Arignar Anna Tamil Sangam” a local cultural organisation, the school would be housed in a rented building in Central Calcutta.

CONNECTIONS FOR PUMPSETS : LAND BANK'S SCHEME

The Tamil Nadu Land Development Bank has chalked out a scheme by which needy ryots can get their pumpsets energised on a priority basis by paying an advance deposit of Rs. 3,000 to the Electricity Board. The scheme will be

implemented through the Primary land development bank in each taluk, it is learnt.

An official of the Bank said that in Thanjavur district alone, over 500 pumpsets were lying idle for want of electricity for the last two years. Of this, Tiruthuraipoondi had the largest number. The bank had asked its district units to conduct a survey of the needy ryots with a view to helping them in the matter of power connection.

The official said that often ryots could not get priority for getting power for their pumpsets for lack of money.

He said that already the bank had earmarked Rs. 19 crores including Rs. 75 lakhs for Thanjavur, for disbursement of loans in the entire State for sinking and deepening of wells, reclamation of lands, purchase of tractors, etc.

FARMERS' TRAINING

For achieving success on the massive programmes the Agri-

culture Department is launching, to step up Agricultural production, it is necessary to involve a large number of farmers effectively in these programmes. They should be educated in the latest research findings and trained to develop the skills needed for adopting the new techniques. With this object in view, the Department is already running with full financial assistance from the Central Government, three Farmers' Training Centres, one each at Bhavanisagar, Aduthurai and S. V. Nagaram near Ranipet. The opening of another such centre at Kovilpatti in Tirunelveli district has recently been sanctioned.

A blast resistant paddy under study for Thaladi season is a cross between C.P.S. 10 and Taichung Native 1. It has very good grain quality and yields about 6,500 kgs. per hectare. This variety is now being tried in farmers' holdings, and when released after assessing performance, will boost rice production in Tamil Nadu still further.



THE VACHAKARAPATTY HIGHWAY ROBBERY

A series of highway robberies which occurred near Virudhunagar in May 1969 created quite a stir. The highway is taken for granted by all and with implicit confidence huge fortunes in merchandise move from place to place on wheels. Whole families comprising women and children loaded with jewels and costly clothings move from place to place, without the least fear or suspicion of danger on our highways. For, protection of people who use the highways has always been held to be the high-water mark for judging a State's Police System. This has been so from time immemorial. Rani Mangammal to the Roman Emperors are remembered not for anything but the roads they gave the people of their times. Therefore a highway robbery is looked upon as an open challenge to the Police—rather an affront to the Police. No Police System worth its name will ever take a highway robbery lying down. Such was the challenge posed to the Police of Vachakarapatty. In fact it was a challenge to the State Police and the gauntlet was naturally picked up by the State C.I.D.

The magnitude of this appalling crime which occurred in the mid-summer of 1969, the like of which was unheard of in Ramanathapuram district before, created a huge panic in the minds of the

people and even shook the public confidence and paralysed the normal activities for a certain spell of time.

Place of occurrence

The occurrence took place 6 miles away from Virudhunagar on the highway leading to Sathur near a culvert with bushes around, within the local jurisdiction of Vachakarapatty Police Station on the night of 21st May 1969. A mixed Gang of 15 persons committed this preplanned crime.

One Subbiah Thevar of Santhayoor, Sundaralinga Thevar of Sennalkudi and Guruswamy Kudumban of Chinnavadiyur in Ramanathapuram District were the leaders of this criminal organisation and one Ayyanar, Chitravelu, Chinnasamy, Chinnathambi, Chinnamuniyandi, Sangan alias Nagesh, K. Sannasi, A. Sannasi, Poochi (alias) Kalimuthu—all kudumbans, and one Neerathalingam Thevar and 2 others were their henchmen who would do anything upon their biddings.

There had been criminal history behind each one of them. They had been committing crimes with impunity, partly for want of useful clues in the reported crime and partly due to the callousness on the part of the victims to report the crimes due to their fear complex of these criminals.

These criminals were habitually absent from their native villages for days on end in pursuit of crime and they used to assemble underneath “a banyan tree” near a cement factory at Thulukapatty for chalking out plans for their depredations. The peak and frequent flow of vehicular traffic on Virudhunagar-Sathur main road across the cement factory route arrested their attention and these leaders hatched out a plan for committing a highway dacoity.

Hardened criminals

Accordingly, on the night of 21st May 1969, they assembled underneath the tree mentioned earlier and then went to the culvert, armed with deadly weapons like sticks, velsticks and aruvals, blocked the way by placing stones and thorny plants across the road and lay-in-wait at the sides for their—onslaught. They even broke a milestone for this purpose. At about midnight, they stopped as many as 7 lorries and an ambassador car plying on either side one after another in quick succession and simultaneously robbed the occupants of cash, jewels, watch, clothes, etc., to an aggregate value of about Rs. 9,000 at the point of deadly weapons. The victims in the car were the Agricultural Income-Tax Officer of Virudhunagar, Thiru Vyramuthu, his wife, son and the driver. They were deprived of cash Rs. 250, clothes, 2 gold chains and a gold thali, chain, etc., valued at Rs. 4,000. They were manhandled too by the culprits. They were hospitalised. During all these robberies

the headlights of the vehicles were on, and the victims were able to give graphic description of the criminals.

The culprits, fleet-footed and hardened criminals as they were, made good their escape after realising a sumptuous booty and then reassembled at a place near Ramakkal temple where they divided the properties and of course, a lion's share went to the 3 leaders aforesaid as they were the 'Villains of the Piece'.

Enter, The C.I.D.

Thiru Vyramuthu lodged a complaint with the police promptly and a case having been registered at Vachakarapatty Police Station, investigation went on vigorously and the local Police force was pooled into action to clapnet the offenders. Soon, the Tamil Nadu C.I.D. took over the reins of investigation as this occurrence in the meanwhile, assumed State-wide importance.

The Inspector of Police, Thiru Razack, who was incharge of the investigation spared no pains and left no stone unturned for fishing out clues. He was able to gather through his reliable complainants that, of these gangsters there was a person with a defective eye, another with a long beard and yet another tall and lean built. This provided the only basis for detection of this case.

A hunt for persons bearing these descriptive features was vigorously made and before long, it came to be known that the gang leaders mentioned above namely,

Guruswamy Kudumban was having a defective eye, Subbiah Thevar a beard and Sundaralingam, of tall lean stature and they were likely to be the culprits of this case. The suspicion against them were well-founded as they were reported to be of very bad antecedents and were previously watched by the Police on history sheets. Subbiah Thevar was reported to have gone Tirupparankundram and removed his beard subsequent to this occurrence.

First arrests

Systematic, sustained and sincere efforts were made by the C.I.D. to get these culprits into the "trap door" and the Inspector arrested Guruswamy Kudumban on 9th August 1969 near Vellayapuram village. Guruswamy Kudumban verily had a "defective eye" and he at once broke down and made a clean breast of the entire occurrence. He gave out the names of all the participants including Subbiah Thevar and Sundaralingam and even produced a portion of the robbed money. He also gave a judicial confession before a Magistrate, though of course, he retracted it at the time of the trial. Nevertheless, his retracted confession did not lose its probative value as it was corroborated by independent pieces of material evidence.

Soon, Subbiah Thevar, Sundaralingam and others were rounded up. From Subbiah Thevar, the robbed Thali-chain which he had kept segregated underneath a cholam pot in his

house, and cash Rs. 450 which he had entrusted to the watchman of the cement mill mentioned earlier were recovered and from Sundaralingam a gold ingot melted from the robbed chain and cash Rs. 200 which he had kept hidden in a trunk box in his house were recovered on their own confessions in the presence of some respectable witnesses and in conformity with law. Similarly from the accused Ayyanar, cash Rs. 100 from Neerathalingam, a broken gold chain which he had kept hidden inside a pot in his house and a dhoty and from Chinnamuniyandi and Sangan alias Nagesh some clothes were recovered. A letter written by Chinnamuniyandi to his wife after the commission of this offence was also recovered and it contained very useful information to track down the participants in this crime. These jewels including the thali were identified by Thiru Vyramuthu and his wife.

It was quite a job to line-up all the victims to enable them to identify the culprits at a Judicial identification parade.

This case was also successfully piloted through in court. A volley of questions were put to the victims (witnesses) by the defence counsel doubting about their veracity regarding the identification parade to which they nicely and convincingly answered: "We will not forget the image of these culprits until we die for, they played such a horrible role". When the Thali was shown to the wife of Thiru Vyramuthu she sobbed and broke into tears for,

(Contd. on Page 39)

(Contd. from page 14)



Free slates, pencils and rote-books for all pupils in Corporation Schools children are given both, clean dresses and nourishing food. Nursery classes are also conducted. The children in the creches have a thorough medical examination by the Assistant Surgeons and their growth and development are recorded.

The I.D. Hospital is renowned all over the world and is one of the few small-pox hospitals, where the Research Laboratory is func-

tioning extremely well. For nearly a decade it has done commendable work and thereby attracted doctors from all parts of the world; doctors from South East Asia have come in large numbers to undergo training in diagnosis and treatment of small-pox. Small-pox deaths have been completely eliminated.

The research work on epidemiological, immunological and viro-

logical aspects of small-pox is being done for the last 5 years. The laboratory is financed and staffed by the Indian Council of Medical Research and World Health Organisation.

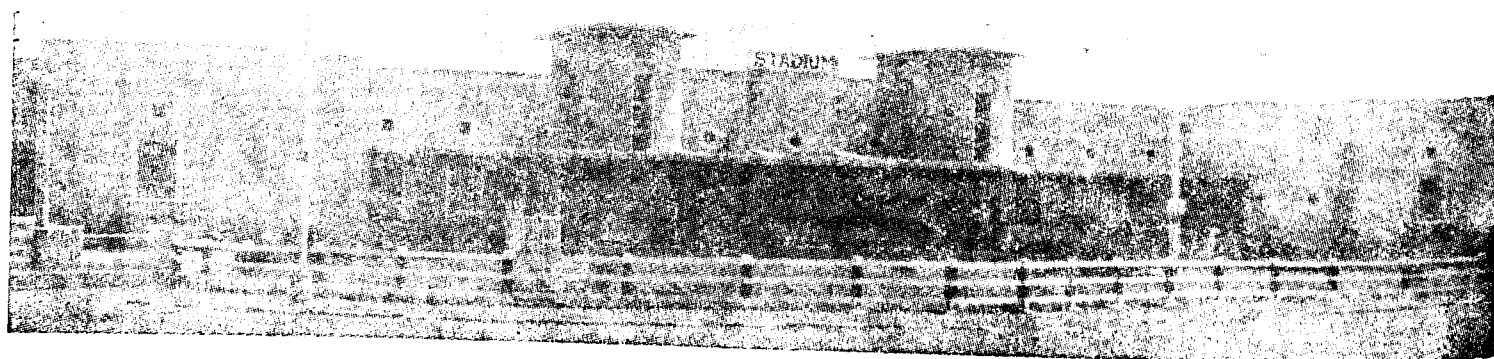
Boys and girls studying in Corporation schools are examined by doctors regularly. The children found with general deficiency are treated with shark liver oil, calcium, iron and vitamins. Spectacles are supplied to some poor children.

Education

There are 349 Primary and Middle schools with a student population of 1,54,282 and 28 High schools with 28,900 on its rolls. The number of teachers under the former category is 4,811 while the latter has a strength of 995. To the credit of this Corporation, it should be said that during the last 3 years, text-books, note-books, pencils and slates were distributed free of cost to pupils in Corporation Schools irrespective of their status, caste or community. Poor and deserving pupils are always given free garments from out of the Mayor's poor children clothing fund.

A hundred parks are maintained including the My Lady's Garden (at right) and more are being laid out under Coom Improvement Scheme (shown left.)





The Nehru Stadium

Poor children studying in Corporation schools are fed midday meals from 3 midday meals centres at Gopalapuram, Chintladripet and Basin Bridge. Free food is being served for 35,000 pupils every after-noon excepting on holidays. A fourth midday meal centre at Conran Smith Nagar has been constructed and it will be opened shortly. On commissioning this, the number of beneficiaries will be increased to 50,000. The total number of schools and creches receiving this benefit is 349.

The Corporation is maintaining 67 play-grounds in various parts

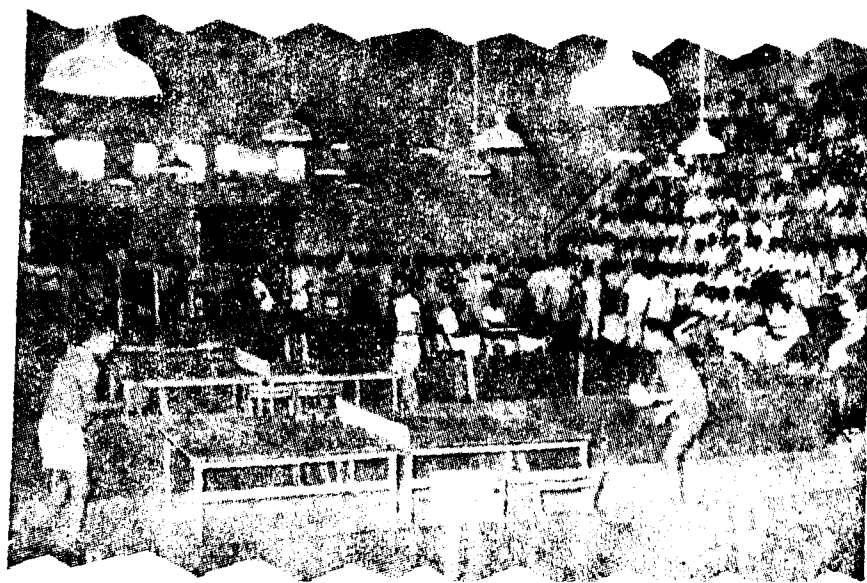


of the city, including the Nehru Stadium, Egmore Stadium and one In-door Stadium.

The in-door stadium was constructed in 1968 at a cost of Rs. 3 lakhs and is located between the Ripon Buildings and the Nehru Stadium. The hall provides 100' wide and 130' long clear floor space without any pillar obstruction. The flooring is of teak-wood and the ceiling is nearly 30' in height. In short, the hall can be used for staging all in-door games; the central area has been laid out with 3 shuttle badminton courts.

It can be proudly mentioned that the Madras Corporation is the first to construct an In-door Stadium and a multi-purpose stadium like Nehru Stadium. The main intention of the Corporation is to treat the stadium maintained by it more as a civic amenity than as a remunerative proposition. To encourage out-door games in the young the Corporation has also employed 20 Physical Training Instructors to visit these play-grounds. In offering such facilities to the public and sports associations, the Corporation of Madras stands unique in India.

The In-door games Stadium



The School Meals Scheme in Tamil Nadu benefitting 18 lakh pupils studying in 30,000 schools is entering its ninth year of useful service under the CARE assisted pattern. The CARE is short for Co-operative for American Relief Everywhere. The School Meal Programme started as a Government scheme deriving local contribution to pay for part of expenditure. In its early stages it attracted the attention of CARE and this organisation came forward to supply milk powder, enriched corn meal, rolled wheat and cooking oil. The total value of these commodities works out to Rs. 30 per pupil per year. In this CARE assisted pattern, the School Meal Programme was started in October 1961. Till March 1970 the value of CARE supplies has worked out to a total value of Rs. 17.56 crores. The local contribution is still continued and this money is now utilised for local freights and fares for moving the commodities. The Government expenditure on the scheme pays for CARE supervision and state-level storage, freights, and other components of the midday meal programme. Before next academic year, the scheme will be extended to benefit 67,000 more pupils.

Procedure

On receipt from U.S. the CARE supplied commodities are stored in godowns in Madras and monthly supplies are effected to the centres through District Educational Officers and Deputy Inspectors of Schools. Only a month's requirements are moved out from the city at a time. The

Deputy Inspectors of Schools calculate the requirements of the centres for a month and submit an indent to the District Educational Officer who submits the consolidated indent to the Director. The District Educational Officers store them in their godowns and despatch them to the Deputy Inspectors of Schools according to their indents. On dates fixed in advance the Secretaries of the Centres go to the Deputy Inspector's Office every month and receive the CARE COMMODITIES. The expenditure incurred

conveyance of meals to schools. Meals from each Central Kitchen would be transported to all the schools within the range. To start with a pilot project was started at Sekkadu in August 1967 with the assistance of CARE. After watching the successful functioning of the scheme, CARE came forward to open 30 such Central Kitchens and to meet the entire non-recurring expenditure of Rs. 60,00,000 at the rate of Rs. 2 lakhs for each Central Kitchen for the provision of buildings, vessels, delivery vans, etc. The

THE CARE-ASSISTED SCHOOL-MEAL PROGRAMME IN TAMIL NADU

by the Secretaries on their trips to the Deputy Inspector's Office and transport of CARE commodities is to be met from the local contribution of 4 paise per meal.

Central Kitchens

Midday Meals in Elementary Schools are prepared in the School premises themselves and the Midday Meals Committees employ part-time cooks for the purpose. The Administrators of CARE came forward to establish Central Kitchens in each range with attached ware-house, utensils and motorised transport for

Government have accepted this offer and have sanctioned the establishment of 30 Central Kitchens 26 in the Cingleput District, 3 in North Arcot and 1 in South Arcot District.

The Director of School Education has reported that all the 30 Central Kitchens recently built have been taken over by the Government. The gift of 66 Vehicles (34 Three Wheeler Tempo and 32 Four Wheeler Tempo Vikings) given by CARE were also taken over by Government. It is also proposed to set up a

MORE CENTRAL KITCHENS

Regional Service Centre at Kancheepuram for the maintenance of these vehicles. A sum of Rs. 8 lakhs has been assured by CARE towards the establishment of the workshop for the maintenance.

Instructions were also issued to the Collectors of North Arcot and South Arcot to secure necessary land and other facilities for locating additional Central Kitchens in the respective districts over and above 30 kitchens sanctioned in G.O. Ms. No. 1815, Education, dated 26th November 1969.

In regard to the 30 Central Kitchens already built and handed over to the Education Department, instructions have also been issued to concerned Panchayat Union Commissioners to provide necessary approach roads if they are not well connected by such road, meeting the expenditure from their own funds.

Regional Godowns

CARE has offered to construct 10 Regional godowns for storage of CARE Commodities for the Midday Meals Programme and to meet 90 per cent of the construction cost. The cost of each godown will be Rs. 2 lakhs and the total cost will be Rs. 20 lakhs of which the Government will have to meet only Rs. 2 lakhs. The godowns are to be located in the following centres :

Vellore, Dharmapuri, Villupuram, Erode, Tiruchirappalli,

Coimbatore, Madurai, Mayuram, Paramagudi and Tirunelveli.

The construction work has already been started by CARE through its own contractors in certain centres and when the buildings are completed the ownership will be transferred to the Government. The operational cost involved thereafter will have to be met by the Government. The Government have also sanctioned the employment of the requisite staff for the godowns.

Evaluation

As the Midday Meals Programme was made available at schools it became apparent that the availability of food had a positive effect on school attendance. The officials noted that the number of children attending schools

therefore gaining more from their school experience.

Both of these realizations created a desire on the part of the Government to expand the programme from a beginning figure of 229,000 children in 8,000 schools (1957) to a State-wide programme which would provide for one out of every three Elementary School Students.

Kitchen Farms

To complete the project, CARE requested that large areas of land be set aside for each kitchen, so that the rice and vegetables that are required as supplements can be produced locally. With the inclusion of this element of the project, the original objective of the Government can be realised. Ten years ago, the Government initiated the Midday Meals programme. To ensure success of

THE KITCHEN FARMS

where midday meals were offered was significantly greater than schools where mid-day meals were not served. In addition to increasing regular attendance, the lunch programme has a noticeable effect on the students' alertness and general receptivity to teaching. The Midday meal enrollees attended school on a more regular basis than non-lunch students and demonstrated that they were more alert and

the farm, CARE has supplied Rs. 60,000 worth of farm machinery, tractors, etc., fertilizer and an implement shed. In addition to these permanent equipments for each farm, CARE has purchased a large high speed borewell drilling machine for ensuring water to irrigate the farm. This drilling machine will move from one Panchayat Union to another completing the tube-wells needed in the farms.

Kendal Medals awarded to Tamil Nadu Police Officers

The Judging Committee of the Kendal Humanity Medal Scheme of the Bombay Humanitarian League notified the award of the Kendal Humanity Medal to the following Police Officers of Tamil Nadu for 1968 and 1969.

The Awardees are :

1. Thiru Subramaniam, Police Constable 659, Thanjavur District.
2. Thiru N. Rajamanickam, Armed Reserve Police Constable 2426, Thanjavur District.
3. Thiru Babu Naidu, Police Constable 1404, North Arcot District.
4. Thiru Maruthamuthu, Station Wagon Driver-Head Constable 720, Madurai Urban.
5. Thiru Arumugham, Police Constable 599, The Nilgiris.
6. Thiru Mahamuni, Police Constable 2597, Special Armed Police I Bn., Avadi.

Thiru Subramaniam :

On 3rd April 1968 at about 8 a.m. one woman by name Sambuvammal of Madukkur accidentally fell into a well 20 feet deep while drawing water, Police Constable 659, on hearing her cries jumped into the well at great personal risk and rescued the woman from drowning. But for his timely action the woman would have died.

Thiru N. Rajamanickam :

At about 11 a.m. on 2nd May 1968 one pilgrim by name Sivaraajan of Chidambaram slipped unexpectedly into the temple tank at Sirkali and was drowned. The Pilgrims who noticed the accident raised an alarm. Thiru

N. Rajamanickam (A.R.P.C. 2426, Thanjavur District) who was on duty there without a moment's hesitation jumped into the tank displaying considerable courage and brought the sinking person from the bottom of the tank to the surface after a tireless search. A tragedy was averted.

Thiru Babu Naidu :

He was on road bandobust duty at Somavarakula Street, Thiruvannamalai, in connection with the visit of the Governor of Tamil Nadu at 3.45 p.m. on 2nd November 1968. Just prior to the arrival of the Governor, the Police Constable heard somebody crying that a boy was drowning in the pond nearby. On hearing the cry the Police Constable rushed to the spot and jumped into the pond at great personal risk and saved the boy by name Kumar, aged 10 years.

Thiru Maruthamuthu :

He was on duty at Kodaikanal in connection with the visit of the Chief Minister of Punjab on 28th May 1969. At about 4 p.m. a boy named Joseph fell into a tank, and the boy was rescued by Thiru Maruthamuthu, H.C. 720.

Thiru Arumugham :

He saved a girl who slipped into the Kundah Dam on 2nd March 1968 at 11 a.m. He plunged into the bitter cold waters of the dam and saved the girl at grave personal risk.

Thiru Mahamuni :

He was on duty at the slum area in Teynampet, Madras, on 11th July 1968 when there were fire accidents in the City. This Police Constable was posted as a

picket in that place. At about 2 p.m. he noticed a hut burning and the fire spread fast to all the huts surrounding it. Hearing the cries of a baby from the hut, he braved the flames and saved the baby at great personal risk.

(Contd. from page 34)

according to her, nay anybody, the sanctity of the thali would be lost when touched by a criminal and this produced a very great impression upon everybody in the court hall. The Assistant Sessions Judge, Ramanathapuram at Madurai who tried this case found Guruswamy Kudumban, Subbiah Thevar, Sundaralingam, Ayyanar, Chitravelu, Chinna-thambi and Neerathalingam guilty under section 392, I.P.C. and sentenced them to 10 years' rigorous imprisonment each. They were further sentenced to 8 years R.I. under section 395, I.P.C. Subbiah Thevar and Sundaralingam were also sentenced to 8 years R.I. each under section 395 read with section 397, I.P.C. all the sentences to run concurrently. A. Sannasi died in the Jail due to illness and the 5 others were acquitted on benefit of doubt.

By the detection of this highway robbery, the Tamil Nadu C.I.D. restored the confidence of the public and carried aloft its prestige and very rightly, the Inspector-General of Police, Tamil Nadu at the Press Conference held at Madurai on 25th September 1969 said that "the Police could proudly claim detection of all the major crimes reported in the State including the incidents in Pudukottai and the highway robbery near Virudhunagar".

Schemes for the resettlement of Tamil repatriates from Ceylon embrace every conceivable category—from destitute women to special boarding school for children. As a majority of them are first-rate plantation workers a lion's share of the provision made is in the form of new plantations. But a good number are from the business community and therefore a sum of Rs. 3 crores will be distributed as business loans. Over 2,000 persons, comprising 500 families have already been settled in new plantations and in new houses. Over 10,000 persons can be accommodated in plantation and land-colonisation schemes. In addition 7 co-operative spinning mills are being assisted with adequate finance to increase their spindlage capacity to absorb hundreds of repatriates. In anticipation of implementation of this proposal, hundreds of Ceylon repatriates are now under training as mill workers.

Tea Plantation

Tea plantations on an extent of 750 acres in the Nilgiris district have been raised at a cost of Rs. 93 lakhs to provide employment for 800 workers or 400 families. 43 repatriate families from Ceylon consisting of 151 persons have been absorbed as labourers in these plantations and accommodated in the houses built for them.

Rubber Plantation

An extent of 2,000 acres in Kanyakumari district will be utilised for raising rubber plantations

SCHEMES FOR CEYLON REPATRIATES

at a cost of Rs. 124 lakhs to provide employment for 666 workers.

Coconut Plantation

Two hundred and twenty acres in Thanjavur district and 26 acres in Madurai district will be utilised to raise coconut plantations for rehabilitation of 49 repatriate families from Ceylon.

The following schemes are under examination and will be taken up after approval by the Government of India. An addi-

tional extent of 3,000 acres in the Nilgiris district will be taken up at a cost of Rs. 450 lakhs providing employment to about 3,20 repatriates. This project is under the active consideration of the State Government. There is also a proposal to raise tea in the Anamalais over an extent of 75 acres.

Cashew Plantations

Seven thousand five hundred acres in Ramanathapuram and Tiruchirappalli districts will

be utilised to raise cashew plantation and 600 repatriates will be provided employment. This scheme is under examination.

Cinchona Plantations

Seven hundred and seventy-five acres in Anamalais will be developed to raise cinchona which will provide employment for 450 workers. This scheme too is under examination. Meanwhile arrangements have been made to recruit 100 Ceylon repatriates immediately for this project.

Under the Land colonisation scheme 14,000 acres have been selected to rehabilitate 4,700 families. 1,256 acres in Tirunelveli and Ramanathapuram districts have already been sanctioned at a cost of Rs. 17.89 lakhs, 421 families will be settled under this scheme.

Three acres have been allotted per family and an amount of Rs. 4,359 has been granted as loan.

There is a proposal to develop a model village in Tiruvarangulam block in Tiruchirappalli district, for the benefit of repatriates opting for land colonisation scheme.

Fishing Industry

One hundred repatriates will be given training in mechanised fishing. A boat and nylon net will be supplied to each group of five repatriates. At a cost of Rs. 17.35 lakhs, 100 families will be rehabilitated.

Training in deep sea fishing with a trawler and necessary equipment is under consideration.

The Government of India have also prescribed schemes to provide financial assistance to individual repatriate families.

(1) (a) Business Loans

The ceiling of business loan to be given to each repatriate has been increased from Rs. 2,000 to Rs. 5,000. A sum of Rs. 3.38 crores has been sanctioned upto May 1970.

(b) *Grant of business loan to the repatriates trained in various schemes, sponsored by Central and State Governments.*—Since only one member in a family receives the loan according to the scheme, it has been suggested to Government that business loan may be sanctioned to the repatriates who desire to start business after completion of their training courses in the schemes sponsored by the Central and State Governments, even where business loans might already have been advanced to other members of the family.

(c) *Employment-cum-Investment schemes drawn up with the Co-operation of Small Scale Industries Dept., in the Private Sector.*

The advantage in this scheme is that all parties are equally benefited. Government is sure of prompt recovery while, the repatriate is completely rehabilitated and the Industry, gets equity which is broad-based, at 12 per cent interest.

Adequate safeguards will be provided to ensure that in case one repatriate leaves the job or is asked to leave the job, another will be selected in this place.

2. Housing Loan

A loan of Rs. 1,650 plus a grant of Rs. 600 in rural areas and a loan of Rs. 4,600 in urban areas will be given to repatriates for constructing houses. A sum of Rs. 21.66 lakhs has been paid as loan and a sum of Rs. 3 lakhs as grant up to the end of June 1970. There is a proposal to take up construction of 120 houses near Sivakasi town.

3. Agricultural Loan

Agricultural loans will be given to repatriates who already own lands in India and whose assets do not exceed Rs. 10,000.

4. Loan for Purchase of Agricultural Land

A loan to purchase upto 3 acres of land at a cost not exceeding Rs. 1,000 per acre and also provision of agricultural loan to those who wish to settle down in agriculture will be granted. The scheme is under the consideration of the Government of India.

5. Loans at Rs. 3,000 per family for purchase of pumpsets have been sanctioned already for 53 families in Ramanathapuram district.

6. Financial Assistance for redeeming mortgaged lands

A proposal to grant loans to deserving repatriates for redeeming lands from the mortgage has been sent to the Government of India for approval.

7. Individual agricultural loans

Small extent of land of 2 to 5 acres wherever available in villages will be assigned to these repatriates who want to settle down and



loans will be advanced to them. This proposal is also sent for approval.

8. Assistance to Co-operative and Private manufacturing units with a view to help them to expand their capacity and absorb repatriates as employees :—

1. **Spinning Mills (a) Tiruchendur Co-operative Spinning Mills.**—

Provision will be made for the employment of an additional 200 workers at an estimated cost of Rs. 50 lakhs. The Government of India has sanctioned a loan of Rs. 15 lakhs. 159 applications from the repatriates from Burma and Ceylon have been received.

(b) **Co-operative Spinning Mills at Melur and Srivilliputhur.**—The Government of India have been addressed for a loan of Rs. 35 lakhs for being invested in the Mills at Melur and another loan of Rs. 15 lakhs in the Mills at Srivilliputhur, so as to provide employment to 300 and 200 repatriates respectively. 925 applications for training and employment have been received at Melur.

172 repatriates from Burma and Ceylon have been selected for Training and Employment in the Mills at Srivilliputhur.

Sri Ayyanar Spinning and Weaving Mills, Virudhunagar.—The Mills have applied for a loan of Rs. 20 lakhs for expanding its spindleage. 200 repatriates will be employed. Proposal for grant of straight loans, from out of

rehabilitation funds is under the consideration of the State Government.

Tiruchirappalli District Co-operative Spinning Mills.—The proposed expansion programme is under consideration. Sri Saraswathi Mills, Tiruttani: There is a proposal to expand its Spindleage and give training and employment to 100 repatriates under its expansion programme.

Schemes relating to assistance to repatriates to start industrial units.—Proposals are under consideration for the establishment of three power loom units, one each in Ramanathapuram, Coimbatore and Tirunelveli districts.

Pre-Industrial Training Institute at Gummidipoondi, Chingleput and at Tiruchirappalli.—A Pre-Industrial Training course will train repatriate boys with low academic qualification to be admitted later in the Industrial Training Institute. There are two courses training 20 in each and the duration is 3 months. 23 boys have been admitted in the Industrial Technical Institutes of the State.

Proposal to start one such training course at Tiruchirappalli is under consideration.

Other Schemes

A scheme to train 25 women repatriates from Ceylon in palm leaf work in Tirunelveli district at a cost of Rs. 9,000 has been sanctioned.

A scheme to start a tailoring unit for women Burma repatriates at Vyasarpadi had been recommended. The cost of the scheme is Rs. 16,792. Such units are already functioning in North Arcot, Thanjavur, and Chingleput districts.

It is proposed to train repatriate women in the Nurses' and Auxiliary training every year during the Fourth Plan period. 150 repatriates from Burma and Ceylon are to be trained.

Loans have been advanced to local bodies for construction of bunks which are hired out to repatriates at nominal rent. 400 such bunks have been allotted so far. A sum of Rs. 9.53 lakhs has been sanctioned, out of which Rs. 7,33,774 has been spent upto March 1970.

A special School for children of repatriates is being run at Mathur in Tiruchirappalli. The school provides education up to VIII Standard with boarding and Lodging facilities. The strength of the school is 758 boys and 62 girls.

A home for unattached women repatriates is being run at Mathur with a strength of 72.

Employment of repatriates without consulting Employment Exchange.—Repatriates should be given preference to the posts in those schemes formulated for their rehabilitation, if they are found prima facie suitable and relaxation of rules obtained from Government whenever necessary.



Product of the national struggle for freedom, the Jamia Millia Islamia is celebrating its Golden Jubilee this month (October 1970). Like Kashi Vidyapith and the Gujarat Vidyapith, this institution at Aligarh drew to its fold the patriotic students and teachers, who had boycotted the educational institutions in 1920, in response to Gandhiji's appeal.

Service and Sacrifice

It was a unique educational and cultural venture reflecting the political ferment and the continuity of our rich intellectual heritage. The British rulers regarded it with deep suspicion and did not recognise its degrees. The students passing out from these national institutions could not hope to get Government jobs. Most of them lived and worked for national emancipation, without caring for worldly gains. For most of the time, the institution was faced with extreme financial difficulties. At a critical

juncture, the Jamia's trustees decided to close it down. But, a dedicated band of students and teachers with the moral and financial support provided by Mahatma Gandhi made the Jamia survive.

A number of distinguished leaders like Hakim Ajmal Khan, Maulana Muhammad Ali, Dr. M. A. Ansari, Maulana Abdul Kalam Azad, Dr. Zaki Hussain and Shaik-ul-Hind Maulana Mahmood-ul-Husain kept the flame burning.

Madness and Sacrifice

It was under the guardianship of Mahatma Gandhi that the Jamia was transferred from Aligarh to Delhi in 1925. In this capital city it emerged in its real character.

After the death of Hakim Ajmal Khan, the Jamia again faced another threat of closure for want of funds. Generous donations from Seth Jammal

THE JAMIA MILLIA

Facsimile of the special stamp on Jamia Millia Islamia released by the Posts and Telegraphs Department on October 29, 1970 to mark the golden jubilee of the institute. The 20 paise stamp is horizontal in design, and depicts the university building with the crest of the Jamia Millia Islamia at left hand side.

Bajaj and Seth Jamal Muhammad of Madras enabled it to survive.

Scholarship Fund

After Independence, the Jamia has been given the status of a University. The doors of the Jamia are open to students of all religious communities and it draws students from many parts of the country.

The immediate plans of expansion include the construction of buildings for the classes and the hostels and the creation of a scholarship fund for talented children. There are many young men and women, who have a keen desire for higher education but cannot fulfil it owing to financial difficulties. The Jamia proposes to raise at least Rs. 10 lakhs as endowment for a Zakir Hussain Scholarship Fund. The amount will be placed in fixed deposit and the proceeds therefrom will be utilised to help needy and promising students.

THE AGARAM PROJECT



The small farmers' co-operative lift irrigation project, of Agaram in Chingleput district, stands, in a class by itself, for it has been conceived as the harbinger of a chain of irrigation societies to be organised all over Tamil Nadu for sustaining the green revolution. That Tamil Nadu, which already leads the country in rural electrification, should set an example in co-operative irrigation is only logical, considering that electrified lift irrigation would be more economical for groups of small farmers", says 'Commerce', dt. October 31, 1970.

The co-operative irrigation society at Agaram, with 100 small farmers as its members, owning in all 120 acres, or an average of 1.2 acre *per capita*, will have three tube wells. One has been put up and energised. This well, sunk to a depth of 100 feet from the ground level, discharges 25,000 gallons of water per hour—sufficient to irrigate two crops of paddy over an area of 40 acres. The rate of water charges per acre is expected to be about Rs. 75 for each crop, while the assured irrigation from the well will spell an additional net income of Rs. 600 per acre of land, thanks to an additional production of two tonnes of paddy therefrom.

World Poetry Society

INTERCONTINENTAL

Africa - Anglo America - Asia - Europe - Latin America - Oceania

Whose Voice for Peace is 'POET'

PROCLAIMS THAT THE ELECT

Mr. M. Karunanidhi

Chief Minister, Government of Tamil Nadu, Madras, India

Having Graciously Served World Poetry with Special Merit
As invincible Contemporary Leader of Tamil Culture

Was Granted The

Distinguished Service Citation

"Poetic Magic breathing Tamil linguistic Splendour & Glory"

Conferred in the Manner of an

ANCIENT ARTHURIAN COURT OF HONOUR

Conferred By Our

CONTEMPORARY WORLD ROUND TABLE OF PARNASSIAN KNIGHTS

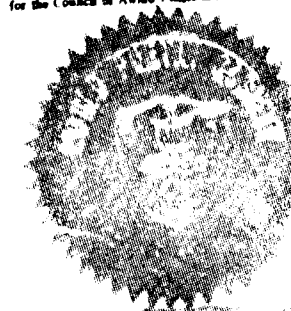
Where Knights of East & West mass Orphic Arms of Peace in Poetry

Sealed and Effected this 14th day of April, 19 69

for the Council of Award Judges and Board of Regents

David Crowder Miller

Chairman
Urbana, Illinois, U.S.A.



Krishna Srinivas

Founder - President
Madras, INDIA



'On the-Spot' painting competition for children in two age-groups viz., 5-10 and 11-17 was held at Rajeswari Kalyana Mantapam on 1-11-70. Organised by the All-India Federation of Children's Film Clubs, the competition attracted 1600 entrants from 103 City schools.

Swinging their way to a happy future!



Selvan and Selvi are happy and contented. Their parents lavish them with all the comforts in life so that they can face the future with a smile.

Are they born lucky? No. Their parents were wise enough to know that with their limited means they could give them

maximum attention only if they didn't have more children.

Your happiness and the future hope for your children is in your own hands. Today you can have a child by choice, not by chance. That is when you desire one, and can give it the best attention.

Ask any of your friends who have benefitted by family planning. There are 10 lakhs of them in Tamil Nadu. Visit one of the family planning clinics. You'll get free advice, help and other aids from trained staff.

Plan your family-and live happily!

Issued by : Director of Information & Publicity,
Government of Tamil Nadu, Madras-9

2.5.77 Registered No. M. 8656

TAMIL ARASU

3/42/27
15/5/77
2.6.77

Special Deepavali Bumper Offer

Rs. Ten lakhs Special Prizes.



Cost per ticket Re. 1/- only

- I Special Prize .. Rs. 5 lakhs.
- II Special Prize .. Rs. 2 lakhs.
- III Three Special Prizes .. Rs. one lakh each.

Usual Prizes Rs. 35 lakhs For Ten series

- 10 First Prizes Rs. 10 lakhs
- 100 Second Prizes Rs. 10 lakhs
- 1000 Third Prizes Rs. 10 lakhs
- 5000 Fourth Prizes Rs. 5 lakhs

Total Prize money Rs. 45 lakhs

Total number of prizes 6115
Tamil Nadu Raffles have created
189 lakhiers so far.

who knows,
you may win big money
with just one Re.
Try your luck!

Draw Date
30-11-70

செலவு ஒரு ரூபாய்



வரவு பல லட்சம்

Be proud to be partners in Country's progress. Take to Raffle habit.

TAMIL NADU RAFFLES

ISSUED BY DIRECTOR OF INFORMATION & PUBLICITY, GOVERNMENT OF TAMIL NADU, MADRAS-9.



Tamil Arasu

FORTNIGHTLY NOV. 21st 1970-35P.

WELCOME TO THE LAND OF GLORIOUS CULTURE



Come to the land of the Tamils where ancient culture and civilization have been preserved in myriad forms... Bharata Natyam... rich Karnatic music... great literary classics... imposing temples... sculptural and iconographical masterpieces... And Nature's charms of tropical vegetation and lush rivers are as hospitable as the people.

For an unforgettable holiday come to the south.
Places of interest

Madras - Mahabalipuram - Kanchipuram - Chidambaram
Tanjore - Srirangam - Madurai - Courtallam - Kanyakumari
Rameshwaram - Ooty - Kodaikanal - Yercaud.

Contact:
The Director of Information, Publicity & Tourism,
Government of Tamil Nadu, Madras-9.

MOU 13

Tamil Arasu

Vol. 1 NOVEMBER 21, 1970

No. 10



CONTENTS

	Page
The Protector of Democracy	4
Those Twenty Days	6
Children's Day 1970	10
Changing Educational Scene Abroad	11
New Wealth from Rice bran	13
Indian Systems of Medicine	15
Historic Fort of Vellore	19
Ooty	20
Son et Lumiere	27
Television Plans	31
Industrial Growth of Tamil Nadu	35
The Madras Museum	36
Nutrition Scheme for Slum Children	41
Glimpses of Nehru	43

Cover Page:

Nehru is a cherished memory in Tamil Nadu. His Birthday Nov. 14th. was celebrated with eclat as befitting a National Leader.

"SANS REPROCHE"

he never sought

Nehru, we have a cherished possession in despair at the disappearance of the Star of Faith.

After Mahatma Gandhi, Pandit Nehru was the only leader to have found a place of reverence in the hearts of all Indians from the Himalayas to Kanyakumari. Today, he is no more in our midst, but the philosophy of democracy that he so lovingly nurtured is still with us. To nurture it and help it function even more purposefully, is the homage that the living could pay for the departed leader. He has done so much for this land. But there still are much more that have to be done and which as yet remain undone.

"The most sustaining memorial that we could raise for him is, to carry out successfully the work that he had initiated. He had erected the rostrum of rationalism in the harbour of democracy and from it had held aloft the flag of universal peace. The best tribute that we could pay him is to ensure that neither the garden withers nor the rostrum totters".

—From the message delivered by Kalaignar M. Karunanidhi over the A.I.R. on the demise of Pandit Jawaharlal Nehru.

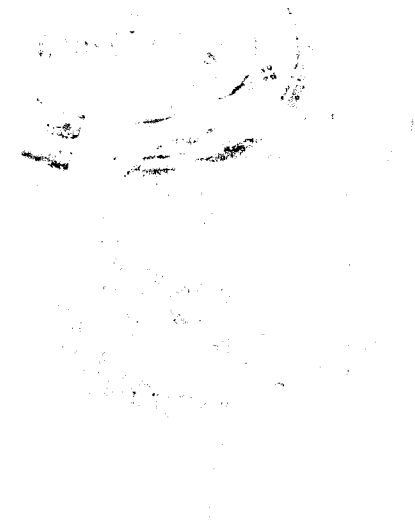
NEHRU, THE PROTECTOR

Jawaharlal Nehru, the first and the most popular Prime Minister of India, is remembered with a deep sense of reverence and gratitude by the citizens of India and the world. His birthday occurring on the 14th November, is every year celebrated as Children's Day for he loved children and he himself was childlike in his simplicity and lack of guile. He endeared himself to children all over the world and the innocent and enthusiastic children affectionately called him 'Uncle Nehru'.

The many-splendoured life of Jawaharlal Nehru—as a Fighter for Peace, Liberator of Humanity, Maker of History, Historian, Leader of Free Nations, Democrat, Model Parliamentarian, Ideal Educationist, great Statesman and the Prime Minister of India—is a source of inspiration and instruction to all.

Jawaharlal Nehru was happily married and looked like settling down to a life of cultural ease and comfort. Fortunately for India, he was suddenly aroused by the energising impact of Mahatma Gandhi. The early years of hardship spent in the wake of political strife tempered the steel of Jawaharlal's character, and proved invaluable in strengthening the fibre of his innate integrity. Doubts or misgivings as to the future rarely assailed him, and at the end of almost a generation of continuous and bitter conflict, Jawaharlal's own personality emerged

4



I have received so much love and affection from the Indian people that nothing that I can do can repay even a small fraction of it, and indeed there can be no repayment of so precious a thing as affection. Many have been admired, some have been revered, but the affection of all classes of the Indian people has come to me in such abundant measure that I have been overwhelmed by it. I can only express the hope that in the remaining years I may live, I shall not be unworthy of my people and their affection.

shining, completely unscathed and untarnished. He never lost the buoyancy of his spirits.

Even in his sixties he was young and handsome, debonair, temperamental, impetuous full of enthusiasm and always busy. He loved laughter but he could not relax and shake off the worry and pre-occupation of office to get out in the open and stretch himself. He had not the time to indulge in day-dreams and fancies much as he would have liked to. He loved birds, flowers, mountains, hurtling forests of water and snow. But while they continued to beckon to him, he went on with his incessant grind in grappling with many a difficult and pressing problem of a newly independent and ancient country.

The tempo of Nehru's life had been exceptionally quick, whether in the years of political strife or during the hectic and eventful years of office since September 1946. He had had but little leisure and less privacy. He never missed an opportunity of coming closer to his people. He loved his men and his presence never failed to act as a tonic to the multitudes.

Jawaharlal saw India's problems in time and in space, and parochialism of any kind was hateful to him. Narrow bigotry—intellectual, cultural or religious—roused his indignation and he would not tolerate meanness in any shape or form. His reflective turn of mind inclined

him to view problems from a remote perch.

Politics is a strange game and a standing challenge to all men of integrity and rectitude. Expediency, more than ethics is often decisive, and yet Nehru had been able to bring in a distracted world an unusual balance of mind, sanity of outlook and clarity of thinking to bear upon the difficult problems of India's foreign relations; and within less than two years of office as Prime Minister, he had won for himself a place among the select band of statesmen who had a determining voice on the future course of world-events. Rabindranath Tagore, the poet, rightly said "Jawaharlal has upheld the standard of purity in the midst of political turmoil, where deception including self-delusion so often destroys integrity. He has never evaded truth when it brought danger in its wake, nor has he made alliance with falsehood when it would have been convenient to do so. His brilliant mind has always turned away in out-spoken disgust from the path of diplomacy where success is as easy as it is mean".

He was always busy. He was terribly overworked and perhaps enjoyed the sensation of being so constantly occupied. He was in the habit of working late in the night, and looked often as if a few days of uninterrupted sleep and rest would have done a lot to sooth his tired nerves

1A

INS REPROCHE"

and tone up his system. He never spared himself even when the time had come when his boundless enthusiasm and limited store of energy had to be carefully husbanded in the larger interests of the country. His very versatility, general accessibility to his colleagues and friends, and unusual willingness to be in daily touch with the people by way of speaking at all manner of functions were a source of menace to his health. The stress of work on Nehru was perhaps greater than bearable.

He had long been in the habit of burning mid-night oil and he perhaps enjoyed it for there was a natural and understandable exhilaration and a feeling of deep satisfaction in toiling hard; particularly for a cause and for the fulfilment of the historic destiny of a great nation.

Nehru's own achievements, as foreign Minister have been remarkable, for the stately edifice of India's foreign office is entirely his creation and he had neither precedents nor seasoned personnel to guide him in the construction of it. His imagination, burning idealism and abounding energy were responsible for India's prominent position in the international field.

"Jawaharlal Nehru, by his rank, ability, and known integrity was able to exercise an independent control over the masses—to lead them instead of being led

by them; for as he never sought power by improper means, he was never compelled to flatter them. On the contrary, he enjoyed so high a reputation that he could afford to anger them by contradiction. When he saw them unseasonably and insolently elated, he would with a word reduce them to alarm; on the other hand, if they fell victims to a panic, he could at once restore their confidence. In short, what was nominally a democracy became in his hands government by the first citizen".

One of Nehru's outstanding contributions to the building up of free India is the sense of unity and stability that he has given to the administration; his personality itself has been the strongest cementing factor.

In 1929 when Jawaharlal Nehru, was rising in all his youthful splendour as the new star in the political firmament of India, Mahatma Gandhi spoke of him thus: "He is as pure as crystal; he is truthful beyond suspicion. He is a knight sans peur, sans reproche. The nation is safe in his hands". Nehru proved himself a worthy illustration of the Mahatma's description and expectation.

India was safe in his hands. Democracy was safe because of him, and Arignar Anna aptly described Nehru as the Protector of democracy.

5

THOSE TWENTY DAYS

M. KARUNANIDHI

8. NERO, THE TYRANT

Julius Caesar was the radiant moon on the firmament of Roman history. And as for Mark Antony and Cleopatra, they were the equivalent of twinkling stars. Nero and Marcus Aurelius held prominent positions in the galaxy though by temperament and character they were so markedly different from each other.

The very mention of the name Nero brings to our mind the oft-quoted description of the sadist who is said to have, "fiddled while Rome was burning" On 18th July in the year 64 A.D.

Rome that had been eulogised variously by historians as the chieftain of Europe, the City beautiful that had a charmed life and the metropolis that had risen in splendour on seven hills, was in flames.

Temples touching the vault of heaven, palaces of rare magnificence, arenas and amphitheatres of valour, artistically-designed mansions where amorous couples strolled hand in hand, terraces of marble, gardens of flowers cool, sweet and fragrant, libraries raised with loving care by dedi-

cated scholars, and museum and archives—all these were ablaze. The air was filled with the thunder of buildings coming down in a crash and with the shrieks of agony from men and women, young and old, caught in the grip of cruel death.

The great fire had started at dead of night and it kept burning throughout the next day and a few days thereafter. Deprived of food and drink, and with their clothes too burnt to ashes, the citizens of Rome ran helter-skelter, seeking sanctuaries that simply were not there. But there was one person who was untouched by the agony and dangers of the calamity. He was none other than Nero who had ensconced himself on the terrace of a mansion beyond the reach of the fire.

Surveying the angry fire sweeping through the City, his eyes lighted up in exultation, he exclaimed, "How wonderful are the flames to look at! My dear capital is on fire and can there be any spectacle more glorious than this? Now and now alone am I able to see what Troy would have looked like when it was in flames. A novel poem is taking shape in my heart. 'Ho there, bring the harp.' So saying Nero strummed the harp and burst into song.

"What brutality, this!" we might ask, for we have lived in the shade of the umbrella of Kings who were so duty-conscious that they were filled with dread, even if the monsoon failed.

In the year 1967, fires spread all of a sudden in the City of Madras and in certain parts of Tamil Nadu. "What could be the origin of the fires? Was it the handiwork of miscreants? Why did they select the huts of the poor for their cruel mischief? Oh, what pleasure could they derive from the agony of the havenots?" questions such as these piled up but neither the cause of the fire nor the criminal authors could be identified completely. Even that great leader who had counselled us to steel our hearts to withstand any onslaught could not bear the impact of this—stark tragedy.

My heart that was in acute anxiety to get at the cause of the strange fires could only recall the following lines of Pattinathar :—

"The fire of yore
burnt up the fortresses three ;
and the fire of later times
was at Lanka in the South
The fire kindled by the mother
was at the pit of the stomach
and the fire of her funeral pyre
is rising higher and higher".

I also thought of the *cause celebre* in which Kannagi, the Symbol of Chastity, argued her case in the Court of the Pandya King Nedunchezhan. She could establish that her husband Kovalan who had been done to death was no thief. The mission accomplished, her grief over the loss of her husband, turned into volcanic fury and she swept through the City of Madurai that was in flames. Even at the extremity of sorrow,

this TAMILIAN woman had the compassion in her to plead with the raging Fire : "Oh, do spare the righteous and the philanthropists, the kine and the family women, the aged and the children—do spare these and turn your attention only on those given to evil ways." After that fire the City of Madurai was renovated as may be seen from references in history.

Whether it be Rome or Madurai or London, it is a fact borne



Nero

out by history that the places razed down took shape again in better form and detail. Not knowing this, the ignoramus-miscreants had miscalculated that they could topple the Government of the day, by starting fires.

All manner of allegations against Nero were being bandied about on the pavements and in the town-squares. The sum and substance of the gossip was that Nero himself had set fire to Rome

since it had been his longstanding ambition to demolish the City altogether and replace it with a new City to be named "Neropolis" after him. It was also said that he had nursed the grievance that he could only visualise the burning of ancient Troy; so he had sought to reconstruct the incident in order to be able to compose a poem on the subject. The consensus was that Nero and Nero alone was responsible for the fire and the destruction of Rome.

Could this be true? Some historians say 'yes' while some others differ. Who, then were the wicked people that set Rome on fire?

Nero blamed the Christian residents of Rome for the tragedy and he wreaked vengeance on them. His action against them is known in history as the "First Christian Persecution". Hundreds of Christians were put to death. Nero got hides of animals packed with live humans and the wriggling bundles were then, thrown to ferocious dogs. Some of the Christians were crucified, some others were burnt at the stake and there were others who were torn to shreds by explosives.

People who saw all this said that Nero was far more callous than the Fire. The Fire that razed a vast portion of the City of Rome to the ground had burnt for nine days only, but Nero's the conflagration, that had gripped the Roman Empire kept going for fourteen long years.

During those fourteen years the Romans were virtual exiles in their own country. Countless were those who fell a prey to his tyranny and paid with their lives; and countless again were the blossoms crushed and cast aside by this megalomaniac.

Nero's mother Agrippana was a woman of outstanding beauty. Good looks formed the passport for admission into the Roman palace of those times and this accomplishment she did possess in abundance. Stately and bright-eyed, with dark tresses and lips set in a bewitching smile, she was the embodiment of grace and elegance. No wonder, for, was she not the granddaughter of the Emperor Augustus?—When she came of age and her figure and heart throbbed in response to the ecstasy of maidenhood, when she glowed like a blossoming bud spreading fragrance all around, she married *Domitus*. The outcome of this union was a son.

Agrippana's husband died soon afterwards but even as she was forced into the weeds, she knew that she was free of the shackles of the past. Gifted with excessive good looks and trained in the craft of seduction, it was not long before she gained admittance to the palace. When Claudius ascended the throne, she wormed her way into his affections through her seductive manoeuvres and in due course she had become queen. The king was her bond-slave and the courtiers as well as warriors, statesmen and foreigners were at her beck and call. Gifts from all the corners of the globe accumulated at the palace and the senders were united in their endeavour to keep her in good humour. Only Agrippana's favourites could find a place in the Court and her former lovers

and hangers-on packed the Senate even. Intellectuals and experts of outstanding ability had sat in the Senate till then, but now, the august House came to be comprised of those who had assisted Agrippana in her ambitious career.

There was one Poppaea, a beautiful woman who belonged to a noble family. Her husband was Rufus Crispinus and when he married her, Rufus had every reason to feel proud of his good fortune. His jubilation, however, was short-lived for a gallant by name Otho who was a close friend of Nero, became Poppaea's second husband. Nero thought little of being treacherous to his friend and he lost no time in marrying Poppaea.

Octavia was Nero's first wife. She was the repository of modesty, affection, intelligence and culture but Nero had no liking for her. The women who captured his fancy were those like Poppaea and Mesolina. In a tantrum one day, Nero kicked the pregnant Octavia so ferociously that she died on the spot.

Yet another woman was put to death by Nero and her crime was that she had repulsed his advances unlike Poppaea and Mesolina. A fourth woman came into his field of vision and to secure her hand, Nero got her husband killed. In this manner, the libertine monarch meted out summary death to the women who refused to become his hetaerae and to the men who came between him and the objects of his amorous attentions.

In the beginning, that was when he was seventeen, the disc of his authority whirled well for Nero, thanks to the able guidance from his astute precep-

tor Seneca, the sustained assistance extended by the commander Burres and above all, the goodwill of his mother. But this equilibrium could not be maintained. Seneca and Burres sought to rescue Nero from the clutches of Agrippana and the moment that domineering lady realised that her son was slipping away from her apron-strings, she hatched a plot to get one Britannicus crowned King in place of Nero. The unfortunate Britannicus was promptly crushed out of existence by Nero.

Agrippana saw her son steeped in the infatuation for women like Poppaea and Mesolina. Her own influence was fast dwindling in the Court and in the country. Our sentiments shrink back in distaste and horror when we read that in a last desperate bid to retrieve lost ground, Agrippana went to the extent of seeking to seduce her own son!

Nero had had enough of her machinations and he decided to get rid of her. She was despatched in the royal barge which broke up as planned, while it was midway through the journey. Many of the passengers were drowned but Agrippana escaped somehow. Thereupon Nero engaged an assassin who sought out the victim. Confronted with certain death at last, Agrippana cried out in anguish "Oh, ye murderer, go ahead and slash the womb that gave birth to that evil fellow Nero." Thus came about the end of that Chief-priestess of high living that arsenal of obscenity. Agrippana had poisoned her own husband to death with the intention of securing the levers of imperial power after making her son a *Roi faineant*, but now

the wheel had come full circle and she herself was put to death by none other than her son.

Blood drenched every step of Nero's journey through history and many indeed were the assassinations carried out at his behest. The capable commander Burres too died. Nero's preceptor Seneca had retired from politics but he also was constrained to take his own life.

Nero put to death quite a few of the employees, political pundits, renowned poets and warriors. The fear even spread that he might wipe out the Senators *en masse*. The hatred and anger which he had so painstakingly earned from the people of Rome kept mounting until his very name was anathema to them. "Nero" became synonymous with murder and tyranny.

It was at this stage of his rule that Nero visited Greece and participated in the Olympic and other games. He returned home in 67 A.D. but by then his own warriors and rebels had rallied against him. Galba who was the commander of the armed forces of the Roman Empire had raised the standard of revolt. He set out for the City of Rome at the Head of the army and he announced as he sped on, "I shall not respect the King who does not care for the people. It is my supreme duty now to vanquish that King and devise ways and means to end the agony and misery of the people".

The end was drawing nigh for Nero who, wedded to drink and debauchery, had squandered his time in pleasure and song and who had not stopped at murder even, to secure the desires of his heart. He was just 31 years of age then.

Driven to the wall by the rebels, Nero walked up and down with a goblet of poison held in his trembling hand. He thought of committing suicide but his determination gave way. He implored his bodyguards and many friends to grant him refuge but they all refused. At his wit's end, Nero planned to leap into the River Tiber and find a watery grave but the desire to live proved too strong.

Taking pity on his predicament a servant at last came forward to give him sanctuary. The mighty monarch who with his gorgeous chariots and cavalry and army had ruled over an Empire, was forced to trudge four miles at dead of night in order to reach the place of his refuge.

The Senate met and passed the verdict that Nero should be captured, disrobed, tied to a post and whipped to death. The terrified fugitive decided at this point that it was far better to put an end to his life than face torture at the hands of his enemies. He thrust a dagger into his heart and fell down dead.

Nero was a tyrant and a murderer; yet he was a poet, a connoisseur and an actor too. He was passionately interested in Greek Art and literature. Notwithstanding the streak of cruelty in his character, he was charitable to the poor and his donations to them were munificent indeed. After the Fire had destroyed more than half of the City of Rome, it was reconstructed as a City Beautiful and in this laudable task, Nero had a substantial share. But alas, his frenzy for murder threw a cloak over his qualities of excellence.

As if to clear the impression that there were many merciless and crude monarchs of the type of Nero among Romans who called themselves a civilised community, Marcus Aurelius appeared on the scene and his reign as Roman Emperor was grand, to say the least.

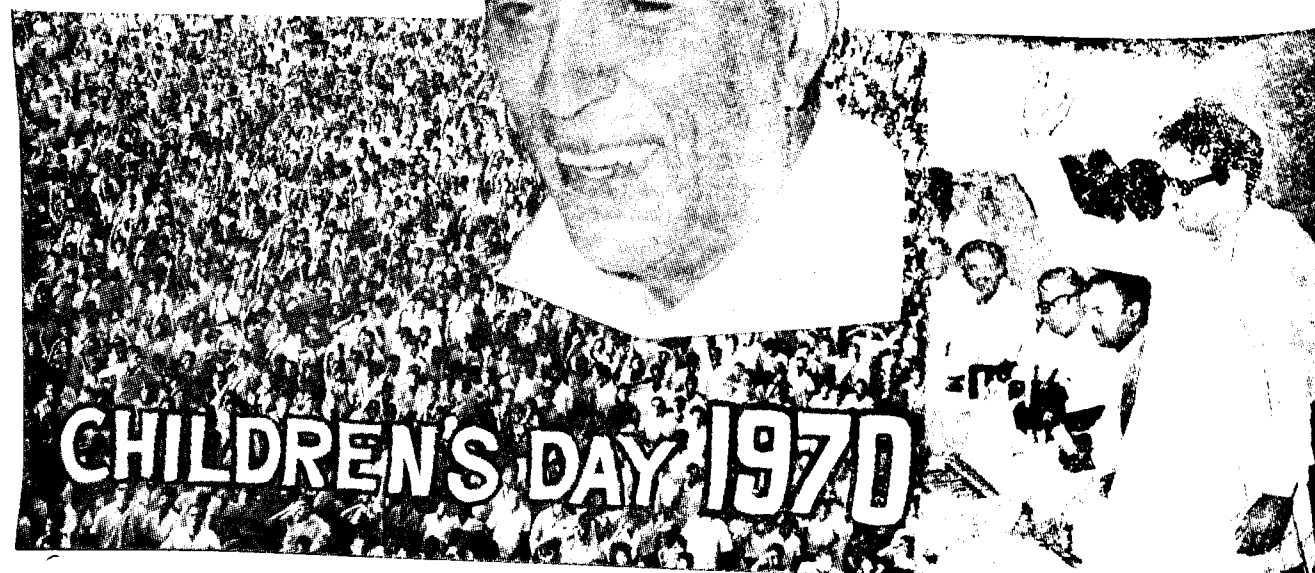
The wealth of Mediterranean countries was at his feet but Aurelius was the personification of austerity. His attire was extremely simple and he believed in keeping down the necessities of life. Right from the time he rose from slumber at break of dawn, up to the midnight hour when he went to bed, nothing other than the interests of the State engaged his attention. He got many a law enacted to reduce the tax-burden on the poor and to improve the lot of slaves, women and children. In meting out punishment to his political adversaries he showed marked leniency.

The three cardinal principles of life that Aurelius enunciated were "Block out vain pomp" "Quench appetite" and "keep reason under its own control."

Marcus Aurelius was a thinker and intellectual of extraordinary brilliance. His heart was set on peace but, for that reason, he was not one to be deterred from the field of battle. The dissertations he delivered throughout his life bear ample testimony to this. Whenever he could get respite from the affairs of the State, he reduced his thoughts to writing. The words of counsel which he offered to himself from time to time were compiled at a much later day under the title 'Meditations' and when the volume came to be published, the whole world wondered at and acclaimed the vigour of his intellect. (To be Continued).

*Spectacular
Celebration of*

*Nehru's Birth day
in Tamil Nadu*



The Tamil Nadu Government had arranged to celebrate Nehru's Birthday in a "grand manner throughout the State. In Madras the Children's Day was celebrated on 14th November 1970 in a spectacular way.

The Tamil Nadu Government had arranged for free exhibition of children's films in 12 theatres. Continuous shows were held from 9 a.m. to 9 p.m. in the Children's Theatre. Over 10,000 children saw the shows on the 14th and the shows were continued the next day also to help more children enjoy seeing the shows.

The Chief Minister, while inaugurating the Children's film festival at Anand Theatre, asked film producers to produce good children's films. Dr. Visalakshi Nedunchezian presided and Thirumathy Ammu Swaminathan welcomed the gathering.

Education Minister Thiru Nedunchezian opened an exhibition of children's books at

Rajaji Hall. He suggested that books should be given instead of coconuts at marriage receptions. Similarly books should replace garlands at all school functions.

As part of the celebrations, a Poets' Symposium (Kavi Aran-gam) was organised at the University Centenary Auditorium. The Chief Minister, Kalaignar Karunanidhi, presided. Poets Kannadhasan, Kothamangalam Subbu, S.D. Sundaram, Murugu Sundaram and Abdur Rahman participated in the symposium the subject of which was "Democracy as viewed by Nehru".

Children's Rally

Children were allowed to travel to and fro on the State Transport buses for a flat rate of 10 paise for the rally at Nehru Stadium. Hundreds of Corporation and private school children took part in a display of dances and physical exercises at Nehru Stadium. The Chief Minister

inaugurated the celebration and the Education Minister Presided and released a special number brought out in connection with the Children's Day. Agriculture Minister Thirumathi Sathiyavani-muthu gave away prizes to winners in the various competitions.

An all-Party meeting was held at the University Centenary Auditorium, to celebrate Nehru's Birthday. Speaking at the meeting, Chief Minister Thiru Karunanidhi said that the State Government had been organising such all-party meetings for Independence Day and Mahatma Gandhiji's Birthday in order that all parties could join for such occasions to sink their differences atleast on such days. The Education Minister Nedunchezian, who was the Chairman of the Celebrations Committee presided over the meeting. Leaders of all political parties participated in the function.

Children's Day was also celebrated in the districts with rallies and distribution of sweets.

CHANGING EDUCATIONAL

SCENES ABROAD

"We believe that education is the sheet anchor of our national development. We believe in the economic value of the general diffusion of intelligence among the people. We believe that the higher the educational accoutrement of an individual, vaster are his potentialities to contribute to the development of the Self and the Society. We believe that education is not merely an item of consumption but a factor of production as well because while it is priced for its own sake, it is recognised as an instrument aiding the individual to develop his skills and interests, attitudes and understandings. As such we believe that no amount of expenditure on education can be too much". These were the words expressed by Mr. Reed, an American Educationist in the course of his discussion with Thiru V. R. Nedunchezian, the Minister for Education, during the first lap of his recent tour of the United States. He spoke with verve and conviction and what he spoke, I should say, reflects the general belief of almost every American citizen who is keenly aware of the close nexus between education and national development. Why, for that matter, even such other econo-

mically advanced nations we visited, viz., West Germany, France, the U.K., Japan, Singapore, etc., hold the same view that education acts as an infrastructure to the growth of their national economy.

Then again one cannot fail to see that education means to these countries a factor that transmutes man and his environment, a factor that brings about growth with change. While growth is economically measurable in terms of a country's rising standard of living and increasing annual per capita income, change is indicative of experimentation, flexibility and creativity. It means adapting and adopting the ways and techniques of modern science and technology. It means giving up old habits and customs and striving for what makes life truly meaningful and constructively progressive. It is this spirit of change that has caught the mind of Japan as much as the Western countries.

By

S. V. CHITTIBABU, M.A., B.T.,
Director of School Education.

While there is recognition by the progressive nation, I have referred to of the fact that national growth with change depends on the development of human resources through education, it is but a logical corollary that they should so organise their educational programmes as to relate them to the life, needs and aspirations of the people concerned and at the same time accelerate the process of continual modernisation. Neither America nor West Germany nor Japan believes that all education is good both for the individual and for the society and that it will necessarily pave the path to progress and development. On the contrary these countries believe in education indicating itself through programmes that produce a high proportion of competent professional manpower which adds to productivity. That is why they are self-sufficient in food and industry. The skilled manpower needed for relevant research and its systematic application to agriculture, industry, and other sectors of life come from a development of scientific and technological education. Japan, be it remembered, though a small island country, poorly endowed with natural resources and supporting a big population of more than 100 million, has today achieved the miracle of not only rebuilding its economy but also attaining a rate of economic growth that has secured for the nation a third-ranking position in the world in terms of economic scale. Behind the remarkable development

of the Japanese economy in postwar years stand the two major factors—technological innovation and a large well-educated and well-disciplined labour force. In this respect the example of Japan, an Asian nation, needs to be emulated by a developing nation like ours.

The knowledge explosion that is seen in the west as well as in

of presized units, curriculum content divides into two fundamental parts basic content for all persons and depth content for persons with the ability and interests that go beyond basic provisions. The idea is that each person should be accepted into the educational programme as he is and that he should be provided with a stimulating environment and opportunities for learning experiences that will effect continuing satisfactory adjustment to life. In this connection special mention may be made of National Science Foundation of the United States. This runs what are called Summer Institutes which are among the Federal Government's pioneer programmes to aid education and to improve the training of secondary school teachers. The National Science Foundation's investment in the programme is massive. The total outlay for the Summer Institutes and related programmes since 1953 has been more than 400 million dollars. About 21,000 teachers each summer attend 450 institutes at colleges and Universities throughout the nation. What an official of the National Science Foundation said is worth quoting if only because it under-scores the value of the training given to the in-service teachers at a Summer Institute. He said :

“ The Summer Institute must improve teaching in general. This is not only because the students will become more effective teachers at their present level, but mainly because of the improvement in their attitudes towards science. Most of the

students arrive at the Institute with the ‘Show-me-the-trick’ attitude but leave with a different attitude, one that is closer to the ‘Show-me-the-background’ attitude. Furthermore there is the improved contact between University and high school people due to the Summer Institute. And I am convinced that the situation in science today is so complex that an improvement in basic

Madurai University to Conduct Nuclear Energy Symposium

The Nuclear Physics and Solid State Physics Symposium organised by the Physics Committee, Department of Atomic Energy, will be held at the Madurai University, Madurai, on December 27—30, 1970. Further information can be had from Dr. S. S. Kapoor, Secretary, Nuclear Physics and Solid State Physics Symposium, BARC, Trombay, Bombay-85.

instruction can only be made by means of collaboration between teachers and University staffs.”

In our country also we have made a modest start and summer institutes are being organized for the benefit of teachers of science and mathematics of Secondary Schools and the University staffs are involved in their programmes.



An important development in the field of rice milling industry in Tamil Nadu is the setting up of modern rice mills with modern machinery. A higher outturn of rice from paddy, with lower incidence of foreign matter and broken rice in it and better quality bran, are the distinct advantages of these modern mills over the conventional mills.

At the moment, there are nine modern rice mills in the State, eight of them with a capacity of four tonnes per hour, the ninth having a capacity of two tonnes per hour. Seven more such modern mills of two tonnes per hour capacity are in advanced stages of construction and are expected to go into production in a short-while.

It is estimated that about 4.5 million tonnes of rice are milled by the organised rice milling

sector and the rice bran obtained would be approximately 220,000 tonnes, which could provide about 37,000 tonnes of rice bran oil valued at about Rs. 7.5 crores. With the establishment of more and more modern rice mills, high quality rice bran will be available in abundance. However, the industrial and commercial possibilities of rice bran oil and deoiled rice bran are yet to be fully exploited in the State. At present rice bran is mainly used for production of poultry and livestock feed.

Rice bran oil could be used as a raw material in the cosmetic, pharmaceutical and edible oil industries. Japan has synthesised a new kind of tough fibre from rice bran oil and urea resin. Rice bran oil could also be used as a material for vinyl chloride plasticizer. Deoiled bran could be used as a good fertiliser, because it contains important manurial nutrients such as nitrogen, phosphoric acid and potassium. Also, various chemicals such as amino-acids, phosphoric acid compounds, could also been produced from deoiled rice bran. It could also be used for edible purposes, i.e., making biscuits and cakes.

It would thus appear that rice bran oil and deoiled rice bran are versatile and valuable raw materials for a number of industries. But, at the present stage of industrialisation and technological know-how these by-products remain utilised.

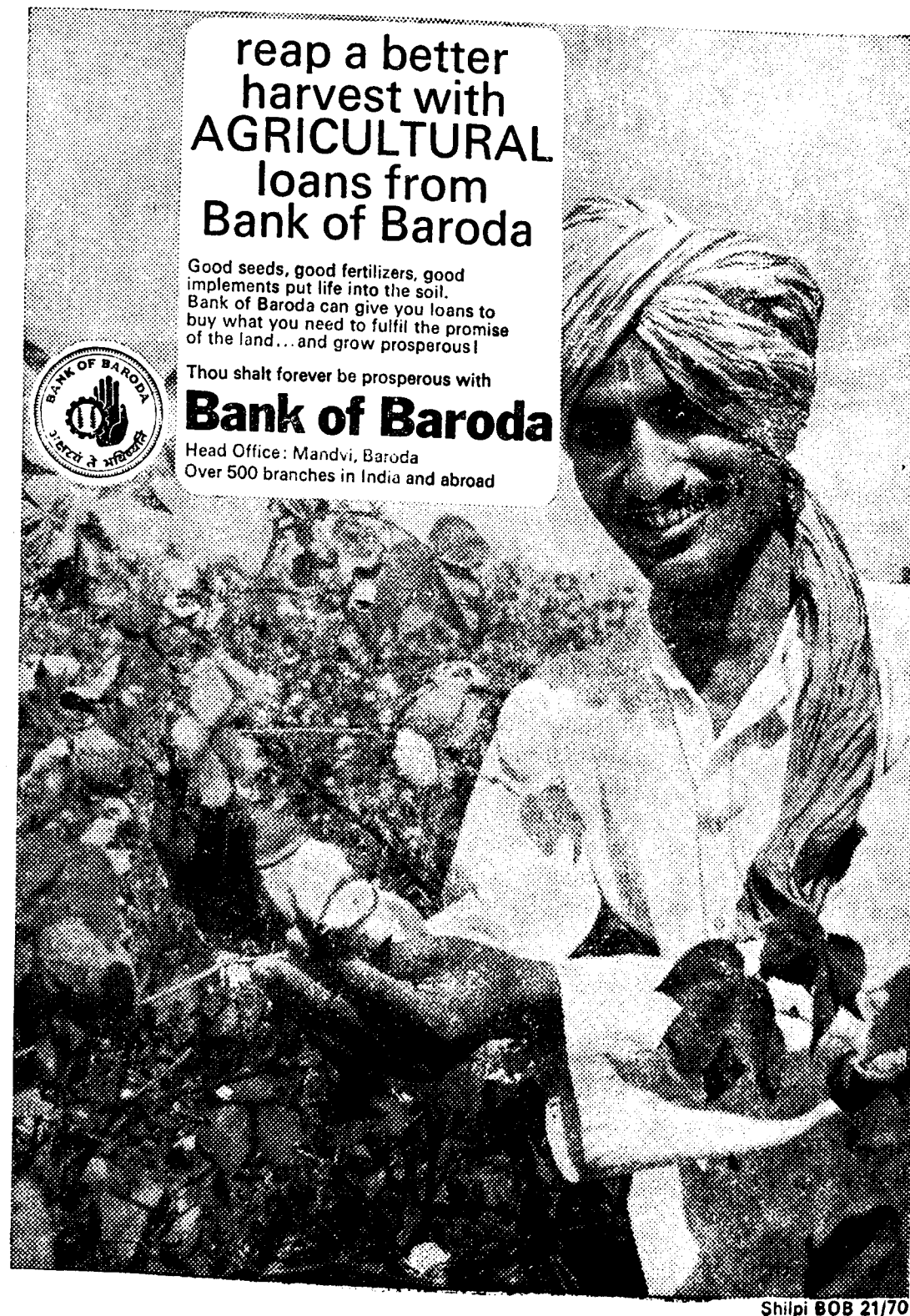


reap a better harvest with AGRICULTURAL loans from Bank of Baroda

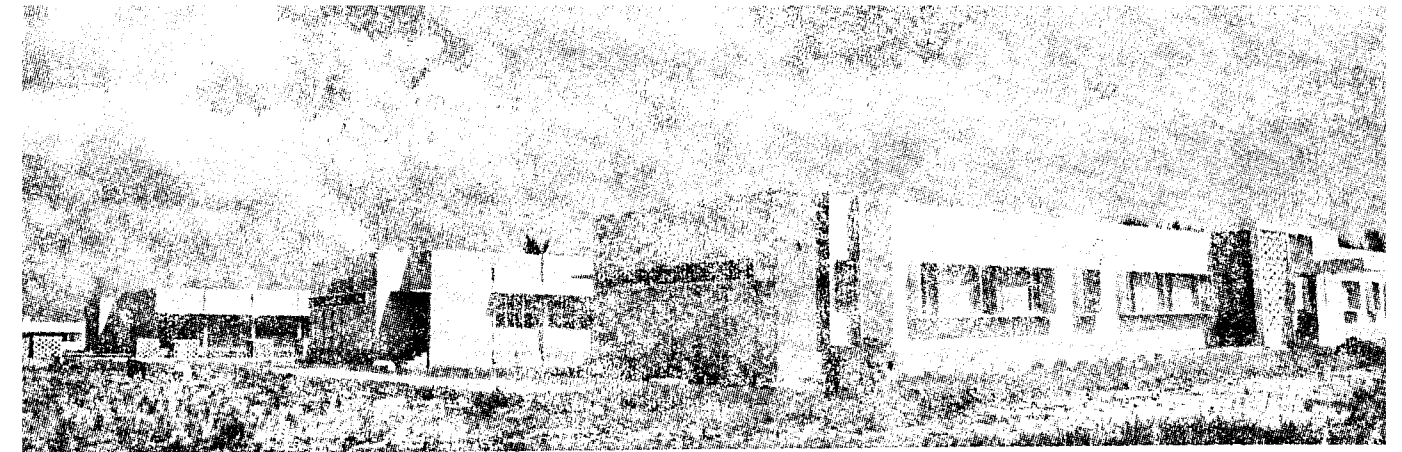
Good seeds, good fertilizers, good implements put life into the soil. Bank of Baroda can give you loans to buy what you need to fulfil the promise of the land... and grow prosperous!

Thou shalt forever be prosperous with
Bank of Baroda

Head Office: Mandvi, Baroda
Over 500 branches in India and abroad

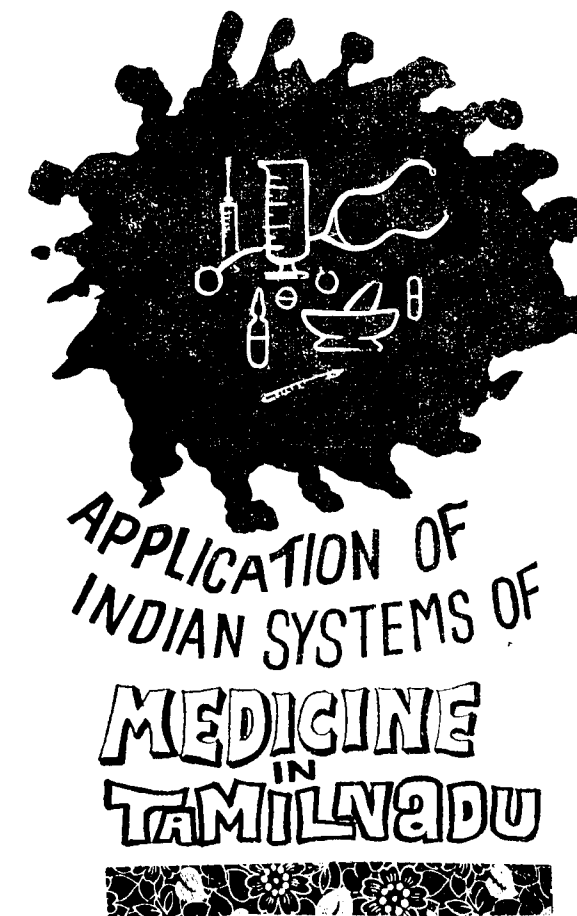
Shilpi BOB 21/70



Arignar Anna Government Hospital of Indian Medicine

The Indian Systems of Medicine comprising Ayurveda, Siddha and Unani were in wide practice in this State for a long time. But they had neither recognition nor encouragement. It was towards the end of 1921 that, at the instance of the late Raja of Panagal, the then Chief Minister of Madras Province a committee was appointed under the Chairmanship of Sir Md. Usman Sahib " to report on the question of recognition and encouragement of Indigenous systems of Medicines in vogue in this Presidency ". The committee felt that the immediate problem was to make the Indian Systems of Medicine self-sufficient and efficient as otherwise the problem of medical relief in rural areas cannot be satisfactorily solved and that the establishment of two sets of medical institu-

tions, viz., one in Indian Systems and the other in modern medicine would be both uneconomical and unsatisfactory.



The Committee accordingly recommended "that the most urgent and immediate concern for the State is to establish and promote by State aid, State recognition and such other means the establishment of suitable centres of Medical Education and the devising of a suitable scheme of studies of Indian Medicine calculated to make those trained under it equal to the task of ministering not only to our medical needs, as at present, but to surgical ailments as well. Every scheme of study of Indian Medicine, whether Ayurveda, Siddha or Unani should make adequate provision not only for the efficient training in subjects appropriate to itself but also for the teaching of the essentials of whatever is valuable in Western Medicine. Consistently with this view, we would

like to see the future practitioners of India, no matter to what denomination they belong to, viz., Ayurveda, Siddha, Unani, European Medicine or any other system, so schooled and trained as to be able to bring to bear on the problems of health and ill-health not only the expert knowledge of their own systems, but as far as practicable, the best that is in other systems also." In pursuance of the recommendation of the Committee the Government sanctioned the starting of the Government Indian Medical School in which training was given in the respective Indian Systems supplemented by a restricted course of instruction in Allopathic Systems. Students who underwent the course of instruction in the school were given the diploma of Licentiate in Indian Medicine, Madras. The first batch of students commenced their studies in the School in January 1925.

The course of training given in the school was later made more elaborate to enable the alumni of the school to become competent practitioners in Indian Systems of Medicine with a good working

Diagnosis by Indian Medical System



"Best in other systems also"

knowledge of the Western Systems also and for this purpose the necessary improvements were carried out to the school in regard to accommodation, teaching and other facilities. The course of teaching for the L.I.M. which was originally 3 years was extended to 4 years and then to 5 years, the 5th year being devoted to special clinical training as apprentices.

In 1946 an "Ad hoc" Committee was appointed by Government to devise ways and means for the encouragement of Indian Systems of Medicine and as per the recommendation of this Committee a Board of studies was constituted. The Government Indian Medical School was converted into a college in the year 1947 and the diploma course of G.C.I.M. (Graduate of the

College of Indigenous Medicine) was instituted.

In 1964, the Government started the College of Indian Systems of Medicine to impart teaching exclusively in Siddha, Ayurveda and Unani Systems of Medicine at Palayamcottai, Tirunelveli district.

The Government appointed a Committee for writing Text-Books in Siddha to meet the present day needs of the students. A special officer for the Siddha Text-Book Committee was appointed for the purpose.

In 1968 a separate building for a 100 bedded Hospital for Indian Systems of Medicine at Arumbakkam was sanctioned by Government at a cost of Rs. 8.18 lakhs and the Hospital started functioning with effect from 14th April 1970. This institution has been named Arignar Anna Government Hospital of Indigenous Medicine. The Hospital will have its own pharmacy shortly.



Dispensing medicine by the Indian systems of medicine is a laborious process calling for acute skill and patience.

Oil massage is an indispensable method of treatment for some complaints. Even this laborious treatment is given in Anna Hospital.

Since 1958, a system of *Viva-voce* Test and Registration of traditional practitioners of Indian Systems of Medicine is in vogue. So far approximately 4,000 practitioners of Siddha System and 1,000 practitioners of Ayurveda and 500 practitioners of Unani System have been registered under this scheme.

There is also provision in the Kilpauk Medical College for the training of Pharmacists in Indian Systems of Medicine, namely Siddha, Ayurvedha and Unani. This course extends for a period of 12 months, out of which 9 months are allotted

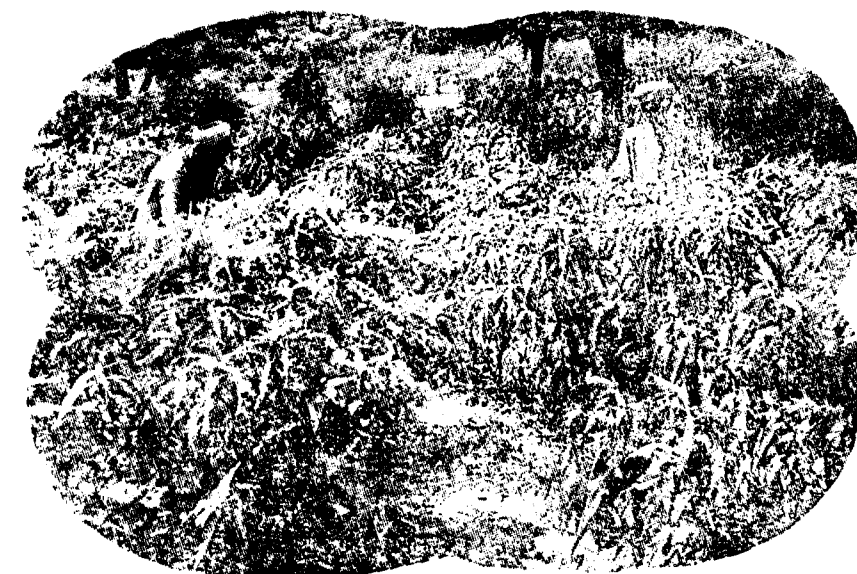


for training in Indian Medicine and 3 months for training in Modern Medicine.

There is a separate medicinal farm situated by the side of the Arignar Anna Government Hospital of Indigenous Medicine on a 9 acre plot. Some of the medicinal plants grown here, are feeding the Pharmacy attached to the Arignar Anna Government Hospital of Indigenous Medicine by way of green drugs, green herbs, green plants, etc.

Contributed by :

S. A. SUBHAN,
Superintendent, Arignar Anna
Govt. Hospital of Indigenous
Medicine, Madras-29.



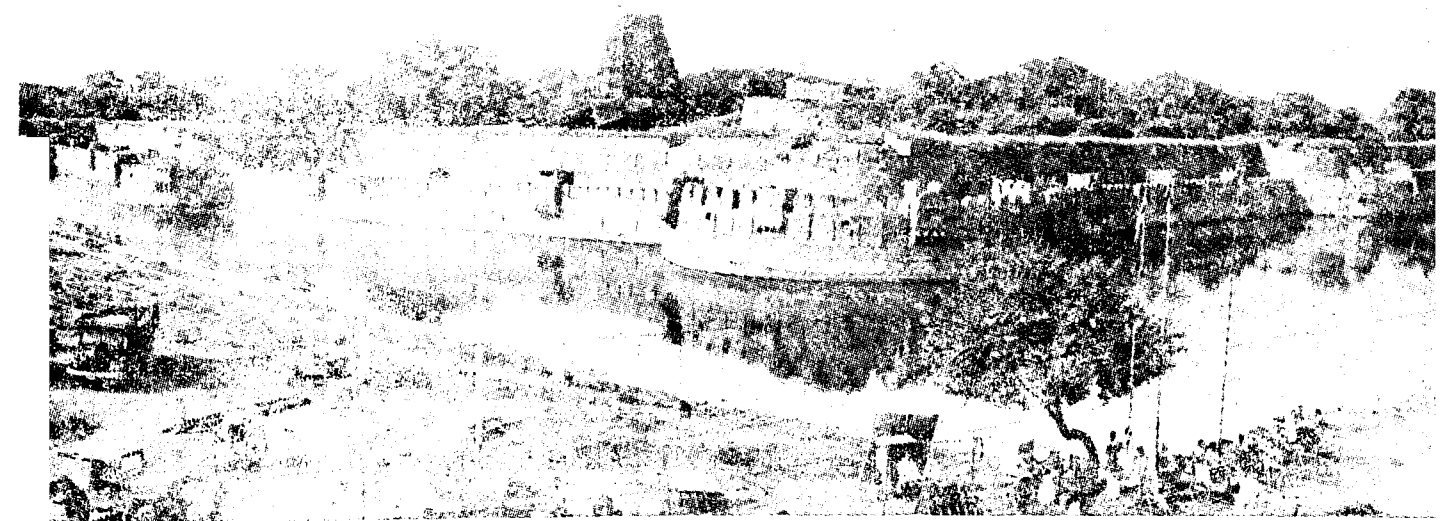
The herbarium of Indian Medicine Plants.



THE GLAMOUR WORLD COMES ON TOP

At a function held at the Music Academy on November 4, under the presidentship of the Tamil Nadu Chief Minister, Thiru Karunanidhi, the Governor Sardar Ujjal Singh distributed the Tamil Nadu Government's awards for the best films, and the best cine artistes and technicians for the year 1969.

The artistes and producers benevolently donated their cash Awards for public welfare. Philanthrope-artist Thiru M. G. Ramachandran set this example by donating the cash award of Rs. 30,000 (given for the best film) to benefit Backward Class Students and for the promotion of their education. Thirumathi Sowcar Janaki donated her cash prize of Rs. 5,000 (given for the best actress) to Beggars Relief Fund. The producer of 'Deivamagan' Thiru Periannan donated his prize of Rs. 10,000 to the Chief Minister's Fund.



A General view of Vellore Fort and Moat

The peace-time use of some of our historic forts make us forget their chequered but militant past. The Vellore Fort is an instance to prove this point.

Acclaimed as one of the most perfect specimens of military architecture, it now houses a variety of government offices including the Police Training College. From its design and other features, it has been deduced that it is the work of Italian engineers, though there is a strong local tradition to aver that it is the work of one Bonami Reddi a refugee chief from Bhadrachalam who handed it over to the Vijayanagar rulers. The Fort of Vellore was in the possession of Narasingh Raja of Vijayanagar by about 1509 A.D. Apart from the moat, the distinctive features of the fort are: a main rampart is broken by round towers and rectangular projections. The old entrance was by a winding roadway with massive gates across a draw-bridge.

HISTORIC FORT OF VELLORE



(Arignar Anna, when he was arraigned for Price Rise Protest in front of Government offices at Vellore, made amusing references to this Fort gateway.)

Picture above is a protected monument. It shows the gallows used to hang chief Mutineers. (Contd. on page 39)



Ooty the Hill Station with the largest level surface

Nature and Man have contrived during the last hundred and fifty years to make the Nilgiris the Paradise of the South. The availability of plenty of level ground at a high altitude in a measure and manner unknown to other hill stations, is perhaps the chief factor responsible for the place to attain this unique position. Good motorable roads and pathways for hikers bring every beauty spot, hunting ground and waterfalls within easy reach of the tourist-visitor.

The entire district is hilly. It may broadly be divided into two natural divisions: (1) The Nilgiris plateau about 35 miles long and 20 miles broad, (2) The south-east Wynad which is also a table land lying about, 3,500 feet lower than the plateau. It rises abruptly from the plains below in the south and south-west and is divided into two parts by a mountain range running north and south, of which

the highest peak is "Doddabetta" (8,650 feet) five miles east of Ootacamund. Three other peaks close to the "Doddabetta" which are about eight thousand feet in height are the Club Hill, the Elk Hill and Snowdon. The Mudumalai forest in North Wynad is a wild life sanctuary.

Rivers

The district is drained by a number of streams all of them drain either into the Moyar river or into the Bhavani. The largest river in this district is Pykara. It is dammed in three places and water is taken down in penstock pipes and electricity generated in the power-houses. The lower reach of the Pykara river is known as Moyar. The Segur is another important river which joins the Moyar. The other important river is the Kundha. Canadian aid enabled us to harness its waters through the Kundha Hydro-Electric Project.

The district has about 714 miles of roads, including 142 miles of municipal roads. The metre gauge line covers a distance of 20 miles in the district and runs from Mettupalayam (Coimbatore district) to Ootacamund via Coonoor.

The discovery and development of Ootacamund and, indeed of the Nilgiris form an episode in modern South Indian history well worth recounting. The earliest expedition into these hills has been recorded by a Portuguese priest by the name of Forreiri as far back as 1602. He records conversations with Toda priests and the gifts he gave to their families. It appears that the existence of Todas, the earliest inhabitants of the Nilgiris, was discovered during the trip.

First Road

The first road to the Nilgiris was begun in 1819. It started at Sirumugai near the Coimbatore border and ran via Kotagiri and Dimpatti to Ootacamund. It was

however too steep and unsatisfactory. In 1829, Mr. Lushington, Governor of Madras, ordered the construction of a new road, which commenced from the village Nelliterai, near Mettupalayam, at the foot of the hills on the eastern side and was commissioned in 1832. It was in 1853 that the constructions of the present road from Coonoor to Ootacamund was taken on hand. Its entire stretch from Mettupalayam to Ootacamund lies through magnificent scenery and several hairpin bends and loops.

In 1854, a proposal was first made for the present 29-mile railway link between the two places. The work on it was commenced by a private company only in 1891 and was completed by the Government in 1908. Sixteen tunnels and several girder bridges were constructed.

Till the advent of the railways, travellers were conveyed to Ootacamund by bullock or horse carriages via Mettupalayam, Sigur or Gudalur.

Plants from All countries

There are a thousand varieties of plants from various countries and they include 35 types of Eucalyptus, 75 types of roses, 20 medicinal plants and a large number of coniferous trees.

There are a number of palaces in Ootacamund which may be visited after obtaining permission from the Superintendents. The most interesting among them are: The Mysore Palace and The Nawnagar Palace.

The Mysore palace is located 1½ miles from the Railway station towards Fernhill. The Nawnagar palace is half-a-mile from the centre of the town via St. Stephen's Church.

The road to Mukerti passes along the ridges of the Governor's Shola and eventually follows the winding Mukerti stream, which is the head of the Pykara river. An ascent of 1½ miles leads to the summit of the peak. Far to the west stretch the plains of Malabar as far as the Arabian Sea. There are other drives in Ooty known for the loveliness of their winding roads. The Governor's Shola is one of them, so called because of the 5-mile

I AM PROUD OF MY COUNTRY

I am proud of my country, proud of my national inheritance, proud of many things, but I speak not in pride but with all humility. For events have humbled me and often shamed me and the dream of India I have had has sometimes grown dim. I have loved India and sought to serve her not because of her geographical magnitude, not even because she was great in the past, but because of my faith in her today and my belief that she will stand for truth and freedom and the higher things of life.

—Nehru.

shady road which used to be a favourite of Governors.

The Connemara is another, a circular drive of 10 miles, passing the Umbrella tree. It ends at the commencement of the precipitous Sigur Ghat which leads to the Nalhatty Falls 3,000 feet below in the midst of wild scenery.

Shooting and Fishing

The Nilgiris offer unrivalled facilities for sport to both the shikari and the angler. On the plateau are found that unique South Indian species, the Nilgiri Wild Goat (locally known as Ibex), Sambar, Barking Deer, Tiger, Panther and Wild Pig, while the low country is famous for its magnificent Bison and spotted Deer unsurpassed anywhere in India. In addition, there is at times the opportunity of shooting a prescribed rogue elephant. The small game shikari will find good sport with grey Junglefowls, Spurfowl, Partridges, Quail, Hares, Mouse, Deer, Nilgiri Woodpigeons, Green Imperial Pigeons and in the winter months Woodcock and Snipe.

For the angler there are some 40 miles of excellent Rainbow Trout fishing, as well as two lakes catering for both the expert and the novice, while the rivers in the low country hold mahseer running up to 70 lb. and Carnatic Carp.

Mudumalai Sanctuary

The Mudumalai Wild Life Sanctuary lies in the Nilgiris

PICTURE PAGES

Opposite Page:

1. Industries Minister Thiru S. Madhavan opened the Government Hospital at Thuraiyur. Thiru Azhagamuthu, the Assembly Whip of the Ruling Party, Thiru Anbil Dharmalingam, and Thiru G. Parangusam, Whip of the Legislative Council, were present.

2. The Chief Minister, Thiru M. Karunanidhi opened the School Building built by the Prosperity Brigade at Nallurpettai on 1-11-70.

3. On October 29, the Tamil Nadu Governor Sardar Ujjal Singh, entertained 550 children of the City Orphanages at Raj Bhavan in connection with Deepavali celebrations. The Governor is seen giving biscuits and tea to children.

4. The Chief Minister inaugurating the Conference of Municipal Chairmen of Tamil Nadu on 24-10-1970 at Rajaji Hall.

5. The Education Minister Thiru Nedunchezian, on his return from his tour of America and Britain was received at the Airport by the Chief Minister, and other Ministers.

6. The Inspector-General of Police placing the wreath on the memorial tablet to pay homage to policemen who lost their lives while on duty. A Memorial Parade in honour of the dutiful policemen, was also held.

Centre Spread :

* The splendid sceneries of Ooty. It has rightly been called the paradise of Tamil Nadu.

Last Page :

1. Mr. Pierre Paul Schweitzer, the Managing Director of I.M.F. with the Chief Minister and the Industries Minister of Tamil Nadu at a party given by the Governor.

2. Thiru C. R. Kelappa, recently elected to the Legislative Council, took his Oath of Office which was administered by the Chairman of the Council Thiru C. P. Chitraran. The Chief Minister and the Education Minister were also present.

3. The Bihar Minister Thiru N.P. Sinha called on the Tamil Nadu Education Minister on 31-10-1970.

4. Mr. Alejandro Melchor, Executive Secretary to the President of Phillipines, was received at the Meenambakkam Airport by the Minister for Endowments Thiru K. V. Subbiah on 24-10-70.

5. At a function conducted by the Egmore Social Service Centre on 30-10-1970, Thirumathy Dayalu Karunanidhi distributed sweets to Children.

6. Thiru Majhi the Orissa Minister for Urban Development called on Tamil Nadu Food Minister Thiru P.U. Shanmugam.

7. His Excellency Cornel Onescu, Rumanian Home Minister in conversation with the Tamil Nadu Agriculture Minister Thirumathy Sathiyavaimuthu.

8. The Labour Minister Thiru N.V. Natarajan, inaugurated the E. S. I. Scheme on 1-11-1970 at Nellikuppam in South Arcot District, under the Presidentship of the Public Works Minister Thiru S. J. Sadiq Pasha.

9. The Minister for Agriculture Thirumathy Sathiyavaimuthu with the repatriates from Burma.

10. Mr. John C. Clark, Director of Export-Import Bank of the United States called on the Tamil Nadu Industries Minister Thiru Madhavan.

(Ooty Contd.)

district abutting both Kerala and Mysore States on its outer borders.

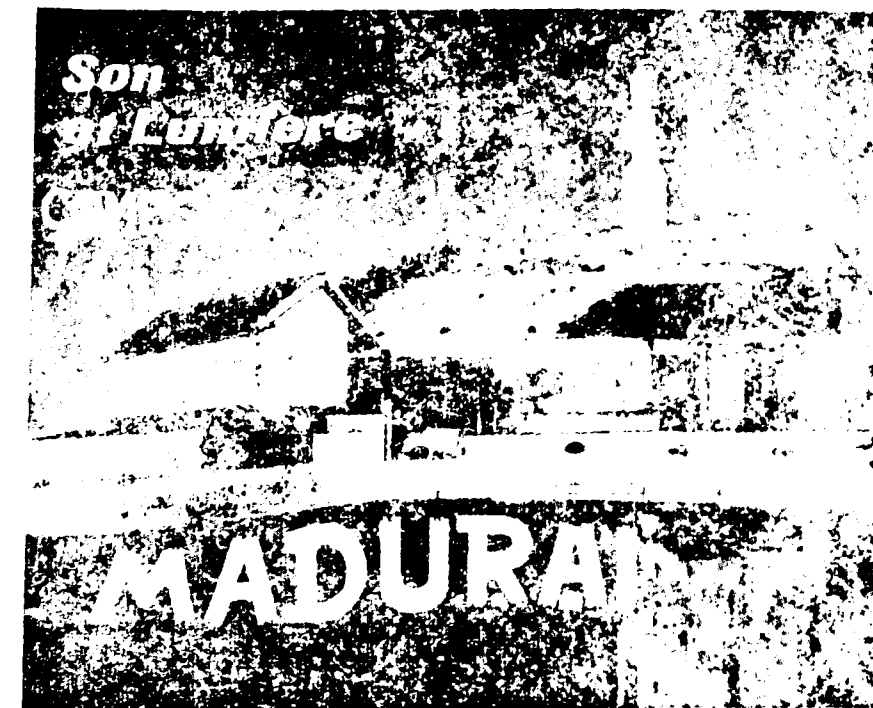
This sanctuary was established in 1839 with an area of only 24 square miles. In 1956 it was extended to 114 square miles. It is 40 miles from Ootacamund on the Ootacamund-Mysore Road.

The fauna that may be seen in this sanctuary are the common Langur, Bonnet Macaque, Tiger, Leopard, Sloth Bear, Wild Dog, Malabar Squirrel, Porcupine, Elephant, Bison, Barking Deer and Mouse Deer.



உவகைதரும் உதகைக்காட்சிகள்

SCENIC
SPLENDOR
OF
OOTY



Son et Lumiere (Sound and Light) shows are extensively used in many parts of the world to re-tell the history of ancient monuments. Versailles and the Notre Dame Cathedral in France, Hampton Court and the Tower of London in England, the Acropolis in Greece, the Pyramids and the Sphinx in Egypt, the Red Fort and the Gandhi Hill near Vijayawada in India tell their own stories to large audiences of visitors.

Son et Lumiere, as the words imply, is essentially a clever interplay of sound—spoken word, music and sound effect—and light. The Chief difference between an ordinary play and a son et Lumiere is that the latter does not deviate from the facts of history.

During the XIV Tourist Development Council meeting held in October this year at Madurai Dr. Karan Singh, Union Minister of Tourism and Civil Aviation has announced the sanctioning of this long-awaited scheme for Madurai. The Son et Lumiere project of Madurai will cost Rs. 20 lakhs. This does not include the expenditure involved in civil work connected with the project. The State Government will bear this amount which will be about Rs. 4 to 5 lakhs.

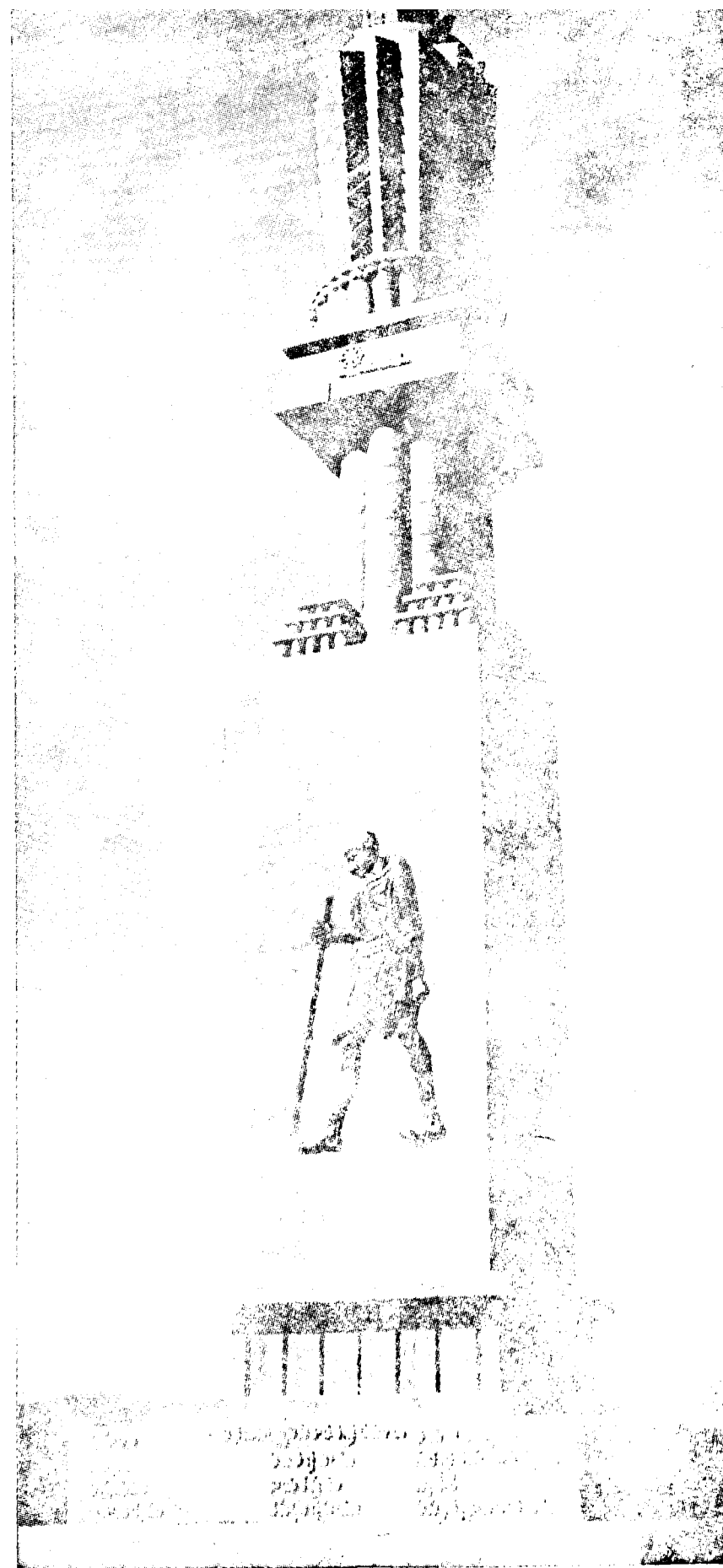
The Sound and Light spectacle is a recent innovation which takes advantage of man's innate capacity to complete with his own imagination, anything that is presented before him in partial formation. The theory of 'maya'

in our philosophy rests on the astounding fact that man is capable of clothing an illusion with a shape of reality. While philosophers have used this as a wedge to drive home the point that we are "blessed to delude ourselves", a French Museum Curator took advantage of the inherent human weakness to give his visitors an experience of history with tape recorded narrations and reflected images of monuments. Thus was born the technique of Sound and Light to visualise history.

The human visual and auditory faculties are helped during a sound and light spectacle to bring to life some dramatic highlights from a by-gone age. Even the promoters of the 'Son et Lumiere' admit that "no amount of written words can adequately describe the spectacle" because what is projected becomes an experience for each individual. In Madurai, each of us shall come face to face with the epic figures of Silappadikaram, when the spectacle comes to be established.

A Medium of Education too

Tourists are generally attracted to our country by our monuments and the Son et Lumiere is a means by which we can get the tourist well acquainted with our monuments in the shortest possible time. This is all the more necessary in a country like ours where history has been



distorted and cultural history has been misrepresented. The Sun et Lumiere will help us to acquaint the tourist with the correct presentation of our culture and history. In this sense it becomes a medium of not only entertainment but education as well.

Experience in the various countries show that these spectacles are almost certain to be a powerful influence in enhancing the tourist value of the whole neighbourhood. Many plan a tour along these spots to visit 'Sound and Light' spectacles.

India became one among the countries which can boast of such spectacles when the Sound and Light Spectacle at the Red Fort, organised by the Department of Tourism, Government of India the first of its kind in Asia—was inaugurated on the 22nd March 1965.

The second sound and light spectacle was put up at Vijayawada last year the Gandhi Centenary Year on the Gandhi Hill. The Gandhi Hill Sound and Light spectacle re-enacts the historic events associated with the life and teachings of Mahatma Gandhi.

Replicas of the house at Porbunder where Mahatma Gandhi was born, of Phoenix Ashram established by him in South Africa, of Sabarmathi Ashram at Ahmedabad and of the Sewagram near Wardha have been reconstructed on the slopes of the hill. They together with the memorial provide the backdrop

(Lighted by sun, the pillar shows all shadows.)

for the sound and light spectacle. Gandhi's voice and those of other national leaders are heard again. From the early childhood days to the days when he led the country to the attainment of freedom through non-violent means and till the last day, his life is brought back to the spectators with accent on the various Ashrams aided by expert blending of colour and sound effects.

Lighting Devices

In putting up a sound and light spectacle a variety of lighting devices are used firstly to show up the intricate architecture of the monument and secondly during narration special effects are used to give the impression of a king entering the audience chamber or a princess rushing to the parapet to see a procession. The sound tape and the lighting effects are synchronised to produce all the dramatic details of a historical event associated with the monument.

The lighting can be manipulated to suggest an atmosphere of gaiety, mourning, turmoil or festivity. Use of fireworks and crackers can help in accentuating the importance of certain particular moods.

The attention of the audience can be focussed on a particular detail of the monument or building by illuminating this detail by itself or by treating it differently from the rest: for instance, by having a light shining through the window of the prisoner's cell or by strong light contrast of

(But, lighted by Sun et Lumiere, the same pillar shows no trace of any shadow.)



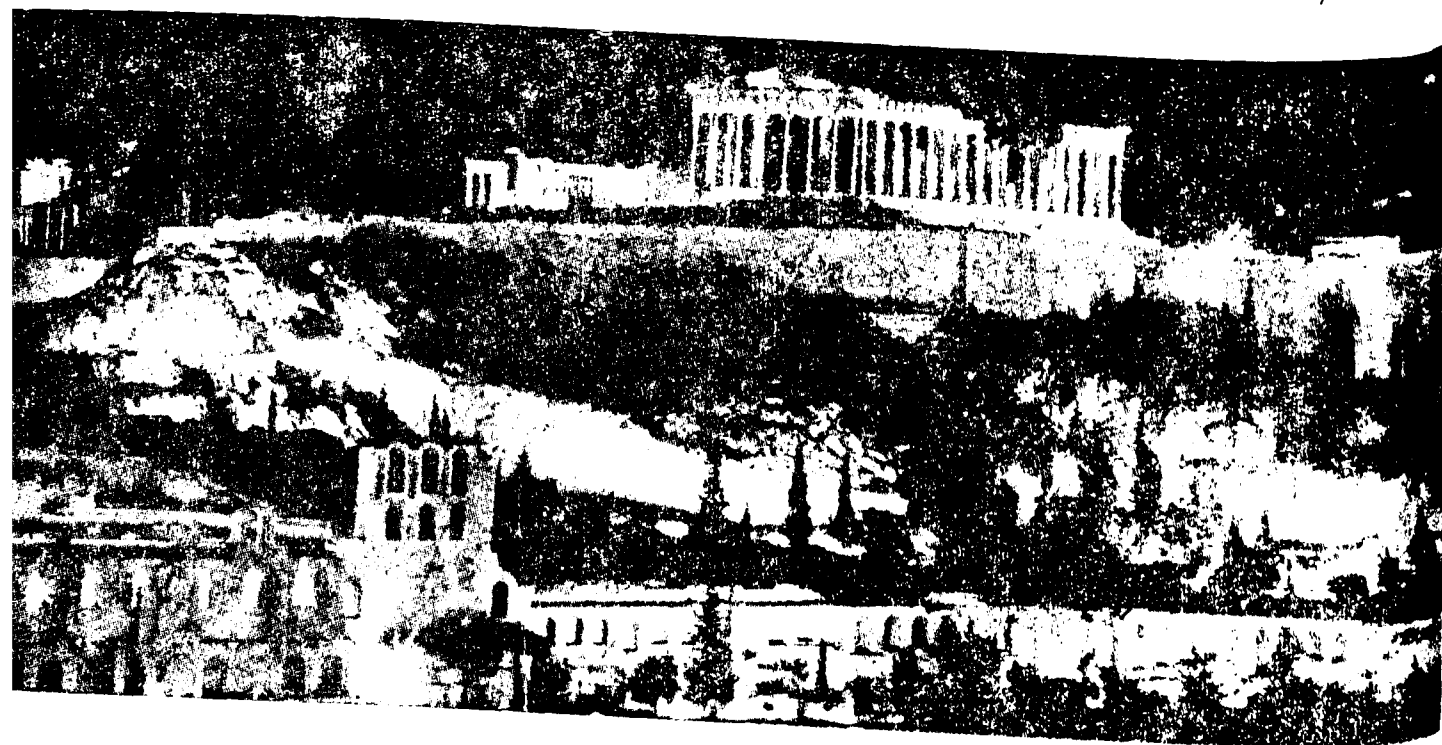
that wing of the building which an infuriated mob has supposedly set on fire.

It may be that the scenario follows the stages by which the building has come into existence. If so, the lighting can be used to illustrate the growth or the decay of the building by lighting only those portions which were in use during a certain period, leaving the rest of the structure in darkness, or treating it in a manner that will convey the feelings and emotions intended in the script.

Radio broadcasting technique has been applied for this new medium, supplemented by stereophonic effects (impression of depth) and movement in space (travelling sound) obtainable by means of double or treble track magnetophones and multiple points of emission. The number and locations of loud-speakers has to be determined very critically so that only the preplanned effects are created. One of the interesting effects created by sound installation can be a procession proceeding from one end

of the building to the other, in which the audience follows the route by listening to the travelling sound of footsteps. Gradual fading or swelling of sound can create a vivid impression of receding or approaching persons. Thus with the inter-play of sound and light, the paths of history are lighted and historic characters are made to tell their tales. The success of the Madurai venture may pave the way for more such spectacles being organised in our State.

The son et Lumiere at Acropolis, Athens records attendance during the tourist season every year more than 2,00,000. This project called for the Shipment of nearly 100 tonnes of equipment. The lighting installation comprises 1100 floodlights. Modern commentators claim that "neither Pericles nor his architect Phidias could have foreseen that 25 centuries later, their Acropolis would become the scenery for this new drama enacted by sound and light only".



PLANS FOR TELEVISION COVERAGE

Two alternative long-term plans for television coverage of India are being examined by a Working Group under the chairmanship of Shri N.C. Shrivastava, Communications Secretary. Other members of this group are Shri K.K. Das, Secretary, Ministry of Information and Broadcasting and Dr. Vikram A. Sarabhai, Secretary, Department of Atomic Energy.

This Working Group, which is assisted by technical and financial experts of all the three Ministries, has been set up to take an integrated view of a large number of considerations that would go into evolving an optimum plan of television development in the next 10 or 15 years.

The Working Group is, at present busy in studying alternative plans prepared by the Ministry of Information and Broadcasting and the Department of Atomic Energy.

I and B Ministry Plan.

The plan of the Ministry of Information and Broadcasting envisages, broadly speaking, coverage of the country by conventional ground-based transmitters in two phases. The first phase would cover in a period of seven years, 65 per cent of the population. The second phase to be completed in the next three

years, would lead to coverage of 90 per cent of the population.

The transmitter network would be spread out from 20 regional stations to be generally located in each of the State capitals. To these 20 'mother' stations, about 150 relay transmitters would be linked to achieve the desired coverage. The relay transmitters would be linked with the mother stations by 'off the air' relay system. Micro-wave links of the P. & T. Department would be utilised, wherever possible.

The total expenditure of this plan has been estimated at about Rs. 112 crores with foreign exchange component of Rs. 39 crores.

This plan of the Ministry of Information and Broadcasting envisages use of a satellite for nation-wide broadcast common national and international programmes. In other words,

DOMESTIC SATELLITE AS AN ALTERNATIVE

a satellite would provide the sky link for national hook-up of T. V. Service in the country, which would be a supplementary facility to be availed of by terrestrial system.

The plan of Atomic Energy Department envisages, broadly speaking, the use of a domestic multi-purpose satellite employing three television and 3,600 telephone channels for full coverage of the country by 1980. The television channels would be used for national T. V. Programmes. The communication channel would be used by various Government agencies including the P and T. Department.

Under this plan, television pictures could be picked up in any of the 4.5 lakh villages, each of which could be provided with a special "community" type of receiving installation. In major cities and their neighbouring areas, the T. V. pictures would be received on domestic T. V. receivers from the terrestrial transmitters of All-India Radio.

This scheme is likely to involve an investment of the order of Rs. 127.5 crores.

The Working Group is presently examining in detail the feasibility, costs, and other implications of these two alter-

native approaches in an effort to find an optimized solution in terms of both costs, needs and consequential advantages flowing from each of these two approaches.

The question of setting up a domestic satellite would involve a whole series of complex issues like radio frequency allocations for its operation and interference with one's own or other countries' terrestrial operations. Indian domestic satellite transmissions would also need to be protected from ground or satellite transmissions of other countries by securing international co-ordination and agreement.

These regulatory aspects of satellite broadcasting would be handled by the Department of Communications and are likely to be examined by the International Telecommunications Union (ITU) in its forthcoming Space Radio Conference in June 1971.

The Working Group is also examining the use of satellite as a part of the total communication system in the country and not necessarily as an exclusive television satellite. In other words, the extent to which a satellite would fulfil other communication needs like telephones is also being studied.

In regard to its proposal the Department of Atomic Energy has already created the necessary infra-structure. The department is well on its way to launch a space satellite and a site for the launching of the satellite has been selected on an island close to Madras city, between the Bay of Bengal and the Pulicat Lake.

Space research in India has steadily gained momentum and

today not only are complete two-stage rockets made entirely in India as also the sophisticated payloads for investigation of the upper atmosphere and for the study of X-ray Astronomy.

A most important practical application of space research is the use of satellites for telecommunications. When a satellite is in a circular equatorial orbit at a height of about 35,900 km. the earth appears stationary to it and a large part of a hemisphere is visible to it. Two widely separated points in the area of visibility can establish high quality reliable telecommunication links through the "synchronous" satellite. A communication satellite can also be used for the dissemination of television pictures over a wide network of T.V. receiving stations.

To enable India to gain competence in global satellite communications, the Experimental Satel-

lite Communication Earth Station has been established at Ahmedabad with assistance from the U.N. Special Fund.

It has been decided to launch the first Rohini Scientific Satellite (RS-1) by mid 1974 using SLV 3 vehicle. The satellite, quasi-spherical in shape and weighing about 30 kg. will be launched into a near circular orbit at 400 km. altitude from island launching station near Madras. This island is called Sriharikota Range (SHAR).

The Indian Space Research Organisation (ISRO) is establishing a satellite launching station at Sriharikota island situated about 19 km. directly east of Sullurpet in Nellore district, Andhra Pradesh. This island is along the east coast with the Bay of Bengal on one side, Pulikat lake and shallow backwaters of the Bay of Bengal on the other. It is 100 km. from Madras by road. An area of

SPACE VEHICLE AND LAUNCHING RANGE READY

approximately 12,000 hectares on the island which is elliptical in shape has been earmarked by the Andhra Pradesh Government for the satellite station. It provides a coastal length of about 21 km. and has a breadth of about 8 km. It is a forest area having casuarina and eucalyptus trees and practically no habitation. There is no fishing in this area and the backwaters of the sea provide safety of range operations.

It is estimated that with an annual investment equivalent to about Rs. 35 crores one can provide community television to all the 560,000 villages in India over a five-year period. This would incidentally generate a strong industrial base in electronics providing employment to

about 120,000 qualified scientists, engineers, technicians, managers and other administrative personnel.

FASHION CREATORS IN HANDLOOM FABRICS

Pamper your House with

CHENCOPTEX

A.A. 399

BED SPREADS, TURKEY TOWELS, PILLOW COVERS, ETC.

Phone : 43

Tel : "CHENCOPTEX"

THE CHENNIMALAI INDUSTRIAL WEAVERS CO-OP. PRODUCTION AND SALE SOCIETY LIMITED, No. A. A. 399

Post Box No. 38, Chennimalai (P.O.), Coimbatore (Dt.)

Awarded First Prize by the Government of Tamil Nadu Continuously for 6 years from 1965 to 1970.

K. CHINNASAMY GOUNDER,
President.

The geographical position of the Madras Observatory is such as to render it a most important link as regards other observatories in opposite hemispheres of the globe. It is precisely midway in latitude between Leningrad and the Cape of Good Hope, the extreme limits on either side of the equator. It is also nearly a quarter of the earth's circumference eastward of Greenwich while the National Observatory at Washington is about the same distance to the West of the Royal Observatory. Hence many of the important occasional phenomena invisible elsewhere may be recorded at

IMPORTANCE OF MADRAS OBSERVATORY

Madras, when otherwise they must be altogether lost. Further its situation within the tropics renders it especially adapted for observations of planets and comets in either hemisphere, whether with meridian or equatorial telescopes.

The Trigonometrical Survey, which was the basis and the

steel frame on which topographical and revenue surveys were based was commenced in 1,800 thanks to the pioneering work of Lambton. The fixed point of reference of the Trigonometrical survey is the Madras Observatory established in 1792. The Longitude of Madras Observatory was determined accurately in between 1839 and 1847. These observations were extremely important as the longitude of the Madras Observatory was a substitute for the prime meridian of Greenwich Observatory and to which observations for Longitude in the Indian Surveys are referred.

TIIC EXTENDS THE HELPING HAND TO SMALL INDUSTRIES



Industrial growth... breath
of TIIC.

Do you intend starting a
small-scale industry? Or
do you intend expanding
your present unit? In either
case, come to TIIC and
obtain its help and
assistance that you need.

TIIC also
renders assistance to the
medium and big industries.

TIIC
THE FINANCIAL
INSTITUTION
WITH A HEART

**THE TAMIL NADU INDUSTRIAL
INVESTMENT CORPORATION LTD.,**

L. L. A. Buildings,
150-A, Mount Road Madras-2.

Criterion TIIC2453



INDUSTRIAL GROWTH IN TAMIL NADU

machines, typewriters and small tools. The growth of the engineering industry in the State has led to the emergence of a number of units making small tools such as milling cutters, reamers, taps and dies, carbide tipped tools, twist drills and diamond tools and they match in quality the tools made in advanced countries.

The heavy engineering industries not only met the demand for various items in the State but have also expanded their activities considerably in that they have also met the demands outside the State. Some of them have also been able to export their products to foreign countries.

In 1960-61 the net out-put by industries was of the order of Rs. 181.02 crores in Tamil Nadu and the contribution of industries to the State's income to the extent of 16.03 per cent. In 1968-69, the net out-put by industries rose to Rs. 317.08 crores (at 1960-61 prices) and at present, the secondary sector, i.e. Industries is estimated to contribute to the State's income to the extent of 21.93 per cent.

The place of Tamil Nadu in the industrial map of India can be judged from the fact that today she accounts for three out of 13 million tonnes of our annual output of cement, has 25 per cent of the total spindlage, and produces 400,000 tonnes out of the 4.3 million tonnes of sugar. Tamil Nadu has about 12½ per cent out of the country's total output of tea, and supplies as much as 65 per cent of the ancillaries of the automobile industry.

Out of a total of 220 units in the country producing electric motors, there are five large-scale and 47 small-scale units in the State; it accounts for 11 per cent of the total production. The industry is fairly well-developed in and around Coimbatore.

The State accounts for one-sixth of the total production of power-driven pumps in the

country, Coimbatore district alone accounting for half of them. Domestic electrical appliances such as water heaters electric irons electric fans, light fittings, food mixers, ovens and washing machines are being manufactured in the State and their quality compares favourably with those made elsewhere.

Tamil Nadu is one of the leading States producing complete bicycles and bicycle-parts in India. There are five large-scale units and 70 small-scale units in the State producing bicycles and bicycle parts. The T.I. Cycles, Ambattur, is a large-scale unit which produces 20 per cent of the out-put of the whole of India.

The State has also made good progress in the manufacture of a variety of items such as plate working machinery, machine tools, jigs and fixtures, calculating

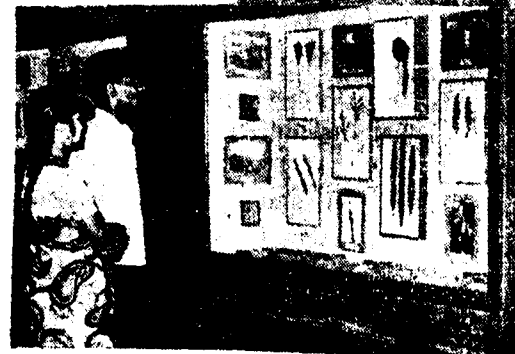
THE MULTIPURPOSE MUSEUM OF MADRAS

The Museum in Madras is a large multi-purpose one covering Art, Archaeology, Anthropology, Numismatics, Zoology, Botany and Geology. In addition to these there is a well equipped Chemical Laboratory for the conservation of Museum objects.

The Government Museum at Madras is the largest and oldest of the State Museums in India. Beginning as a Museum of practical Geology in 1851, its scope was soon extended to cover other fields such as Archaeology, Ethnology, Pre-history and Natural History.

ARCHAEOLOGY

The Archaeological section of the Museum is the chief centre of attraction, particularly to foreign visitors and tourists. It deals with the acquisition, preservation, study and display of sculptures,



36



antiquities and allied objects pertaining to the various periods of South Indian History. The exhibits in this section consist of sculptures in stone and metal, inscriptions on stone and metal, architectural pieces,



paintings, wood-carvings, metalware, and a few original manuscripts. The most ancient antiquities of the historical period of South India consist mainly of the Buddhist relics from Andhradesa of which the beautiful Battiprolu crystal reliquaries and the inscribed stone caskets which contained them deserve special mention. The Buddhist sculptures from Amaravati which adorn an entire gallery in this Museum constitute by far the most interesting and important record not only of the development of the artistic activities of South India during the five centuries from about 200 B.C. to about 300 A.D. but also about the social life of the people of those times as that period is not attested by any indisputably authentic written records. The galleries devoted to South Indian bronzes constitute another remarkable part of this section.



The Museum possesses one of the world's richest collections of bronzes, many of which are superb specimens of South Indian Art. Of these, the most notable ones are the series of images depicting the Dance of Siva (Nataraja) and groups consisting of Rama, Lakshmana, Sita and Hanuman. In the whole world this Museum may be said to be the only institution where the widest possible range of icons in bronze from a limited area are available for study under a single roof. The Museum's rich collection of bronzes is now displayed in a spacious three-storeyed building—the Bronze gallery which was newly constructed. About 400 bronze specimens are on show. Another 600 specimens are kept in reserve Collection.

ANTHROPOLOGY

The Madras Museum is among the earliest of institutions in India and abroad where Ethnology and prehistoric Archaeology are represented as Museum subjects. The first palaeolith in India from Attirampakkam, Chingleput District, discovered in 1863 by Bruce Foote, and housed in this Museum is one of a large

CONTAINS WORLD'S RICHEST COLLECTION OF BRONZES

collection of prehistoric antiquities possessed by this Museum. An earlier collection acquired in 1878 from J.W. Brecks from the Nilgiris consists of exotic-looking pottery, beads, ornaments, iron implements and bronze vases. The Museum also possesses large collections of iron age pottery, iron tools, bronze utensils and gold ornaments excavated at Adichanallur in Tirunelveli District and Perumbair in Chingleput District and the Stone Age collections made later by Mr. F. P. Manley and others have considerably augmented the Museum's reserves so that the prehistoric antiquities of this Museum constitute one of the richest collections in the world, today. Besides, the Museum



37

possesses a large ethnographic collection representative of the tribal and rural cultures of the people of southern India. This includes tribal dwellings, utensils, implements used by tribal folk, their dress, weapons and ornaments. These have been recently augmented by such interesting additions as the Kathakali figures representing the dance-drama of Kerala, shadow play figures of Lambadi and Cadaba women to illustrate their dress and other objects pertaining to the material culture of these picturesque tribes. The exhibits have been attractively displayed in modernised built-in, illuminated cases.

NUMISMATICS

The Madras Museum is noted for its large and unique collection of coins, particularly of South Indian and Mughal coins, but for reasons of security, only plaster cast impressions of some of the more important types of coins have been displayed in the public galleries. The Gupta coins are specially interesting, being mostly of gold and bearing inscriptions in classical sanskrit which appear for the first time on Indian coinage. A very rare find recently acquired by the Madras Museum was a hoard from Dowlashwaram, a place near Rajamundry, consisting of 127 gold coins, 49 of which belong to the Eastern Chalukyan ruler, Raja Raja I and the rest to his son, Kulothunga Chola. This section also has a good collection of historical documents, seals and medals.

The natural history collections of the Museum are very extensive and are displayed in its vast Zoological, Botanical and Geological galleries, which extend over several halls.

GIGANTIC WHALE

The zoological section is one of the largest sections in the museum, handling the collection, preservation, storage and display of all types of animal forms from the lowly organized one-celled protozoan to the gigantic whale. Although its scope is mainly limited to South Indian fauna a few interesting specimens of foreign animals and birds, especially a few beautiful birds of remarkably brilliant plumage such as the Mandarin Duck, Macaw Parrot, Tragopan, Monal and the Golden Pheasant, have been added to enrich the collections particularly in recent years.

The Botany section makes an attempt to link the everyday life of the people to the objects on display, as it has been found that the common articles like paddy, wheat and timber while on display rouse fresh interest. For instance the American flavouring plant Chinchweed on display here, has been found capable of being cultivated in Madras. Fifty varieties of paddy are exhibited here, and the commercial feasibility of various types of plant and timber are also explained in the section. In timber alone 500 varieties are exhibited.

The geological gallery is a veritable treasure house of Indian minerals and has been recently

rearranged so as to present the lay man with a fairly complete picture of stratigraphy and the range and variety of the mineral wealth of India. Some exhibits which specially attract the attention of visitors in this gallery are the stones, gold ores, building stones, meteorites and a gigantic fossil Ammonite (which is allied to the living Cuttle fish).

CHILDREN'S GALLERY

The Children's Gallery is a particularly attractive gallery consisting of modern illuminated show-cases containing exhibits of special appeal to children including costumes of all lands and of other parts of India. By suitable arrangements a certain amount of continuity has been achieved in the sequence of exhibits. The exhibits on display begin with an instructive portrayal of the story of the origin of the earth followed by a case illustrating the mineral wealth of India, and a series of dioramas illustrating pre-historic animals in miniature, set against attractive backgrounds depicting their natural haunts, the story of primitive man and his tools and the variety of animal life on this earth. Models illustrating the various organ systems of man and other animals, the story of human transport etc., are also graphically exhibited in suitable settings.

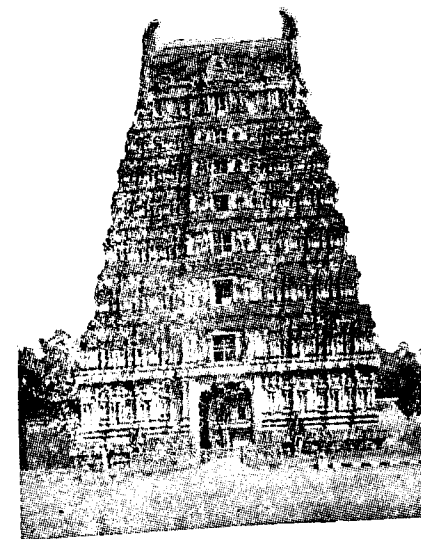
INFORMATION

The Museum and the National Art Gallery are open from 7 a. m. to 5 p.m. every day of the week except Fridays, admission free. (Contd. on page 42)

On the south side is a sally-port approached by a footpath which crosses the moat by a causeway. Within the fort is a parade ground fringed by buildings. Noticeable among these are the great mahals or double-storeyed rows of ornate rooms built round, large courtyards. The water for the moat which surrounds the fort is supplied by a subterranean drain connecting it with a large reservoir near the railway station. In earlier times it is said the moat used to contain ferocious crocodiles.

The history of the fort is also equally interesting: After the eclipse of the Vijayanagar Empire, by the middle of the 17th century the Sultan of Bijapur seized Vellore. In 1676 the Marathas captured it after a siege lasting four and a half

A fine carving in the monolith pillar of Kalyana Mantapam



The Gopuram in front of Vellore Temple

months. In 1708 Daud Khan from Delhi ousted the Marathas. The British who had by then gained a strong foot-hold in South India considered it the "Strongest fortress in the Carnatic". In 1710 it was given by Dost Ali to his son-in-law. The latter's son Murtaza Ali murdered the Nawab Safdar Ali here in 1742. Thereafter, for more than twenty years the fort was the stronghold of Murtaza Ali, who defied the authority of his own lawful chief, the Nawab of Arcot and his British allies. Only after 1760 was the British forces able to garrison Vellore. The British estimate of the strength of the fort of Vellore proved very true when it defied a two-year non-stop siege by Haider Ali during 1780-82 and the British Garrison heaved a sigh of relief only by the death of Haider Ali. In 1791 Vellore was the base for Lord Cornwallis's march on Bangalore. The fort was used as a detention

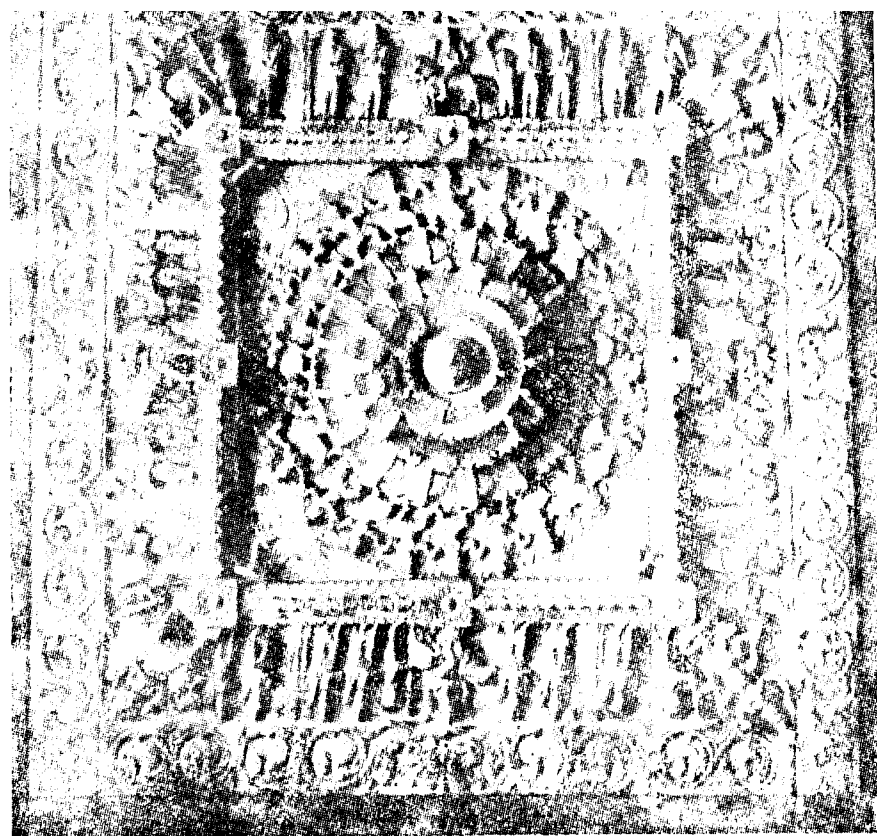
camp for the family of Tippu Sultan and was the scene of the first Sepoy Mutiny in 1806.

The Vellore Temple

The Vellore Fort which is considered the most perfect specimen of military architecture, also contains a temple which is a perfect specimen of temple architecture in South India. The perfection of its architecture inspired a vandal's delight in the minds of the East India Company which wanted to ship home to England, the Kalyana Mantapam of the Vellore Temple, as a present to the Prince Regent for being erected at Brighton. The projected vandalism did not however succeed that too only because of the vagaries of weather which sent off-course the ship that was to carry it home!

The Dwarapala figure in front of Gopuravasal leading to Vellore Temple





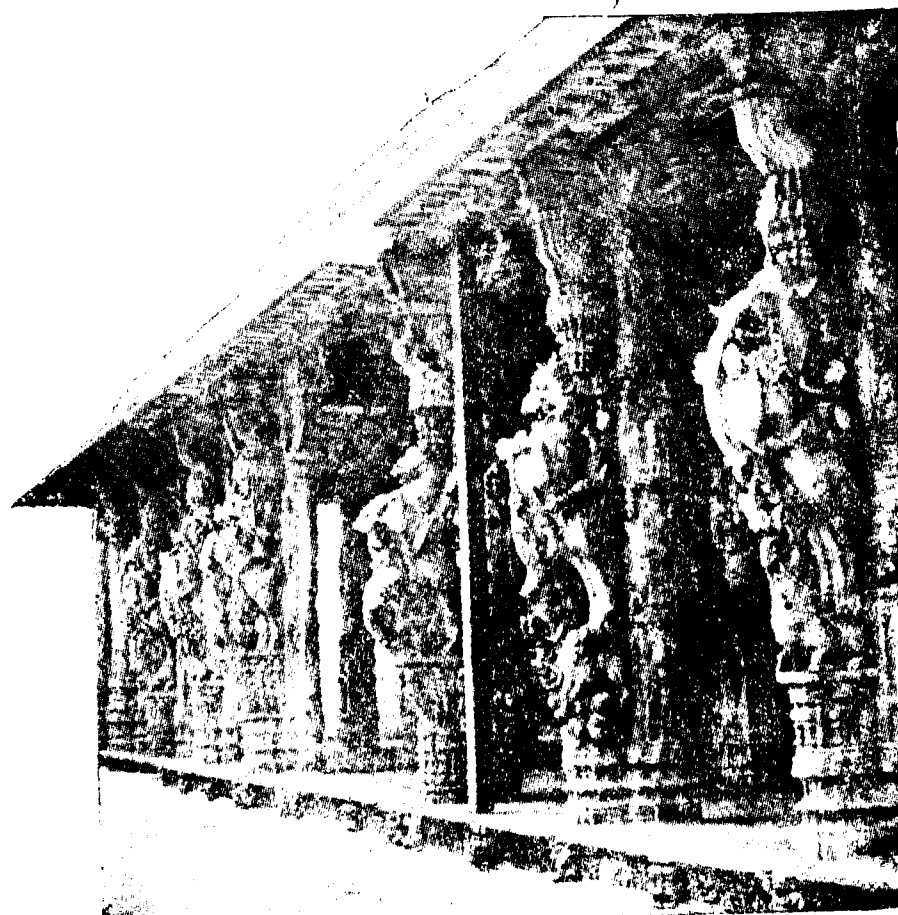
The Ceiling of Kalyana Mantapam contains minute carvings

The temple gateway has seven-tiered gopuram of exquisite workmanship constructed with granite of blackish-blue colour rising to a height of 100 feet. The door is of wood studded with bosses of iron smelted in the shape of lotus flower. The passage beneath the gopuram also contains sculptures on circular medallions ornamenting pilasters. The Kalayana Mantapam is an exquisitely carved stone structure in the temple court-yard, with monolith pillars supporting it. The audience hall of the temple has a stone ceiling which contains minute carvings to represent a cluster of fruits round which parrots are seen hanging down from the ceiling by their claws—

wonder craftsmanship in stone—all of which have made people compare this temple in favourable terms with Madurai Meenakshi Temple.

As already indicated the Fort was used for some time to detain the members of Tippu Sultan's family. The last King of Kandy was also interned in this Fort from 1816 until his death in 1832. A prison house of Kings, the Fort had the proud distinction of being the scene of the first Indian attempt to oust British rule.

The monolith Pillars of Kalyana Mantapam



NUTRITION SCHEME FOR SLUM CHILDREN



Chief Minister inaugurating the Scheme

A Nutrition Scheme for pre-school children in urban slums was inaugurated recently by the Chief Minister of Tamil Nadu Thiru M. Karunanidhi in Madras City. The scheme would initially cover 9,000 children but by the end of this month it is meant to benefit over 40,000 children between six months and three years old in the city.

It is proposed to extend the scheme to Madurai, Salem, Coimbatore and other important urban centres in the State. The Tamil Nadu Government has

sanctioned Rs. 22.80 lakhs to cover the 40,000 beneficiary children of the city and 1,400 children in the two tribal development blocks of Salem district viz., Yercaud and Kolli Hills.

Enriched Milk Bread.

The Nutrition Scheme is being implemented with the help of CARE (The Co-operative for American Relief Everywhere). Care supplies the milk powder which is made into enriched milk bread at the Government sponsored Modern Bread Factory. Supply of the enriched bread is effected

on the basis of cards issued to families as per existing enumeration, through 150 supply centres spread throughout the city. Milk has been recognised as the source of brain power and when a child is deprived of this source in its infancy, no amount of rich food is capable of nourishing the brain cells in later years. Retarded development of children due to physical impoverishment in their early stages of growth will be checked and they too shall benefit by the free education and other means of development to become useful citizens in later years.

RAFFLE MONEY FOR POORER SECTIONS

The Tamil Nadu Government has earmarked, initially, a sum of Rs. 1.75 crores from collections under the raffle scheme for provision of medical facilities, construction of school buildings and slum clearance work during 1970-71.

Of this, Rs. 50 lakhs is set apart for provision and expansion of medical facilities in rural areas and Rs. 25 lakhs in Madras City, Rs. 50 lakhs for elementary school buildings, and Rs. 50 lakhs for slum clearance.

The Chief Minister announced the constitution of a special fund, known as "the Tamil Nadu Special Welfare Fund", for the purpose of utilising the proceeds of the raffle scheme for specific and clearly identifiable schemes.

High Power Panel set up

Effective from the financial year 1970-71 all receipts from the sale of raffle tickets will be credited to this fund and all expenses thereon met from it. Rules have been framed by the Government

for regulating the transactions relating to the Fund.

A Committee has been constituted, with the Chief Minister as President, for administering the fund. Other members of the Committee are: Minister for Education and Health, Agriculture, Food and Local Administration, the Chief Secretary and Finance Secretary to the Government. The Finance Secretary will be the Secretary of the Committee.

The Chief Minister, said, in a press statement, that in spending the allocations from the fund, the authorities would keep in view the interests of the poorer sections of society, and that the committee would secure that the money is spent in all parts of the state, in a uniform manner.

(contd. from Page 38)

Free guide service is available at the entrance to the Museum, the Bronze Gallery and the Art Gallery during certain specified hours (10 a.m. to 12 noon and 2 p.m. to 4 p.m.)

Scholars, research workers and parties of visitors are permitted to take photographs and sketches of objects inside the Museum on taking previous permission of the Director of Museums.

The Museum is equipped with a microfilming unit and copies of manuscripts, documents supplied at rates approved by the Government.

The Publications, Photographs and Picture-post cards printed by the Museum are available for sale at the Museum.

With best compliments from

UNITED INDIA FLOUR MILLS PRIVATE LTD.

1/4, Suryanarayana Chetty Street
MADRAS-81



Manufacturers of Superior Quality

'Gopuram Brand' MAIDA and SUJI

AND

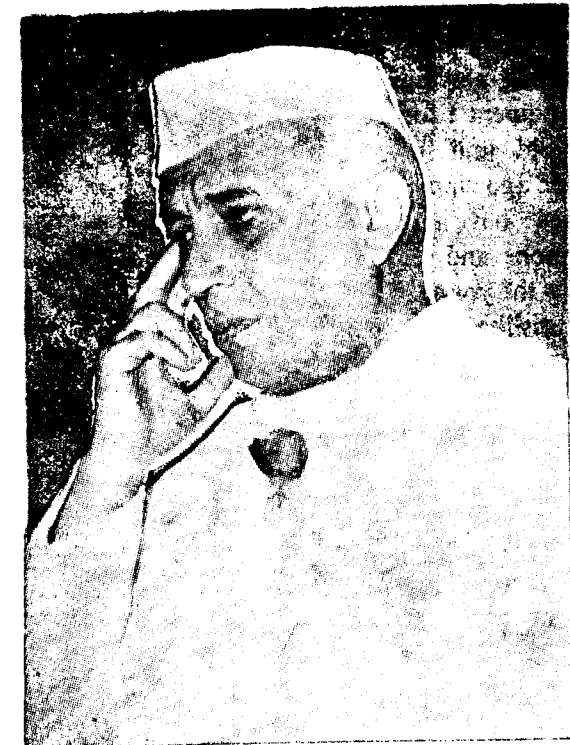
'Ship Brand' ATTA and BRAN

Phone { 52670
52673

Tele.: "MONARCH"

MY HERITAGE

What is my inheritance? To whom am I an heir? To all that humanity has achieved during tens of thousands of years, to all it has thought and felt, and suffered and taken pleasure in, to its cries of triumph and its bitter agony of defeat, to the astonishing adventure of man which began so long ago and yet continues and beckons to us. To all this and more, common with all men. But there is a special heritage for those of us of India, not an exclusive one, for none are so exclusive and all are common to the race of man, but more especially applicable to us, some thing that is in our flesh and blood and bones, that has gone to make us what we are and what we are likely to be.



THE UNIVERSAL VISION

I have ventured, in all humility, sometimes, to criticise those developments at the United Nations which seemed to me to be out of keeping with its charter and its past record and professions. Nevertheless, I have believed and I do believe that the United Nations, in spite of its many faults, in spite of its having deviated from its aims somewhat, is, nevertheless, a basic and fundamental thing in the structure of the world today. *Not to have it or to do away with it would be a tragedy for the world.* Therefore, I do not wish this country of ours to do anything which

weakens the gradual development of some kind of a world structure. It may be that the real world structure will not come in our life time but unless that world structure comes, there is no hope for this world, because the only alternative is world conflict on a prodigious and tremendous scale. Therefore, it would be wrong for us to do anything that weakens the beginnings of a world structure, even though we may disagree with this, particular organisation and even though we may sometimes criticise it, as we have done.

—Jawaharlal Nehru



I AM FOND OF CHILDREN

I like being with children and even more, playing with them. For a moment I forget that I am terribly old and that it is a very long time ago since I was a child. Old people have a habit of delivering sermons and giving good advice to the young. I remember that I disliked this very much long ago when I was a boy. Nothing saddens me so much as the sight of children who are denied education, sometimes denied even food and clothing. If our children to-day are denied education what is our India of to-morrow going to be? It is the duty of the State to provide education for every child in the country. And I would add that



it is the duty of the State to provide free education to every child in the country. Unfortunately, we cannot do all these things quickly and suddenly, because of our lack of resources and lack of teachers. But we have to get going.



INDIA NOT AFRAID OF THE FUTURE

I am not afraid of the future. I have no fear in my mind, and I have no fear, even though India, from a military point of view, is of no great consequence. I am not afraid of the bigness of great powers, and their armies, their fleets and their atom bombs. That is the lesson which my Master taught me. We stood as an unarmed people against a great country and a powerful empire. We were supported and strengthened, because throughout all this period we decided not to submit to evil, and I think that is the lesson which I have before me and which is before us to-day.



SAYINGS ON SO MANY OCCASIONS

MEDIUM OF INSTRUCTION

In the case of language the major change that has come over India is that the medium of instruction in schools is now the language of the State. English is certainly used in Education especially in the Universities. But the instruction in the regional language is a break linguistically from the past. You can therefore regard English only as a secondary language, a compulsory secondary language if you like, a highly important language but a language which is not the medium of instruction. It is learnt as foreign language. That is inevitable and also right.

I come to English and its importance. It is important not because a number of people know it in India, although it is a factor to be remembered. It is not because it is the language of Milton and Shakespeare, although that also has to be considered. There are great poets in other foreign languages too like French, German, Russian and Spanish apart from Asian Languages. English is important because it is the major window for us on the

modern world. And we dare not close that window. If we close it, we imperil our future.

FAMILY PLANNING, AN URGENT MATTER

The very first thing we have to consider in regard to the plan is what will be the population for which we are planning. We have to consider how much food, clothing, housing and so many other things they will require. As soon as we consider this, we come up against the physical objectives which we have to attain and their relation to the population of India. We have to come to grips with this problem of population. It does not become some kind of a theoretical concept. *We have to plan in terms of food, clothing, housing, education, health, work etc. and we realise that some kind of limitation of the rapidly growing population becomes an urgent matter for us.* It was for this reason that we were driven to consider this question of family planning as a part of national planning. As soon as our Planning Commission began working a few years ago, it considered this matter and made it an integral part of our planning.

I AM A SOCIALIST

I must frankly confess that I am a socialist and a republican and am no believer in kings and princes or in the order which produces the modern kings of industry, who have greater power over the lives and fortunes of men than even the kings of old, and whose methods are as predatory as those of the old feudal aristocracy. I recognise, however, that it may not be possible for a body constituted as is this National Congress, to adopt a full socialistic programme. We must realise that the philosophy of socialism has gradually permeated the entire structure of society the world over, and almost the only points in dispute are the pace and the methods of advance to its full realisation. India will have to go that way, too, if she seeks to end her poverty and inequality, though she may evolve her own methods and may adopt the ideal to the genius of her race.

SOCIALISM OUR GOAL

We have deliberately laid down as our objective a socialist pattern of society. Personally I think that the acquisitive society which is the base of capitalism, is no longer suited to the present age. We have accepted socialism as our goal not only because it seems to be right and beneficial but because there is no other way for the solution of our economic problems.

Swinging their way to a happy future!



Selvan and Selvi are happy and contented. Their parents lavish them with all the comforts in life so that they can face the future with a smile.

Are they born lucky? No. Their parents were wise enough to know that with their limited means they could give them

maximum attention only if they didn't have more children.

Your happiness and the future hope for your children is in your own hands. Today you can have a child by choice, not by chance. That is when you desire one, and can give it the best attention.

Ask any of your friends who have benefited by family planning. There are 10 lakhs of them in Tamil Nadu. Visit one of the family planning clinics. You'll get free advice, help and other aids from trained staff.

Plan your family and live happily!

Issued by : Director of Information & Publicity,
Government of Tamil Nadu, Madras-9

JULIS

Registered No. M. 8656

TAMIL ARASU

*Special Deepavali
Bumper Offer*

1000000

Rs. Ten lakhs Special Prizes.

31/12/71

15/12/71
11.50

Cost per ticket **Re. 1/- only**



- I Special Prize .. Rs. 5 lakhs.
II Special Prize .. Rs. 2 lakhs.
III Three Special Prizes .. Rs. one lakh each.

**Usual Prizes Rs. 35 lakhs
For Ten series**

- 10 First Prizes Rs. 10 lakhs
100 Second Prizes Rs. 10 lakhs
1000 Third Prizes Rs. 10 lakhs
5000 Fourth Prizes Rs. 5 lakhs

**Total Prize money
Rs. 45 lakhs**

Total number of prizes 6115
Tamil Nadu Raffles have created
189 lakhiers so far.

who knows,
you may win big money
with just one Re.
Try your luck!

**Draw Date
30-11-70**

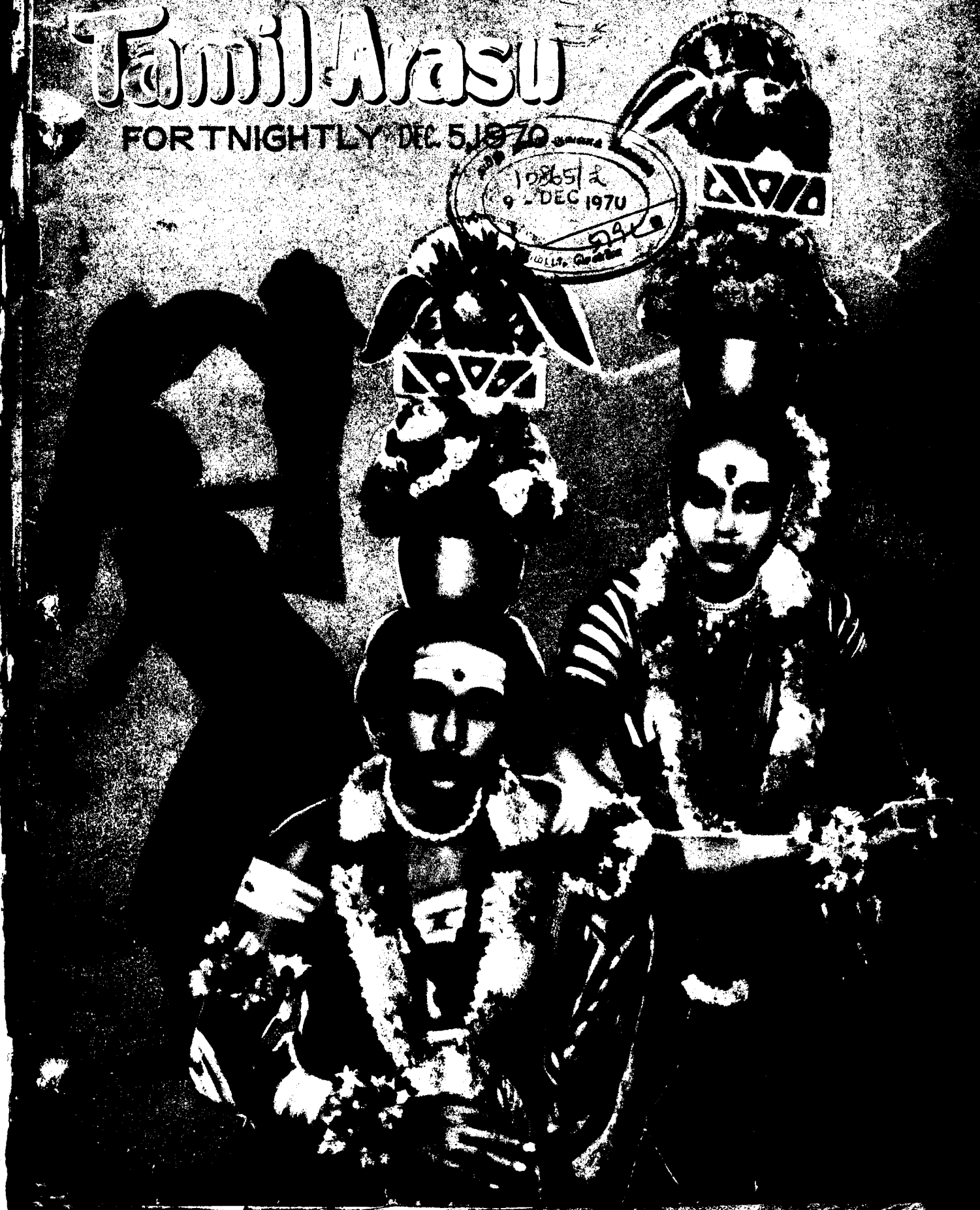
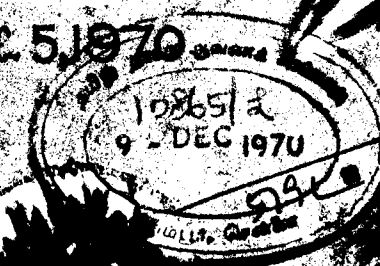


Be proud to be partners in Country's progress. Take to Raffle habit.

TAMIL NADU RAFFLES

Tamil Arasu

FOR T NIGHTLY DEC 5, 1970



Swinging their way to a happy future!



Selvan and Selvi are happy and contented. Their parents lavish them with all the comforts in life so that they can face the future with a smile.

Are they born lucky? No. Their parents were wise enough to know that with their limited means they could give them

maximum attention only if they didn't have more children.

Your happiness and the future hope for your children is in your own hands. Today you can have a child by choice, not by chance. That is when you desire one, and can give it the best attention.

Ask any of your friends who have benefitted by family planning. There are 10 lakhs of them in Tamil Nadu. Visit one of the family planning clinics. You'll get free advice, help and other aids from trained staff.



Plan your family-and live happily!

Issued by: Director of Information & Publicity,
Government of Tamil Nadu, Madras-9

MOULIS



DECEMBER 5, 1970

No. 11

CONTENTS

	Page
Those Twenty Days	4
Help for the Technically Trained	11
The Bryant Park of Kodaikanal	14
Changing Educational Scene Abroad	15
I. A. D. P.'s Adaptive Research	27
Schemes for Sub-marginal Farmers	29
A Breakthrough in Tea Processing	31
Servicing Small Industries	33
Catering and Nutrition	36
The Tudiyalur Agricultural Co-op.	39
The Work of SPCA	43

Cover Page:

Depicts one of the popular Folk Arts of Tamil Nadu,
The Karaga Attam.



TWENTY DAYS

M. KARUNANIDHI

9. MAZZINI AND GARIBALDI

The colourful pages of Roman history, from the time of the invasion by the Etruscans upto the dictatorship of Benito Mussolini, unfolded themselves before the eyes of my mind and I had the impression of going through a long story, wondrous in its variety.

In concrete shape, before me, were the relics of history, spectacular even in the stage of dilapidation—the ruins of buildings tall and stately, in quite a few places in the City of Rome.

I connected the two scenes; and waves of sheer awe rose and rocked my heart.

Like a racy novel, flows the amazing history of Rome and prominently recorded therein are the rise of Caesar, the reign of Augustus, the infatuation of Mark Antony, the coquetry of Cleopatra, the flamboyance of Caligula, the callousness of Nero, the perversities of Agrippina, the gospel of Marcus Aurelius, the supreme artistry of Michelangelo and the like. And as we turn the pages of Roman history, we are in the grip of conflicting emotions arising from joy, alarm,

complacency disgust, indignation, agony and exultation.

What a mass of contrasts among human characteristics and how intense indeed are those contrasts!

Was it in the lineage of Augustus that Nero came to occur? Could the soil that Octavia trod suffer the weight of a vamp such as Agrippina?

Impossible, we would say! But truth does happen to be stranger than fiction and the history of Rome does seem to be an anthology of the biographies of powerful personalities who were so totally different from one another, in terms of character.

As I gazed at the historic relics in the City of Rome the sad thought struck me that the decline in the national spirit of the Romans.

Yes, when the national spirit of the Romans was on high, Rome ruled the world. And when it sank and was dissipated altogether, Rome had to bow its head before tiny principalities.

The Roman Empire broke up in the 5th Century A.D. at the end of the reign of Romulus who was ousted by Odoacer. Italy was reduced to fragments and it fell an easy prey to the hostiles.

It was left to that political pundit Machiavelli of the 15th Century to dream of a united Italy that could rule the globe

once again. Machiavelli was one who maintained that the objective was all that mattered and, as for the means and implements one made use of to realise that objective, they were not of such importance as to engage the question of ethics. He sought to inject imperialist ambitions into the hearts of the princes of Italy and according to him the pathways and channels of politics did not necessarily have to be straight. Through his book *THE PRINCE*, Machiavelli taught the rulers how they should be treacherous at heart and still appear friendly, for the reason that the success scored by a king depended entirely on his ability to dissemble. Those who subscribe to straight-forward methods in politics, as charted out by honest intellectuals like Rousseau would gasp, to scan the tenets formulated by Machiavelli. I recollected that, while in the Tiruchirapalli jail in the year 1953, I had had occasion to read a book by the late Prime Minister Jawaharlal Nehru wherein he had written that although Machiavelli's arguments were far from being acceptable, the Big Powers of today were only following the self-same theories, albeit in a covert manner. Whomsoever may accept or agree with the theories of Machiavelli, we shall certainly repudiate them totally. For we know, and we have been trained to believe, that virtue itself turns executioner to those who stray from the correct path of governance.

We now come to the 19th century when, once again, the

sweet dream that the dismembered Italy should be united, sprouted in the hearts of two men. One of them was Mazzini and the other Garibaldi.

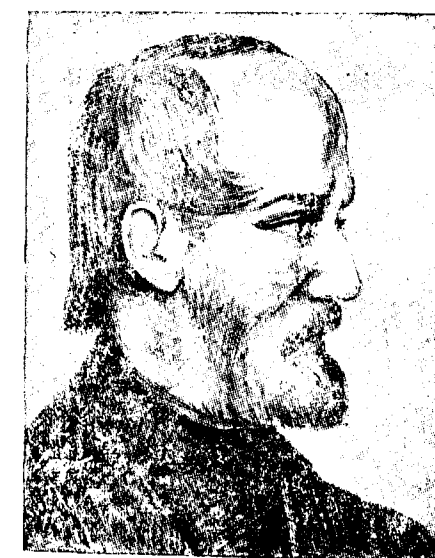
Mazzini was verily a king of letters who, through the sweep, and force of his pen, sparked off resurgence in Italy. Garibaldi brought the dimension of action to this fervour and *clan* and he went on to achieve victory.

Mazzini raised the fire of nationalism. Garibaldi spread the flames to the four corners of Italy and in that conflagration he seared the enemies until they were less than withered leaves.

Mazzini and Garibaldi could be likened to the two eyes of Italy.

Again if Mazzini was the heart of Italy, Garibaldi was its powerful arm.

On one side was the domination of the Austrians. On another side, the royal dynasty of Piedmont ruled over a section of the country, as vassals of the Austrian aggressors. Over certain other sections of Italy, the Pope held sway. In yet another part of the land were people writhing in agony, under the tyranny of the King of Naples. Such was the picture of Italy divided into four broad



Mazzini of "Young Italy"

fragments and at its nadir. It was at such a point in history that the two freedom-fighters, Mazzini and Garibaldi, appeared on the scene. The thought and desire to rekindle the love of liberty in the oppressed land, reunite the motherland and revive the glory of Italy, had taken root in the hearts of these two individuals, very early in their youth.

Mazzini could be said to have attained political maturity at the age of ten itself and when he was twenty-five he caught the tyrannous eye of the rulers. He, who had qualified himself to practice Law but had renounced the profession so as to be able to argue the case for people's liberty in the Court of the Revolution, was lodged in the Savona prison. To Mazzini, the prison-house was a sanctuary for vigorous thinking and he considered the spell of incarceration to be the equivalent of a stretch of time spent in a flower-garden where the air was filled with the sweet music flowing from nightingales.

Thoughts and plans for the future arose on the screen of his mind, during this imprisonment. Realising that the youth of the land formed the arteries of the country and coming to the very valid conclusion that wonders could be worked only by the members of the younger generation throbbing with ardour and energy, Mazzini was filled with a desire to found an Association of Freedom-lovers and freedom-fighters, to be named "Young Italy". He decided that membership of the organisation should

be barred to those above the age of forty. He was against seeking the assistance of foreign powers for securing Freedom of the motherland. His principle was that the seed of a country's freedom should be sown only by the hands of that country's people; their raw blood should nurture it and their valour alone should form the hedge to protect the crop as it comes up. Mazzini was of the firm conviction that it was only through such a determined battle could victory be achieved and he emphasised in no uncertain terms that a community that does not have the passion and strength to fight for its rights did not qualify to live the life of the free!

With such well-developed ideas and carefully-formulated plans of action, Mazzini stepped out of prison—only to be exiled by the Government!

Mazzini sought asylum in the lap of France, in Marseilles. In that country which had played the harp of Liberation with such dedication and raised the rich and meaningful music of "Liberty, Equality and Fraternity", was pitched the camp for the defence of the Italian motherland. Mazzini's printing press was that battle camp. Through his forceful writings, he continued to kindle the fervour of nationalism in the hearts of his countrymen; and he proved that the nib of an intellectual's pen had more prowess in it than the sword of a tried and tested warrior even.

In the company of other freedom-lovers who had been

exiled from Italy, Mazzini in Marseilles lost no time in drawing up plans for revolution. Garibaldi was among those who had been exiled and it was in Marseilles that he met Mazzini.

Garibaldi was all praise for Mazzini whom he hailed as a noble individual who kept wide-awake while his entire country had forgotten its love of liberty and was wrapped in deep slumber. "Mazzini was the noble patriot who kept the sacred flame of freedom alive and saved it from being put out", the Great compatriot was to record later.

The Association of Freedom-fighters known as "Young Italy" took shape in Marseilles and within 2 years its membership swelled to 60,000. Alarmed over this upsurge, the Austrian Government prescribed capital punishment for those who became members of "Young Italy".

In the name of the Italian Community, Mazzini addressed an impassioned appeal to the Italian monarch who was ruling over a section of the country. "The hour of Revolution is drawing near. Do come and be our leader", invited Mazzini.

But the King, by name Charles Albert, did not have the guts in him to resist the dominance of the Austrians and so he set the repressive machinery of the Government against the freedom-fighters. The revolutionaries were imprisoned, tortured and even condemned to death. The sentence of death was pronounced on Mazzini and Garibaldi

too, and they were forced to leave the shores of France. Switzerland refused to grant them asylum and Tunisia too followed suit?

For three long years, these two indomitable heroes were in flight, from country to country. But even then, the lamp of Freedom that they carried in their hands shone in splendour and blazoned forth its inspiring message.

After confronting hardships in such an unbroken chain, Mazzini at last reached London and from there he continued his endeavour to further the nationalist movement of Italy, through his prolific writings.

As for that man of action Garibaldi, who was almost fagged out, he was treading the shores of South America. Settling down in a corner of that land, he found that his passion for freedom would not be quitted. He was of immense help to the local people who were yearning to throw off the yoke of Brazil and he also assisted the people of Uruguay to defend and safeguard their rights.

Even while he was fighting for the oppressed people of other countries, Garibaldi's heart was all the time yearning to see his own country free and united. While in South America itself he banded together some Italians and assembled a small army in effect, to fight for the freedom of the motherland.

He designed a new flag, the prominent colour on which was

black, signifying that the motherland was in bondage. In the centre of the flag was the symbol of a blazing volcano indicating the unquenched yearning for freedom.

A new army and a new flag! The Supreme Warrior Garibaldi was sharpening the sword of Revolution, there in Montevideo.

The Year, 1848! Throughout Europe the masses had risen against despotism. It was the time when Revolutions erupted and Republics spread their nascent fragrance. The year was historic, for the strength of the people's will acquired a militant edge that toppled dictators many.

The people of Italy who had been aroused by the writings of Mazzini took the terrible pledge to rest no more. But they had no leader to channelise their turbulent energy. The agonised cry went up. "Will Garibaldi return?"

Garibaldi was prompt in responding to the people of his motherland.

"Even if you were to collect all the gold in the world and pour it in front of me, the total worth of that wealth would come nowhere near the value of the assemblage of my red-uniformed warriors. Such is the precious valour of my men; and do the aliens have the strength of will to confront them?"—With this challenge on his lips Garibaldi set foot again on the soil of his motherland.

That was in April of the year 1848. Yes, after 14 years of

exile, did the hero return, with his ardour for freedom undimmed and at the head of an army rocklike in its determination.

Vibrant with new energy, the people of the land rose as one man to throw off the Austrian yoke. The song of freedom rent the very skies.

Grainfields turned into battle fields and the peasants, whose hands were used only to the plough, now took up the weapons of war. Labourers shouldered armaments and the entire population, from school children to aged men, participated actively in the struggle for freedom. As a result, the Austrian Army, though reputed to be awfully arrayed, turned tail and disappeared from the scene, within the short space of a week.

Mazzini received the glad news in London and his rejoicing knew no bounds. "Our dear land has now thrown off monarchy and accepted a republic in its place" he announced in exultation.

But alas, the Republic proclaimed by Mazzini lasted but 8 weeks.

The Austrian army that had been scattered and put to flight regrouped and returned to give battle. Garibaldi and his men withstood their onslaught but they had to confront the French forces too, this time. His men were extraordinarily courageous no doubt, but they were not fully trained after all, nor were they adequately equipped for long-drawn-out action. Surrounding

them were the enemies come with a fresh lease of strength.

The altered situation made the Parliament of the Republic of Italy to do some rethinking and the sad result of the cogitation was the decision to surrender.

Mazzini's life-long dream came down in a crash and he sobbed: "Oh, my dear motherland, you are the heir to great glory and great misfortune". With his heart shattered and dream dispelled, he left for England.

The incensed Garibaldi, on the other hand, rushed through the streets of Rome, bursting out like Vesuvius, the Volcano.

He called out: "Have you listened to the news, O, young men, of our land? We are fighting a battle on three fronts, for ranged against us are the armies of Austria, France and the Papal State. Our warriors number but three thousand and they too are not fully trained in the strategy of warfare. And so, the Parliament has ordered us to surrender. Yours are the hands that are to write again the heroic epic of Rome. Join my ranks in order to fight the enemies of the motherland! I shall not be able to offer money or position or a marble palace to those who volunteer to march with me. On the other hand, the guerdon will be hunger and thirst, battle fields overflowing with raw blood and clangorous formations ever in danger. O! Young men that have offered up your hearts for the country, do come forward to defend the honour of the motherland!"

Despite all his sustained efforts, Garibaldi's men could not, withstand the combined might of the enemies. Soon they had to flee.

Garibaldi and his warriors were on the move, unmindful of the weather, unmindful of hunger or sleep, unmindful of the terrain they traversed and through jungle and over the sea.

Garibaldi sought asylum in the beautiful isle of Rio de Janeiro

but the Government of the island ordered him to leave, as it stood in dread of Austria.

With 200 soldiers, Garibaldi set sail in 13 boats. The long and cruel arm of despotism pursued him even on the deep sea and in a violent engagement that had all the force of a gale, he lost 160 of his men.

Marcus Aurelius



His wife fell ill and carrying her on his shoulders, Garibaldi reached an hamlet of fisherfolk. It was there that his helpmeet who had come into his turbulent life while he was in South America and who had uncomplainingly stood by him through thick and thin, breathed her last.

Having lost the opportunity to redeem his motherland and having been deprived of his comrades-in-arms too, Garibaldi lost his dear wife.

His heart laden with grief and misery, he walked on for 40 days oblivious of his surroundings.

He had the glimmer of a hope that Victor Emmanuel who ruled Sardinia might grant him refuge but it was not to be, for that prince was too scared of the might of Austria.

The same fate awaited Garibaldi in Tunisia. He sought shelter on the coast of Gibraltar but the English Governor of that rock would not let him stay.

In this manner, the despotic regime of Austria and its ally-Governments elsewhere chased Garibaldi from place to place.

At last, Garibaldi reached New York in the year 1851, and engaged himself in the candle-trade. Perhaps through that calling he sought to point out the poignant fact that he himself had been a candle that had burnt itself in the cause of the motherland!

After 3 years, Garibaldi returned to his native soil and in Nice he turned attention to agriculture. But even at that stage, the love of freedom was smouldering deep in his heart.

It was left to Cavour to rekindle that fire in Garibaldi's heart. Cavour, a shrewd statesman, was the Prime Minister of Victor Emmanuel belonging to the Piedmont dynasty that ruled over a part of Italy. Cavour invited the hero to his side, with the intention of putting an end to intolerable dominance by Austria through the help of Mazzini and Garibaldi and then setting up Victor Emmanuel as the crowned King of the entire Italian landscape. Garibaldi accepted the invitation, for he was keen to get rid of foreign domination and reunite Italy somehow or other. At this juncture, France too agreed to oppose Austria.

Garibaldi assembled an army of 5,000 men and this time he left little to chance. His forces, aided by the armies of Emmanuel and the French legions, administered a crushing defeat to Austria. The regions of Italy reverted to the ownership of Italians.

Just when total victory was within grasp, the French monarch Louis Napoleon called off the war and made up with the Austrians, against the advice of Garibaldi. The reason for his volte-face was the apprehension that if Italy were to become a single entity, his position would be threatened some time or other.

Garibaldi took the setback in his stride and building up his strength once again, he scored creditable victories in Naples and Sicily. Even the English poet Tennyson lauded these successes attained by the Italian hero.

From then onwards, it was a story of success after success for



Garibaldi who saw his dream of united Italy coming true. He died in 1882, full of years and honours.

But Mazzini could not realise his dream. The people of the land where Garibaldi won his Victories, decided through a plebiscite to accept the monarchy of Victor Emmanuel. They presumably were of the opinion that they would be shielded from alien domination, only if a strong king were to be their fortress.

The all-consuming desire of Mazzini had been to light the undying lamp of the Republic in a united Italy. Since this was not to be, that towering writer and uncompromising idealist died of a broken heart in the City of Pisa.

Thus the two gems, Mazzini and Garibaldi, disappeared from the scene but their thoughts and deeds are a perennial source of inspiration to this day.

(To be continued.)

NATIONAL FILM AWARDS AT MADRAS



The annual national awards for films were presented by the Tamil Nadu Chief Minister, Thiru Karunanidhi on 21st November 1970.

K. B. Sundarambal, whose name is a byword for the South Indian cinemagoer, was overcome with emotion as she walked up to receive her award, from Thiru M. Karunanidhi.

Speaking at the function, Thiru. Satya Narayan Sinha, Union Minister for Information and Broadcasting, appealed to Indian film makers not to go in for escapist entertainment which totally negated the role of the cinema as a socially purposeful medium.

The award winners for 1969 were: The best film—Bhuvan Shome (Hindi). The second best film—Deeparatri Kanya (Bengali)



The best films in regional languages:

Tamil—Irukodugal
Malayalam—Adimaikal.
Kannadam—Kajja Bhooja.
Telugu—Atharsha Kudumbam

The award winning artistes were:

Best actor—Uthpal Dhat (Hindi film).
Best actress—Madhabi Mukerjee (Bengali film).
Best playback songster—S. D. Burman (Aaradhana—Hindi).
Best playback songstress—K. B. Sundarambal (Thunaivan—Tamil).

Thiru Gemini Ganesh and Sowcar Janaki received awards as best actor and actress respectively of Regional entries.



Soviet Cosmonauts honour C. M.

Boris Volynov and Evgeni Khrunov called on the Chief Minister at his residence on 28-11-70 and pinned the "Space Pennant" on his shirt.

EVERY HELP FOR THE

Dr. Livingstone, an eminent British Educationist, says that the educated unemployment is more dangerous than the uneducated unemployment. The Chief Minister of Tamil Nadu Thiru M. Karunanidhi, in his Madurai University convocation address expressed his deep feelings at the prevailing situation in the country in this regard.

While disclosing the fact that the Government of Tamil Nadu is formulating schemes within the limited powers available to it for solving the unemployment problem, he advised the students from the upper strata of the society not to think in terms of seeking employment after their education.

Solving unemployment problem

He pleaded that the idea to be in a job is more honourable than other avocation should give place to a pragmatic approach. He requested that these students instead of thinking about finding jobs should think about serving the society leaving the employment arena to the students from the poorer sections of the society. They should consider this as a sacrifice he said. That advice itself serves as one of the solutions for solving the growing unemployment problem. At the same time the Chief Minister also stated that the Government of India should think of help in a big way.

Only then we can succeed in solving this important problem which the country is facing today.

As stated by the Chief Minister at the Madurai University Convocation address, the Government of Tamil Nadu has drawn up several schemes for solving the unemployment among the engineering graduates, diploma holders and craftsmen. One of the schemes is the special apprenticeship training scheme under which about 600 unemployed engineering graduates, 1,000 diploma-holders and 800 craftsmen will be absorbed as Apprentices. This is

TECHNICALLY TRAINED

over and above the existing apprenticeship training schemes under the Apprentices Act.

The object of the scheme is to impart training in practical work to unemployed persons having technical skill so that they can have better chances of absorption in State Government departments, public sector undertakings and private sector and to acquire the necessary self reliance to start enterprises of their own. The scheme will be in operation for a period of two years.

The trainees during their apprenticeship will be paid Rs. 250 for engineering graduates, Rs. 150 for diploma-holders and from Rs. 60 to 90 for craftsmen per month.

The selection of apprentices under this scheme will be con-

ducted by a Recruitment Board. The graduates, and others who are already on the rolls of the employment exchanges in Tamil Nadu will be interviewed by the Selection Committees of the Recruitment Board at Madras, Coimbatore and Madurai. Similarly the craftsmen who are on the rolls of the Employment Exchanges will be interviewed at the District headquarters.

Another scheme has also been drawn up to increase the employment opportunities for the engineering graduates and diploma holders. Under this scheme all the necessary facilities and assistance will be provided to those who are willing to start ancillary industries around the three Public Sector Undertakings, The Madras Refineries Limited, the Madras Fertilisers Limited and the Hindustan Teleprinters. In this connection the Industries and Commerce Department of the Government of Tamil Nadu in collaboration with the above three Public Sector Undertakings has arranged an exhibition, "Opportunities for Entrepreneurs" at the Guindy Industrial Estate, Madras. The exhibition was inaugurated by Thiru D.R. Chavan, Union Minister of State Petroleum and Chemicals on 21st November 1970. Thiru S. Madhavan, Minister for Industries, Government of Tamil Nadu presided over the function. Thiru S. Madhavan said that there are

TO START INDUSTRIES



Thiru S. Madhavan and Thiru Chavan going through the exhibition

about 5,000 unemployed Engineering graduates in Tamil Nadu alone. The only way of solving this problem is to increase the tempo of industrial development. Therefore he said that the Government of India should give licence to the Tuticorin Fertilisers Project and Naptha Cracker Plant and Petro-Chemical Complex at Manali near Madras without any further delay. The future hope of Tamil Nadu lies only in the implementation of such projects. For, these big projects will further create employment opportunities through ancillary industrial units like the complexes which we are now planning around these three Public Sector Projects.

The Union Minister said that such ancillary units are inevitable for big projects like the Madras Refineries Limited. On display at the exhibition were the spare parts required by these three

undertakings which can be manufactured by small-scale industries. The Industries Department has also arranged to take the persons who are interested in starting ancillary units to manufacture these spare parts, around these factories.

This scheme will be extended to other big Public and Private sector undertakings also. The participation of such other undertakings in this scheme is therefore welcome. Already a similar exhibition has been arranged at Tiruchirappalli to create an ancillary industrial complex around the Boiler Plant of the Bharat Heavy Electricals Limited.

The aim is to create ancillary industrial complexes around giant factories so that more people will take to these small enterprises providing employment to more people.

While inaugurating the Ancillary Industry Exhibition at Guindy on 21st November 1970, Thiru D. R. Chavan, Union Minister of State for Petroleum and Chemicals referred to similar developments in other parts of the country. He said :

“Ancillary industrial estates have been set up and two important and successful examples are the Hindustan Machine Tools Ancillary Industrial Estate at Bangalore and K. R. Sundaram Industrial Estate which has been set up by Enfield of India in Madras. H.M.T. produces 2,000 machine tools which involves manufacture of 20 million components—hence an ancillary industry has been set up. This industrial estate has 50 units which have been set up by erstwhile workers, foremen of H.M.T. Most of the machines have been supplied by the National Small Industries Corporation under its hire-purchase system. Besides providing factory accommodation at reasonable rent and assisting units to set up their plants, H.M.T. provides free technical advice and guidance for the manufacture of components. Inspection, training of workers and other services are provided by H.M.T. Blue prints, guage, fixtures and technical supervision is also provided by H.M.T. Sometimes, H.M.T. provides scarce raw materials required by these units.

As all of you may know, a two-day seminar on the Development of Ancillary Industries by Public

Sector Undertakings was held at Bangalore on the 3rd and 4th of April 1970 when the Secretary to the Union Cabinet stated that the public sector undertakings should take steps to encourage local entrepreneurs to set up ancillary units around undertakings which would create employment. Resolutions adopted in the seminar include (i) that every public sector undertaking where ancillary development is possible should set up an Ancillary Division or designate a senior officer who should primarily be responsible for the development of ancillaries. His responsibilities would include to specify items where imports are inescapable and give top priority to locate indigenous capacity for these items to farm out items to ancillary units and to identify items which could be profitably offloaded to existing or proposed ancillary units; (ii) the public sector undertakings should take on the responsibility for the development of Ancillary Industrial Estates in co-operation with State Governments, etc., (iii) the public sector should provide all necessary technical assistance, tooling and testing facilities; (iv) public sector should try to provide scarce raw materials; (v) the price and period of contract should be for a long duration and (vi) public sector units should recommend the financial requirements for their ancillary units to the various financial agencies.

The above factors show that the Government is taking keen and active interest in setting up ancillary industries mainly as a tool to diversify the employment opportunities in the country.

In the Ministry of Petroleum and Chemicals, some of the large units such as the Oil and Natural Gas Commission, which in 1970-71 has a Revised Budget of Rs. 56.6 crores for exploration and development and is earning a revenue of Rs. 51.4 crores, had a gross demand for spares and components of Rs. 25.2 crores in that particular year. Of this, about 42 per cent was accounted by imported stores. In the case of Indian Oil Corporation, which on 31st March 1970 had a gross investment in plant and machinery of Rs. 129 crores, and had a turnover of Rs. 63.66 crores, had stores of about Rs. 11.0 crores. Similarly, Fertiliser Corporation of India on the 31st March 1970 had a gross investment in plant and machinery of Rs. 134 crores with a sales turnover of Rs. 65.8 crores, had stores, spares and packing material worth Rs. 17.2 crores. While some of these spares are indigenous, some of them are still imported and with a little effort,

ancillary units could be set up to cater to their requirements.

The Oil and Natural Gas Commission has been for some years trying to develop indigenous sources for procurement of machinery spares and to this end, a Design and Manufacture unit was set up in 1962. Although the progress could have been much more, nevertheless, such items as welding sets, 877 items of spares involving a foreign exchange outgo of Rs. 40 lakhs have now indigenous producers. In addition, items to be taken up soon include filters, bearings, descanters, degassers, gaskets, rubberised components and fuel injection pump parts. In addition, the Commission amongst other things, is investigating the import substitution for Radiators for heavy duty engines, instruments and gauges, transmission chains, gas sprockets, and also reclamation of worn out parts by the hot and cold process.

(continued on page 35)

The spare parts required by Madras based Public Sector projects on display





The Kodaikanal hill station on the Palani Hills in Madurai is a lovely summer resort with perennial attractions. The Bryant Park is one among them. Laid out as a terrace garden to please visitors, it is a major seed-collection centre and exporter of cut-flowers. Situated in the valley adjacent to the lake, the Bryant Park is today one of the major Horticultural research centres of Tamil Nadu.

The Bryant Park is the result of the pioneering work done by one Mr. H. B. Bryant, the District Forest Officer of Madurai around 1900. The area between the "consumption ghat" and the lake in the valley which was a dense jungle in the early 1900 was planted with a large numbers of blue gums, wattle and pines by Mr. H. B. Bryant. By 1908 the valley had been laid as a park with pine groves on the slopes and the flower bed of different varieties below.

But until recently due to various reasons the park did not receive the attention it deserves. From 1900 to 1919 it was under the

control of the forest department. It came under the control of the Curator, Government Botanical Gardens, Ooty from 1920 to 1924. Then at the request of the curator who expressed his inability to supervise this work it was transferred to the Kodaikanal Municipality with an annual grant of Rs. 1,000 for its maintenance. Due to lack of adequate finance and trained personnel all these years the park could not make much progress either as a beautiful park or as a Horticultural and floricultural research centre. With a view to convert it into an attractive botanical garden, the park was finally taken over by the State Agricultural Department on 18, November, 1961. And an Assistant Horticulturist is in charge of the park now.

From then on the Bryant Park has witnessed many-sided progress and is growing into one of the major Botanical Gardens. The park now occupies an area of about 20.5 acres. About 18.15 acres of land was cleared and laid out with pleasing

turf. An area of 2½ acres of swamp was cleared and levelled up and converted into a children's garden. The pont terrace was completely redesigned with lawns and terrace gardens. New hedges to a length of 700 metres were planted besides erecting arches, rockery, etc., at ideal places to improve the layout of the park.

While such improvement works were being carried out side by side, the introduction of new varieties of plants was also planned in a systematic and scientific way and was implemented in full swing. A total of about 440 varieties of Floribunda and Polyantha roses, 29 varieties of cacti and succulents, 28 different varieties of orchids, 14 varieties of Chrysanthemum, 501 different species of trees and shrubs were newly introduced for trial in this park. This park is also the main centre for the supply of

(Contd. on page 35)



CHANGING PATTERN OF EDUCATION ABROAD

(The Second of Two Articles,
the first one was published
in Tamil Arasu 21-11-70.)

A word about the educational systems prevailing in the countries I visited. The United States operates within the framework of a federal system in which each of the 50 States exercises sovereign control over schools and education in that State. There in the United States is a strong tradition that a large measure of control over education and the schools should rest with the local community. State statutes and directives define minimum standards for schools, the taxing power of the local community for education and leave to the locally selected school board the responsibility for providing education in conformity with State regulations. Each school system under the School Board frames its own curriculum in broad outline and leaves considerable autonomy to the school teacher to choose his own method of teaching based on sound educational principles and achieving the desired results. The United States Office of Education (which corresponds to the Central Ministry of Education in our country) has a mandate to collect educational statistics and make them available to schools and school authorities. It performs a research and clearing-house function rather than an administrative one

in relation to school systems. It administers the subsidies for education appropriated by the Congress of the United States. For the most part these funds are used for vocational education, science and mathematics, modern languages, guidance and research in the field of education. It is said that the Federal Government which is now sharing about 8 per cent of the expenditure on education may by the end of 1980 hold itself responsible for something like 30 per cent of this expenditure in view of its commitment to equalise educational opportunities for all, taking particular care of the culturally and educationally disadvantaged classes of the people under the Welfare provision of the federal constitution. A more extensive description of the Secondary education system in U. S. is published elsewhere in this issue.

In Germany

In West Germany educational planning and policy, by virtue of the legal stipulations are in the

S. V. CHITTIBABU, M.A., B.T.,
Director of School Education

hands of the Ministry of Education of each member State of the Federation. Most of the States have a School Advisory Council composed of representatives of teachers and parents, the ecclesiastical authorities, administrative and other persons concerned with education, which must be heard by the Minister before any organisational changes are made. The Ministry issues the general directives and on their basis the teaching staff of individual schools draw up their curricula. The teachers are given freedom to adopt their own teaching techniques, keeping in view the desired objectives. Before school books are introduced they must be submitted for approval to the Text Books Committee of the Ministry. They are then entered in the official list of Text Books from which the various schools can make their choice. Education is financed out of general tax receipts, not from special education taxes as in the United States of America. School costs are shared by the State and those who run the schools, that is, any corporate body or organisation legally responsible for establishing and maintaining a school. When maintenance is on a joint basis, which is becoming more

and more common, staff costs (salaries, pensions, etc.) are borne by the State and material costs (school buildings, class-room equipment, etc.), by those who run the school.

In the United Kingdom

In the United Kingdom, under the guidance of the Minister for Education the national policy is applied by the Local education authorities to the needs and circumstances of their own areas and in consultation with the governors and teachers responsible for individual schools. The essential quality of the national policy is flexibility and accordingly the Minister does not issue directives in such matters as

expenditure is financed out of national taxes from which a grant is made to the local authorities. The greater part of educational expenditure is incurred directly by the local authorities from out of local rates collected on the basis of the value of land and buildings.

In Japan the Central Education authority is the Ministry of Education, which is responsible for the promotion and dissemination of education at all levels. The ministry administers a number of national establishments including Universities, Junior Colleges, Technical Colleges, etc., and it also provides guidance, advice and financial assistance to local

community and the free compulsory education that is enforced in all the abovementioned countries for all children generally of the age-group 5-6 to 15-16 is fashioned and designed to equip them for the challenging tasks of life, and at the same time inculcating in them a sense of individual dignity, love of work and regard for truth and peace. There is also another salient feature which deserves notice and that is the vocationalisation of education in the above countries which brings education closer to productivity. Unlike our educational system which has been training young persons so far, mostly for white-collared professions or Government services, the educational

it offered for boys as well as girls who were planning to take to technical professions. It is high time that we did something in this direction with a sense of urgency with a view to training our youth in useful vocations while at school.

The New Instruction Aids

The use of instructional technology in the classroom in the United States, West Germany, Japan and Singapore is seen to be on the increase in scope and extent. Slide projectors, overhead projectors, tape-recorders, motion pictures, the radio and above all the T.V. constitute a fascinating variety of teaching aids which help the teacher to enliven learn-

on the earning of a required number of units of credit and not upon a comprehensive examination at the close of the secondary school year. Note is taken also of the student's growth through observation techniques, oral tests and practical examinations. There is no national school leaving examination in England and Wales. Control over examinations is exercised by "Schools' Council for Curriculum and Examination" to ensure national comparability. There are no compulsory subjects. Candidates may take as many as they wish. There are about 80 subjects to choose from at the O-Level of the General Certificate Examination and about 60

cational attainment of the pupil should be increased.

The Teacher Abroad

The American teacher recognises his unique leadership role and responsibility to promote an educational community which reflects values and principles contributive to improving the quality of education. He works in a team spirit, keeps an open mind, receptive and experimental, and looks upon his work as a great intellectual and social adventure.

Even so, the teachers of West Germany, the U.K., Japan and Singapore seek to win the love and confidence of their

STRONG VOCATIONAL BIAS

syllabus, curricula, text-books or the detailed organisation of any school. Only one subject, religious instruction, is compulsory under the law and it is subject to safeguards concerning parents' wishes and denominational rights. Teachers generally enjoy very wide limits of freedom in what shall be taught and it shall be taught. But the work of the training colleges for teachers and the professional associations, the formal and informal contacts of Her Majesty's Inspectorate of schools and the advice put out by the Ministry in circulars and booklets all have a unifying influence while at the same time stimulating the spread of progressive and innovative ideas. Educational (i.e., prefectural and municipal), education authorities whose main responsibility is for the operation and support of public elementary and secondary education. Every school organises its own curricula in accordance with the Ministry's course of study with due consideration for community characteristics and the pupils' stage of development and experience. The above is only a very brief review of the educational systems and I cannot possibly make it a bit more elaborate in view of the limited space available. However, the fact is revealed that by and large education is the responsibility of the State and the local programmes and practices adopted by the United States or West Germany or Japan give a strong vocational bias to secondary education. In the United States the comprehensive schools offer special courses apart from the academic such as vocational, vocational-technical, technical, commercial, etc. In Japan the Upper Secondary course is classified into several categories according to the pattern of curriculum : general, technical, commercial, domestic arts and others. In West Germany too vocational education has attained considerable significance and one of the vocational schools which we visited in West Berlin was most interesting for the varied courses

GREAT RESPECT FOR TEACHER

ing situations and sustain the interest of students. The Hon'ble Minister and I had an opportunity to visit a T.V. Studio equipped with all the sophisticated gadgets that modern science can offer in a Teacher's Training College in Singapore. The programmes put out on a closed circuit by the studio for the benefit of the schools around the college were reported to be most enthusiastically received by the children who obviously found them exciting and instructive. subjects to choose from at the A-Level of the General Certificate Examination. In West Germany schools conduct their own examinations and award grades. For joining the University one should receive the *Abitur* with the required grades at least in five subjects obtained in one sitting. In Japan common examinations are held simultaneously for all candidates of Upper Secondary Schools. In the light of what I have observed I feel that there should be no further delay in our bringing about some needed reform in our examination system. Our external examination should be made less formal and its validity as a measure of the total edu-

As regards examinations it is to be noted that in the United States there is no uniform programme of teaching for the entire country. Promotion is based

wards and establish their prestige on sincerity, integrity, hard work and a sympathetic handling of their problems. All these teachers believe in continual professional growth and do not therefore hesitate to avail themselves of the opportunities given to them to refresh their knowledge, and update their techniques of instruction through in-service education programmes.

The teacher training programmes of the United States are based on the concept that all children deserve excellent teachers and all teachers need an equally high level of preparation to develop the necessary qualities to educate their nations's youth. Dr.

Francis Shoemaker, the Director of the Teachers' College of Columbia University tells that the teacher is at once a planner, an innovator, a culture-bearer, and a prophet whose love of children, faith in his vocation, personal devotion and commitment are as indispensable as courage in all difficult situations, intellectual curiosity, critical thinking, tolerance, enthusiasm and a sense of humour. These observations are worth remembering indeed.

New horizons

There is so much to write. But in a short article like this it is not possible to pack in more details. The impressions that I have gained with respect to education during my recent foreign tour have been outlined above in a general way. I hope to be able to write more in subsequent articles. Need I say that I have professionally gained a lot as a result of this—gained in knowledge, experience and understanding of the new horizons in the educational scenes of other countries, the new directions that are given to quality education there and the new images of the future that are being envisioned by those who do and dare. As an educational administrator, I am more conscious than ever before of the urgency with which the task of restructuring our educational programmes on innovative and imaginative lines has to be fulfilled. *

INDUSTRIAL LICENSING IN THE DISTRICT

District Level Committees set up to eliminate delays

With a view to give a greater impetus and make suggestions for the development of Small Scale Industries in this State, the Government have constituted District Level Committees in each district, under the Chairmanship of the District Collector. The Committee consists of the following members :—

1. District Collector—Chairman.
2. Assistant Director of Industries and Commerce—Member—Convener.
3. Personal Assistant to the Collector (P.D.)—Member.
4. District Health Officer—Member.
5. Inspector of Factories of the district—Member.
6. Superintending Engineer (Electricity) of the district—Member.
7. Two representatives of the District Small Industries Association—Members.
8. One M.L.A. and one M.P. from the district to be nominated by the Government—Members.

This Committee would spot out delays in the issue of approvals and licences by the various authorities in the district in connection with the establishment of Small Scale Industries and eliminate them promptly. The Committee will also co-ordinate the activities of the various Departments so as to assist in the prompt disposal of applications. The Personal Assistant to the Collector (P.D.) would be closely associated with this Committee so that he could expedite the clearance of the applications by the panchayats. The main function of the Committee is to spot out delays in the issue of approvals and licences, such as licences under the Factories Act, panchayat licence, electricity power supply, etc., by the concerned authorities and to eliminate the delays promptly. It will be the responsibility of each of the District Departmental Officers, with whom an application has been pending for over two weeks, to bring it to the notice of the Committee with proper explanation for the delay. The affected parties may also write to the Chairman of the Committee directly bringing cases of delay to his notice.

SECONDARY EDUCATION IN U.S.

The word "Secondary" is used in contradistinction to "primary" in England and "elementary" in the United States to describe a stage in education beyond an elementary standard.

The term "secondary" was popularized by Matthew Arnold, who adopted it from French educational nomenclature to indicate that grade of general education which lies between the elementary or preparatory school and the university. His repeated cry, "Organise your secondary education," marks the beginning of a movement which led to the appointment in 1894 of the Bryce Commission on secondary education and the Act of 1902, in England. So far as the U.S. is concerned, between 1890 and 1960 more than a dozen committees or commissions representing influential educational organisations of national scope formulated the purposes of secondary education. The doctrine became widely accepted that the maintenance and enrichment of the democratic social order demanded that the high schools admit, and retain as long as possible, all the pupils from the elementary schools. This in turn required the schools to determine the educational needs of the students and of society. The statement of these needs involved the specification of a set of desirable behaviours (e.g.,

understandings, attitudes, appreciations, skills) and also the aspects of living (e.g., citizenship, family, health, work, leisure) in which the behaviours should be exhibited. The following is a typical statement of this kind : "All youth need to understand the significance of the family for the individual and society and the conditions conducive to successful family life". Efforts to compile and disseminate such statements of needs or objectives were fruitful in stimulating and guiding not only the determination of educational policy but also curricular reforms.

Curriculum

The organisation of learning experiences into "subjects" of which American literature, algebra and history are typical examples, was a characteristic feature of the curriculum of the first high schools. In an effort to adapt the curriculum to a wider range of individual differences in interest and ability, the traditional subjects were gradually changed in content and internal organisation ; many new subjects were also introduced.

Steps toward standardization were likewise taken. As a result subjects were usually planned in terms of a year or half year of instruction in periods of 40 to 60 minutes per day. Students who complete a subject satis-

factorily are granted one unit of credit. Upon completion of a specified number of properly chosen units (15 or 16 in a four-year school) they receive a diploma. Some work in certain subjects including English, United States history, mathematics, science and physical education, is commonly required, but roughly half the student's programme may be elective. Foreign languages, fine and practical arts, shorthand, typing, psychology, automobile driving and many other subjects are offered as electives in the larger schools.

In the comprehensive high schools, however, the social studies, the fine arts and the vocational subjects had grown in relative importance largely at the expense of the foreign languages and mathematics. Moreover, courses in problems related to family living and personal adjustment were introduced and grew in popularity. Work-experience programmes, involving part-time employment arranged by the school with provision for correlated instruction and supervision, were established in some schools.

Guidance and Related Problems

Modern secondary schools recognize that students often need considerable guidance in selecting their courses, in choosing a vocation and in otherwise adjusting their personal lives. Problems of these kinds are aggravated by diversified curriculum, by changing social conditions affecting opportunities for employment and by changing relationships with other persons,

LOOKING AFTER PLANTATION LABOUR

The Plantation Labour Act, 1951 applies to all Coffee, Tea, Rubber, Cinchona and Cardamom Plantations of 10-117 hectares (25 acres or more in acre) and on which 30 or more persons are employed or were employed on any day of the preceding 12 months. The Act regulates the working conditions of workers in plantations and provides for the provision of drinking water, adequate medical facilities,

housing accommodation, recreation and educational facilities, etc., to the workers.

Three hundred and four plantations covering 89,492.23 hectares and employing 72,386 workers, came under the scope of the Act during the year 1968. The provisions of the Act are enforced by the Commissioner of Labour who is assisted by the Chief Inspector of Plantations,

Madras and five Inspectors of Plantations. All these plantations were inspected by the plantation Inspectors during the year.

Housing Accommodation

Planters provided 30,022 houses (new constructions and renovations) conforming to the prescribed standards, up to the end of the year under report; Planters have yet to provide 3,668 houses, for the resident workers.

During the year under report, plans relating to the constructions of labour quarters were received from 12 planters and approved by the Chief Inspector of Plantations.

(Edn. in U.S.—Contd.) particularly parents, that occur, in adolescence. The larger schools therefore employ specially trained personnel to gather data about individual students, to give counsel and to co-ordinate similar less formal efforts by all teachers. Often tests to determine both general ability and special aptitudes are administered. Extensive records of achievements and summaries of personal characteristics are kept on file. Time for guidance is made available, and sometimes consultants from outside the school are invited to assist students and teachers on special problems.

The articulation of secondary schools with the elementary schools and colleges was greatly facilitated by testing programmes sponsored and administered by the institutions on the higher level. The transmission of rele-

vant data about students from the lower to the higher levels was also improved. As a result of parties like these the guidance of students in the selection of high school and college work became more effective. Concern for students with serious disabilities, such as low achievement in reading rate and comprehension or inadequate skill in arithmetic computation, led to the provision of special classes for these students in the high schools.

Problem of drop-outs

Educational leaders also became concerned by the fact that many students leave school before they are graduated. Research showed that, while the necessity of contributing to family income and maladjustment of curriculum and student are two important causes, they are not the only

ones. Attention was focussed on the out-of-pocket costs of attending high school. Class dues, tickets, special equipment such as band instruments and various other types of incidental expenses often add up to considerable sums. The inability to meet these expenses doubtless leads many students to withdraw from school at a stage where they could still profit educationally.

Many observers of the educational scene expressed the opinion that the changes in the secondary schools during the 20th century resulted in a lowering of standards and an unwarranted neglect of the ablest students. There was little doubt, however, that the educational level of the nation as a whole had been raised appreciably by the improvement and the popularity of the secondary schools.

TAMIL NADU MARCHES AHEAD IN FOOD PRODUCTION.

	Lakhs of Tonnes
1950-51 (Preplan Period)	31.63
1955-56 (First Plan)	45.45
1960-61 (Second Plan)	53.13
1965-66 (Third Plan)	50.60
1969-70 (Final Forecast)	63.00
1970-71 (IV Plan anticipated)	67.00

Tamil Nadu aims to produce 67 lakhs of Tonnes of Food grains during 1970-71 with the extension of area under High Yielding Varieties and increased use of Chemical Fertilisers as below:

1. Anticipated (gross) area under food crops	132.90 lakhs of acres.
2. Area proposed under High Yielding Varieties	40.45 lakhs of acres.
3. Anticipated consumption of chemical fertilisers.	1.80 lakhs of Tonnes.
Nitrogen—N	0.60 " " "
Phosphoric Acid P.	0.50 " " "
Potash K.	47.00 lakhs of acres
4. Plant Protection (Food Crops)	8.30 " " "
(i) Aerial spraying	28.7 " " "
(ii) Plant Protection by other means.	

PICTURE PAGES

Opposite Page :

Nehru Birthday Celebrations in Madras on 14th November 1970.

(1 and 3) Children's Rally at Nehru Stadium. Chief Minister Thiru M. Karunanidhi, is seen acknowledging the greetings of a vast throng of Children at Nehru Stadium.

(2 and 7) The Education Minister, Thiru V. R. Nedunchezhiyan, inaugurated the Children's Books Exhibition at Rajaji Hall.

(4) Shows music concert of Music Director Thiru Viswanathan's Party, Thiru T.M. Soundararajan, Thirumathy P. Susila are seen singing.

(5) Depicting a scene from the play 'Venpura' enacted by the poet Kannadasan.

(6) The Poets' Symposium in Session.

(8) Chief Minister is addressing the All Party Public Meeting at University Centenary Hall.

Last Page :

(1) Minister for Backward Classes Thiru N.V. Natarajan distributes enriched bread to Children of the slum areas.

(2) Chief Minister Thiru M. Karunanidhi, opening the Municipal Maternity Hospital at Mettur.

(3) Mr. Derrick Hughes, Regional Representative of the British Council in South India called on the Tamil Nadu Education Minister, Thiru V. R. Nedunchezhiyan, on 11th November 1970, at the Guest House.

(4) The Public Works Minister, Thiru S.J. Sadiq Pasha, opened the new bridge across the Ongur River on the Marakkanam-Choonampedu High Road.

(5) An Agriculture and Harijan Welfare Seminar was held at Salem on 5th November 1970. The Minister for Religious Endowments Thiru K.V. Subbiah, presenting a rolling shield to the best Harijan Welfare School in Salem district.

(6) The Chief Minister distributed 15,000 house-site and land pattas at Sathyamangalam in Coimbatore District. A Nomadic Professional bard was also given patta for a settled life.

(7) The Chief Minister inaugurated the All India Co-operatives week on 9th November 1970 at the Tamil Nadu Co-operative Union Building in Madras. The Minister for Co-operation presented a copy of the Co-operation Journal Special Number to the Chief Minister.

(8) The Minister for Public Works, Thiru S.J. Sadiq Pasha, inaugurated the Palar Drinking Water Extension Scheme on 8th November 1970 at Tambaram.

(9) The Chief Minister opened the Government Arignar Anna Arts College at Namakkal.

(10) Mr. Ladislaus Von Hoffmann, Vice-President, International Finance Corporation met the Tamil Nadu Industries Minister Thiru S. Madhavan at his Chambers on 13th November 1970.

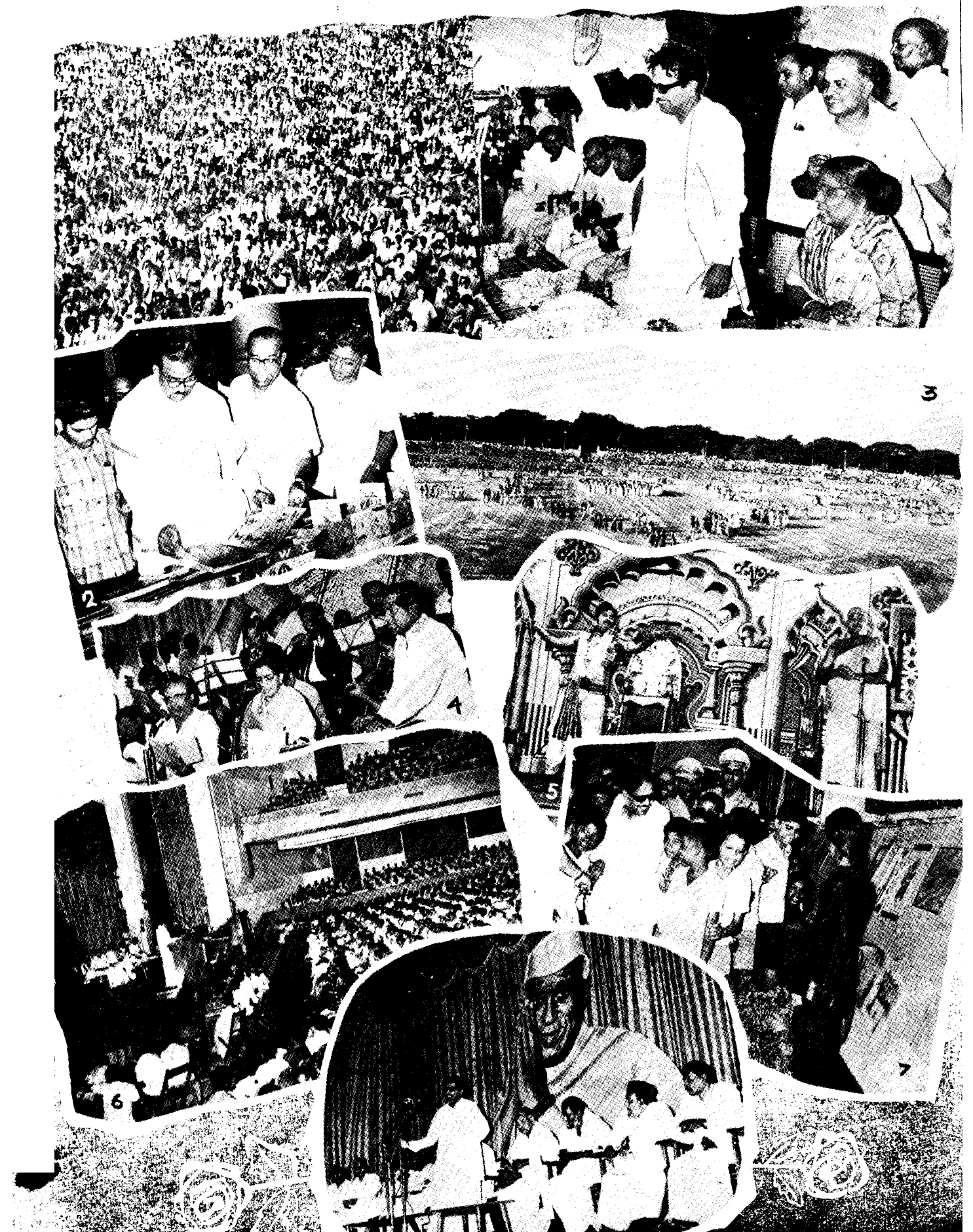
THE PANDYA SCULPTURES OF TENKASI.

The sculptures reproduced in the Centre-spread are to be found in Sri Kasi Viswanathaswami Temple, Tenkasi.

Among the large and famous temples of Tamil Nadu, the Kasiviswanathaswami temple at Tenkasi holds a pre-eminent position. The interesting inscriptions found in the temple speak volume about the valour and piety of Parakrama Pandya, the outstanding Pandya King who built this temple. He along with his brother Kulasekhara ruled over the region from 1422 to 146 A.D. with Tenkasi as head quarters.

The Gopuram, an imposing structure, was one of the tallest in Tamil Nadu. It was built on a huge platform about six feet high from ground level. The Gopuram was built of stone, up to the first lintel about 38 feet in height and the rest in brick and mortar, the top of the tower reaching a height of 180 feet. This tower was ruined by a fire during the beginning of the nineteenth century. The four top-most storeys had been completely annihilated by fire and the truncated tower now presents a sad spectacle. Efforts are however being taken to rebuild the tower.

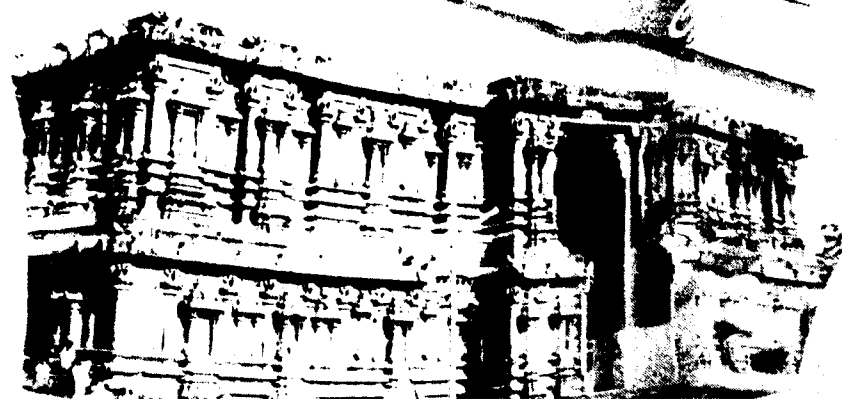
The Pandyas brought a different but important shift in emphasis in Temple architecture. Pandyan art in general is seen as an attempt to produce a more elegant effect by an increase of decorative detail which may be taken to mark the transition from the restrained maturity of Chola architecture to the "exquisite though extravagant productions of the Vijayanagar".



99062



10
101100 1010.10





A lodged field is as bad as losing food from the mouth

I.A.D.P SOLVES HIS PROBLEM BY ADAPTIVE RESEARCH

The Thanjavur Intensive Agriculture Programme has armed itself with a new method of research for intensification of agricultural progress in the District. By widening the theatre of research beyond the fences of research stations, the time lag in research has been drastically cut down by the method of Adaptive research in the farmers' holdings.

In the first decade of the intensive programme, 1960-70, the introduction of ADT-27 and the double cropping programme were the two break-through points which set the pace of paddy production, to a new level. ADT-27, a cross between an Indica and a Japonica, improved the per acre production of the first crop season, and the double cropping programme brought in more area by conversion of single crop

lands to double crop pattern without any extra expenditure to the Government. After these achievements towards the end of the decade, the development more or less seemed to head for a lull.

In the wake of the spread of ADT-27 to nearly the entire first crop area, the risk of lodging came to light as a severe threat to maximising its yield. The North-East Monsoon setting by October, lashes down the maturing ADT-27 crop. The crop lodges and grains germinate from the submerged crop. Especially in years when the release of water from Mettur Dam is delayed, this threat is very considerable. Since delayed release has become more or less a normal feature, the maturing crop in the tail-end areas of the delta as well as the upper areas get caught under

the heavy downpour of the rains. It is a sad plight that the farmers are to witness helplessly their crops being flattened and getting spoiled.

Measure up to the Problem

The I.A.D.P. was well aware of this problem as well as the panacea. It was a question of getting a strain of non-lodging trait. In 1969, I.R.-8 was promoted and this admirably withstood the onslaught of the monsoon. Its duration being 135 days, it did not fit in exactly the first crop season of just 100 to 110 days, and the succeeding second crop of paddy could not be raised in time and harvested early before the stoppage of water in the channels. However, the ryots having some supplementary irrigation facilities like filter-points tube-well or other sources,



Not good enough

were persuaded to raise IR-8 early and have the second crop also in time. Nearly a lakh of acres has the prospects for IR-8 and the rest nearly 4 lakh acres cultivated only on receipt of water in the channels has to be content with ADT-27 with its attendant problems.

The concern of the I.A.D.P. was at the beginning of 1969 to get a non-lodging strain of short duration to fit the first crop season. Normally, the procedure is to bring to the notice of the research wings, of the problem and wait for their recommendations. But the time lag inherent in laying the entire thing to research personnel alone, is rather repugnant to the I.A.D.P.

I.A.D.P. in 1969, took the initiative of asking all the research institutions in the country to suggest strains for the peculiar situation of Thanjavur. The Paddy Specialist, Coimbatore, the A.I.C.R.I.P., Hyderabad, and the C.R.R.I., Cuttack were already breeding short duration, short statured strains by crossing with IR-8 and TN-1 and they suggested some promising cultures.

As a result of discussion with Specialists stationed at Aduthurai some four cultures were selected for large scale trial all over the district for the study of their performance under all agro-climatic zones along with ADT 27.

In addition, the productive efficiency was also sought to be gauged by undertaking the trials under two levels of fertiliser schedules—one as recommended for ADT-27 and another as for IR-8.

I.A.D.P. trained its extension men in laying the plots and conducting the trials according to the research standard. Farmers were chosen and 120 sites were selected in all the Development blocks of the district. The trials were soon laid, vigorous supervision was ensured and by the fall of 1969, results started pouring in. The results were then pooled and statistically analysed. In addition, farmer's opinions were solicited in six divisional seminars—as to their preferences.

The statistical enquiry as well as the farmer's verdict clearly pointed out the superiority of the culture 11321—a cross between ADT-27 and IR-8. Thereafter, this

culture was approved as a strain—Co. 33 and popularly named as 'Karuna'. This venture first of its kind in India has thrown open the possibility of broad-basing the conventional research to speed up the entire process of research in as short a time as possible to meet the rising aspirations of the farmers. Hurry no doubt is pregnant with the danger of over-looking certain other factors, but spreading the trials over a vast area and conducting the trials in a large number of localities, the risk is minimised, if not eliminated. Especially in the light of special programmes of research bringing out new strains every other day, there is a need to cope up with the trend and to quickly verify the performance of the strains and spearhead the spread of the ones selected. Gone are the days when a particular strain remained in the field for long as undisputed and probably, we may have a new strain every three years. In the fast-flow of events envisaged, it is only the adaptive research that can guide the Extension workers to pick up and spread the best strains.

The answer to the farmer's prayer



The Government of India have included a new Scheme in the Fourth Plan for the benefit of sub-marginal cultivators and agricultural labour. The scheme provides for programme for employment-oriented activities such as poultry, dairy-farming and agro-industries in order that sub-marginal cultivators and agricultural labour living on the verge of subsistence are effectively helped. The Government of India have provided Rs. 4.75 crores for the scheme during the Fourth Five-Year Plan. Thiru P. K. J. Menon, Programme Adviser, Planning Commission, had discussions with Chief Secretary

sub-marginal farmers. The guidelines for this scheme have been received from the Government of India only on 4th June 1970. The draft scheme communicated by the Government of India is being implemented with speed and vigour.

Need for a scheme

This scheme has been devised to assist the marginal farmers and landless agricultural labourers in view of the very high priority attached in the Fourth Plan to measures specifically designed to enable the weaker sections of rural population to benefit from the economic growth and development in the rural sector.

maximum exploitation of the agricultural potential in the area.

The scheme is intended to benefit—

(a) Landless agricultural labourers.

(b) Sub-marginal farmers having one acre or less of wet land or two acres and less of dry land ;

(c) Marginal farmers having one acre and up to two acres of wet land or from two acres and up to four acres of dry land.

Agricultural labourers will comprise of those having a homestead and earning 50 per cent or more of their income from agricultural wages.

Rs. TWO-CRORE SCHEME FOR THE ONE-ACRE FARMERS

on 27th April 1970. Thiru Menon had indicated during the discussions that the State Government are likely to get Central financial assistance to the tune of Rs. 2 crores under the scheme, and that 2 projects are likely to be allotted to Tamil Nadu under the Scheme. Based on these discussions, Government have taken a decision to implement the sub-marginal farmers scheme in the districts of North Arcot and Salem. It has been proposed that such of those farmers who own less than 2 acres of dry land or less than one acre of wet land could be considered as

The principal objective is to assist the sub-marginal cultivators in making the maximum productive use of their small holdings, by undertaking Horticulture, Animal keeping and Dairying, etc. The effort will be directed towards generating larger incomes by channelling credit, improved inputs and improved practices into these activities. These marginal farmers and specially the landless agriculturists will also be assisted with greater employment opportunities generated by such rural works, as may help in the

This project aims to cover about 20,000 families of all the three categories put together during the Fourth Plan period.

It is proposed to implement this project in four Community Development Blocks namely Chengam and Pudupalayam in North Arcot district and Valappadi and Pethanaickenpalayam Blocks in Salem district.

In North Arcot district these two blocks will be ideally suited for implementing the scheme for the following reasons :—

(1) In this area the percentage of marginal farmers and

the agricultural labourers as compared with the total rural population is quite high.

(2) Area is very much economically backward.

(3) There is maximum scope for implementing the schemes proposed under this project.

(4) Water table is fairly high and the underground springs are fairly copious for improving the irrigation facilities in order to increase the cropping efficiency. Further, the flow of the river Cheyyar through the Project area is helpful to recharge the springs in the wells and to feed a number of irrigation tanks.

(5) In view of the existence of the Javadi hills with good pasture, the project area is suitable for encouraging subsidiary occupations like cattle and sheep rearing.

The main objective of the scheme is to help landless agricultural labourers and farmers whose holdings are submarginal or marginal which cannot be considered as an economic unit in the four blocks of the Salem and N.A. district. To increase the productivity and economic facilities like irrigation, subsidy on investments will be given. Similarly landless agricultural labourers will also be helped by providing off-season work, Small backyard poultry units, etc. Special schemes to give them work during off-season are also contemplated in the project. (Source: Collector's Reports.)

IADP MOVES FROM SUCCESS TO SUCCESS

Having had the success in the maiden attempt of adaptive research in 1969, the I.A.D.P., proposed at the beginning of this year to undertake a similar programme for selecting a suitable strain for the second crop season. A strain to succeed Karuna in the second crop season has to be necessarily a medium duration strain with special traits of disease resistance and high productive efficiency. In fact, the overall per acre production of paddy in Thanjavur is year-in and year-out brought down by the poor performance of the second crop. A further break-through can be had only by a strain capable of giving yield on par with the first crop without much pests and disease attacks.

Now, there is a major adaptive research programme, in 120 locations and Mashuri IR. 20 and culture 11803 are being tried along with pankaj, to select a suitable medium duration high yielding strain for Thaladi. In the State Seed Farms simultaneously IR-20, IR-22, C-4-63 and Jaya, are being tried. Apart from this massive second crop trial programme, for samba, culture 11803, is being compared with Co. 25 and for Kuruvai also CR-1-6, IET-849, IET-400, culture

5652 are being compared with Karuna to test their performance in 12-13 locations.

For the first time, the problem of the semi-dry tract of Arantangi area has also been taken up and Pusa 2-21 CR-42-38, culture 7711 are being tried against Co-31 the strains recommended for this area.

In addition, in the field of plant protection also, the granular application of pesticides to control insect-pests is being taken up for the first time under the adaptive research programme. The various research institutes have found out the efficiency of applying pesticides in irrigation water as granules. Now, this has got to be verified and confirmed for Thanjavur and trials are being laid out in all divisions along with spraying practices.

Adaptive Research thus has become a programme of the I.A.D.P. with a view to give a push to the various research programmes and to verify the efficiency or otherwise of the new findings for Thanjavur District. This is a voluntary additional task taken upon itself and the potentiality is rather immense. (Source: I.A.D.P., Thanjavur.)

TEA PROCESSING

A breakthrough

Thanks to a breakthrough in tea leave processing achieved by two inventors of Tamil Nadu, the taste of tea will be better than ever before. The invention of a Tea Fermenting Drum, imparts superior flavour and colour to the product and improves its decantation properties. Thiru K. C. Krishnaswamy and Thiru C. Hariprasad, the inventors, have bagged the highest award of Rs. 10,000 given by the Inventions Promotion Board for the first time since its inception in 1960.

Tea is India's largest plantation industry and accounts for almost half of our foreign exchange earnings by way of exports.

The commonly used black tea is processed in factories from green leaves plucked from tea plants. There are four distinct processes through which the green leaves pass before black tea is obtained—withering, twisting, fermentation and drying. Withering is intended to take away moisture and thus condition the leaves to become less brittle and easy to roll and twist when passed under special machines. The withered and twisted leaves are called *Tea Dhool*. These operations are preparatory to the most important process of fermentation, which makes the leaves capable of yielding a well flavoured and desirably astringent beverage liked by most of us.

As in other processing industries, the trend in tea industry over the past many years has been towards automation, which necessarily means a change over from batch processing to continuous processing. Though improved techniques for other phases of tea manufacture have been introduced, no significant change could be effected in the method of fermentation. The conventional static process of fermentation consists of spreading the *Tea Dhool* on the floor in thin layers and allowing it to ferment under humid and cool atmosphere. This process does not allow uniform aeration and fermentation of the *Tea Dhool*.

Fermentation is a delicate operation. A slightly over fermented or under-fermented tea will have no comparison in value with a properly fermented tea, the price difference between the two varying by as much as 50—75 per cent. Effecting automation in fermentation, therefore, required careful attention and much thought.

The invention of Thiru Krishnaswami and Thiru Hariprasad developed after prolonged experimentation, is an *enclosed rotating drum with facilities for supply of air and oxygen* under controlled temperature and humidity. The very idea of imparting agitation to the *Tea Dhool* during fermentation was earlier considered harmful, tending to destroy the flavour of the finished product.

The inventors were confronted with considerable resistance and faced the prospect of unacceptability of their invention among the tea processing plants. But inventors cannot afford to be timid. Perseverance is the hallmark of success in such endeavours. Things began to change for the better when a lone planter came forward to give the technique a try: He got a good price for the tea processed by the new method, and the off-take was also high.

This method of dynamic fermentation of *Tea Dhool* in a steady stream of fresh, heated, cooled or moist air allows better aeration and also extracts the heat developed during the process resulting in improved quality of tea. Simple in construction and easy to operate and maintain the new device has made the fermentation process efficient, economical, speedier and hygienic. It saves 15—20 per cent of the time normally required for fermentation.

The process is versatile in that it can be adjusted to produce from blacker or gritty teas to brown or flaky teas. It also permits reconditioning of certain kinds of low quality brown dust into better grades of tea.

Manufactured by Messrs. Walker and Greig, Madras-18, today over 44 units of the fermenting drums are in operation in

(Contd. on page 34)



DISPLAYED ABROAD TO TEMPT FOREIGN BUYERS

SERVICING THE SMALL INDUSTRIES

The small industries Service Institute, Madras, has jurisdiction over the entire State of Tamil Nadu and the Union Territory of Pondicherry. Under its control, there are Extension Centres at Coimbatore, Madurai, Erode and Pondicherry.

The Small Industries Service Institute renders direct technical advice for setting up new small enterprises, on choice of machinery, design, fabrication, layout installation and operation of plant

and machinery. Designs and drawings for production equipment and accessories and assistance in improving the production processes are also provided. This Institute provides technical guidance on the efficient use of raw materials and utilisation of substitutes, salvages and scraps. Technical assistance is given in design and development of new products and bye-products, standardization and simplification of designs of existing products and also in the development of ancillary enterprises.

The Central Workshop at Madras and the Extension Centres provide servicing facilities to small scale units in the State. In the workshops attached to the Institute in Madras, there are facilities for pattern making, general engineering jobs, for physical and chemical testing of metals and for carrying out experiments in ceramics, glass blowing, etc. The Extension Centre at Coimbatore assists small scale foundry units by demonstration of foundry techniques. The Centre also helps small scale units in the design and development of electric motors. The Extension Centre at Madurai has a general engineering workshop where tool room facilities are available. The centre has also

ENCOURAGING EXPORTS

A Pioneering attempt was made by the Tamil Nadu Government in encouraging exports outside by participating in the International Trade Fair held at Sydney during October 1969. The Department of Industries took a stall measuring 30 sq. mtrs. The pattern of participation was that in addition to the products from the Departmental Handicrafts Emporium, products from private small scale industries were also given space in the Pavilion for display. A number of private units had participated through the Department of Industries. The Government of Tamil Nadu subsidised the cost of transport as well as charges for accommodation for the products of the participating units.

The response to the products of the Department as well as those of the private industries products from Tamil Nadu were encouraging and a large number of enquiries and orders were received. A representative of the Industries Department was also deputed for this Fair.

Following up this participation, the Government of Tamil Nadu, through the Industries Department, have subsequently taken part in the following Trade Fairs:—

- (1) Expo. '70 in Japan.

- (2) International Trade Fairs at Leipzig and Frankfurt.

- (3) Indian Exhibition at Singapore and Kuala Lumpur.

Whereas for the Expo. '70 as well as for the Indian Exhibition at Singapore and Kuala Lumpur, Departmental Handicraft products were sent, for the Fairs at Frankfurt and Leipzig, products from a number of Small Scale Industries in Tamil Nadu were also sent under the aegis of the Government of Tamil Nadu. The following Units have participated in the Fairs:—

- Messrs. Instruments & Apparatus (P) Limited, Madras-2.
- Messrs. M.R. Electronics.
- Messrs. L.G.B. Bros. (P) Limited, Coimbatore.
- Messrs. National Electricals, Madras.
- Messrs. Concord Arai (P) Limited, Madras.
- Messrs. Fruitnik Delican (P) Limited, Madras.
- Messrs. Tamil Nadu Food Processing Unit, Madras.

There were considerable trade enquiries for the products of these units and it is expected that as a result of this participation, the export from this State will receive an encouraging boost.

← Photo of Tamil Nadu pavilion in the international fair.

an electroplating section. The Extension Centre at Erode assists the leather tanning industry in finishing light and heavy leathers. Job orders are also undertaken by the Centre. The Extension Centre at Pondicherry has also a general engineering workshop to assist the local small scale units.

In addition, there are four mobile workshops, two for carpentry, one for blacksmithy and one for glass. These mobile workshops, as peripatetic training units, assist artisans in rural areas in adopting the new techniques for improving their skill and productivity.

Training Facilities

The Institute also conducts an Industrial Management Appreciation Course and Special Courses in Production Management, Financial Management, Marketing Management, Export Marketing, Cost Control, etc., with the assistance of guest speakers. Implant studies are also conducted on specific requests by small industrialists.

(contd. from Page 31)

various tea factories. The company has recently shipped a drum to Uganda.

Made of semi-hard aluminium sheets, the drum occupies, 35 sq. metre floor area and stands four metres high. The cost per unit works out to about Rs. 30,000.

The adoption of this invention by tea factories is bound to give a fillip to the Indian tea industry and increase its foreign exchange earnings.

In the Institute and the Extension Centres, regular and adhoc training courses for the benefit of artisans and supervisory personnel in blueprint reading, machine shop practice, foundry, blacksmithy and forging, carpentry, lens grinding and electroplating are also conducted. Besides, courses for the manufacture of footwear, glassware, neon signs, scientific glass apparatus and ceramics are also offered.

The Economic Investigation Division of the Institute is engaged in studying the problems of small industries and prospects for developing new small industries in Tamil Nadu. This Division has conducted Industrial Potentiality Surveys of all the districts in the State, besides several other area surveys. These surveys indicate the prospects for new industries in the areas. This Division also collects relevant economic data from small scale and large-scale units, not only for answering queries regarding industrial development but also to increase the all-India fund of information regarding growth of small industries.

Sub-Contract Exchange

The Small Industries Service Institute, Madras, has recently set up a Sub-Contract Exchange. This Exchange serves as a storehouse of technical and other information relating to small-scale industries and serves to facilitate ancillary development by bringing into contact large scale units desire which to farm out components and parts to small units and the small scale units which seek to serve the requirements of large scale industrial establishments.

Since 1961, the Institute has handled over 42,000 cases of technical assistance. On an average over two thousand enquiries for starting new industries are attended to every year. Officers of the Institute pay visits to small-scale units to give them on-the-spot advice; such visits have been over 7,000 a year, during the past few years. The Institute has given management training to 2,000 entrepreneurs, and technical training to an equal number during the past five years. During the current year, the workshop and extension centres have done over 7,000 jobs for various small industries. The Institute has been supplying technical schemes, design and drawings and other specialised literature for small-scale entrepreneurs.

A Guide and Friend

In short, the Institute's function is to take up any technical work which might lead to the strengthening of the existing small-scale industries in Tamil Nadu and for promoting new ones in the State. Whether it is suggesting industries for Rural Industries Programme, or export information to small Industries or by way of giving technical reports on small-scale industries to the banks or to the Invention Promotion Board or to other organisations, the various divisions of the Institute endeavour to function as a guide, philosopher and friend to small entrepreneurs in Tamil Nadu. Periodically the Institute is also organising conferences known as "Open House Discussions" in respect of various industries and regarding specific technical problems of industries. In these conferences, suggestions are given for solving the existing problems of the entrepreneurs and for assisting them in future.

(Contd. from page 13)

ornamental plants. The one acre swampy land in front of the park was completely drained and an attractive sunken garden was laid.

Seed Collection Centre. Observational studies revealed that Kodaikanal is an ideal place for the collection of seeds of almost all annuals. It was also found that plants like cyclamen, Begonia, cineraria, ranunculus, etc., which are considered typical glass house plants elsewhere in India are doing well in the open.

Studies on keeping the quality of cut flowers with and without the aid of chemicals, studies on the response of soilless culture on ornamental plants as well as propagational studies are underway. This park is also responsible for the formation of the

Kodaikanal Agri-Horticultural Society in 1963 which holds an Annual Flower Show in May every year. An annual expenditure of Rs. 45,500 is being incurred to maintain this park.

The park is now concentrating on cut flower export trade. A programme for raising long-stalked cut flowers of Agapanthus, Arum lily, Watsonia, Red hot poker, day lily, Delphinium and selected rose varieties has already been taken up for export trade through the State Trading Corporation. A consignment of the above flowers sent in April to the Ghent flower show at Brussels was received favourably.

From the modest beginnings, the Bryant Park has now grown into a major project of many-sided importance.

A view of the Bryant Park



(Contd. from page 13)

Aside from the efforts of individual undertakings, the Ministry of Petroleum and Chemicals has undertaken a co-ordinated effort to accelerate the setting up of ancillary industries in the 14 public sector undertakings under it. The Ministry of Petroleum and Chemicals convened a meeting of Heads of Public Sector Undertakings in October 1970 and the undertakings were asked to expedite their programme for setting up of ancillary industries.

Aside from the ancillary industries, the Ministry of Petroleum and Chemicals is also actively encouraging the setting up of small-scale industries in the Plastic Processing Industry; in Pesticides formulation which so far has been confined mainly to DDT, BHC, Endrin, Aldrin, etc., and in drugs and dyestuffs where small scale industry will need to get the raw materials at reasonable prices and they would have to have direct quality control and have a more efficient retailing of their product.

To conclude, I have shown that the setting up of ancillary industries could help to solve one of our immediate and pressing problems, namely, that of unemployment and it is necessary that every entrepreneur looks at this problem in a correct perspective. As I have pointed out, with the rapid growth of India's population, the problem of unemployment will increase and it will be necessary for the Government and the enlightened industrial community to gear up the machinery to provide employment opportunities to our fellow countrymen. I wish you to bear this thought in mind when you go around the stalls of this Exhibition and with these words, I declare the exhibition open."

CATERING takes care of NUTRITION

When it comes, to eating out, everyone has a nostalgic memory of a small place where the cook, cashier, and manager were all rolled into a single person serving the delectable dishes. The small clientele would all sit around this single purveyor of edibles and eat to their heart's content, right from the sizzling pan. Everyone of this small coterie would long cherish the memory of those delectable eats. But soon as clients increased in number, discontent reared its head and led to a collapse of the establishment or sneaky commercialisation inexorably ending in sacrifice of quality, service and other virtues. A homely trade has grown into a business of huge dimensions without the virtues of all that we used to hold dear in those charming little eating places of yester years. Without any conscious effort those purveyors to the limited clientele were giving us the benefit of the highest form of catering service.

That service could not be transferred to the Leviathan that the industry has grown into. The other alternative is to put that homely service in the form of technology into the Leviathan! This spells the need for a separate institution to train personnel for the catering industry.

The challenge

The change-over is a challenge to those who deal with food preparation and service which is called the catering trade. Technical training in catering industry in its various fields is now accepted as the only method by which the people involved in this trade can acquire the required skills needed by this important segment of industry.

Under the present systems of mass

production and mass distribution, the nutritional aspect seems to have been completely ignored. This had been mainly due to lack of adequate knowledge in the field of Nutrition by those who are associated with the Trade, insufficient time, keen competition among the units, improper and faulty management practices and techniques, ignorance about purchasing, storing and bad accounting methods.

A class in progress



Vast research has already gone into the nutritive value of our foods and the peculiar niceties of our food preparation methods which either destroy or add to the nutritive content of our foods. The urgent need is also felt to bring this research to the kitchen of the housewife as also to the hotel kitchen. Happily, the Institute of Catering Technology in Madras not only trains personnel for hotels and canteens, but is also a training ground for applied nutrition. Four such institutes of Catering and Nutrition one each at Bombay, Calcutta, Madras and New Delhi, have been set up.

These institutes offer full-time courses in Hotel - Management, Cookery, Bakery and Confectionery Restaurant and Counter-Service, Hotel Reception and Book-keeping. There is also a course in Food Preservation and Canning extending for a period of one year. Both theoretical and practical training is provided to all the students in the various courses. Special courses for housewives are provided in Cookery, Bakery and Confectionery over a period of fifteen weeks.

Students who are admitted to the full time diploma course in Hotel Management get training in a variety of subjects such as Nutrition, First aid, Hygiene, Basic Science, Restaurant and Counter-Service, Book-keeping, Housecraft, Cookery and Catering Management. They are also given a course of lessons in French language!



A far-sighted Step

In order to prevent our existing catering establishments from becoming centres of food poisoning, the Corporation of Madras has incorporated a new bye-law in the Act governing the grant of licence to these establishments. The bye-law runs as follows: The amendments to the bye-laws (Corporation of Madras) also suggest that "If the local autho-

rity arrange for training of food handlers in food hygiene, it is obligatory on the part of the management of food establishments to send their employees for training to such institution for such period as may be prescribed by the Health Officer." In this connection, it is suggested that the Institute of Catering Technology at Madras may be entrusted with the responsibility of

organising condensed and short term courses for these personnel as they have the requisite facilities in this direction. There is also provision for organising "Elementary Management Course" of seventeen weeks' duration wherein subjects like Cookery and Bakery, Hygiene, Book - keeping, Nutrition, Management, Restaurant and Counter-

Service, Food Costing are included. Such a course will be highly useful to persons associated with industrial canteens, hospitals, Railways and other catering establishments. Just as we say public sector should be a model employer so too in this direction we expect public sector undertakings to take a lead and sponsor their candidates to get useful training in these fields instead of



House-wives are also trained

adopting the antiquated methods of trial and error."

Why such fuss about cooking which has come so naturally to mankind over the years and why teach it? A senior Lecturer in Nutrition in the Institute answers this succinctly: "After all what does cookery mean? It is the knowledge of all herbs, and fruits and spices and of all that is healing and sweet in grapes and savoury in meat. It means carefulness and inventiveness, watchfulness, willingness and readiness of appliances. It means in fine that you are to see imperatively that everyone has something nice and wholesome to EAT".

In the Technological Campus

Located in the sprawling technology campus of Madras in Adyar, the Institute of Catering Technology has been sponsored jointly by the Governments of India and of Tamil Nadu. It started functioning in 1963. The Institute is situated in a most congenial environment along with other Technological Institutes

like Central Polytechnic; Institute of Leather Technology, Institute of Chemical Technology, Institute of Commercial Practice, Women's Polytechnic, Institute of Film Technology, Mat-Science and Technical Teachers Training Institute in what is proudly called Technological Campus. The Government of Tamil

Nadu offered the site for the construction of the buildings free of cost and the Government of India have borne the entire Capital Expenditure on the buildings and the equipment. The Recurring Expenditure is borne equally by the State Government and Government of India.

A course for housewives

In response to the very great demand the institute started, a

part-time course for the housewives in Food Preservation from this year. The demand for Housewives courses has increased so much that the Institute had to admit two batches in Bakery and Confectionery in the second session of this year. The Harijan Welfare Departments of the State Governments of Tamil Nadu and Andhra Pradesh are sanctioning Scholarships to the Students of the Scheduled Castes, Scheduled Tribes and Backward Classes respectively. The Institute awards Merit-cum-Means scholarships to about 10 per cent of the students in each class, the value of the scholarship being Rs. 420 in the first year and Rs. 840 for the second and third years. The South Indian Hotels and Restaurants Association have been kind enough to Institute a scholarship of the value of Rs. 300 per annum to a deserving candidate with merit.

Pleasing Room decorations for hotels is also taught



Tudiyalur Co-operative Agricultural Service Society, in Coimbatore district of Tamil Nadu is an institution combining under the system of a single institution almost all the important services needed by the agricultural country. This Society was started in 1955 as a rural co-operative bank with 330 members and a share capital of Rs. 37,000. Since then it is continuously growing and has now 5,000 members with Rs. 7-50 lakhs share capital. Its area of operation covers 13 revenue villages and 56 hamlets. Nearly 25,000 hectares of garden land and about 4,000 hectares of dry land are served by it. The Society has loan fertiliser sections, a mixing section, a seed multiplication division, a complete pesticides unit with equipment, a cattle feed and poultry division and an agricultural machinery division. They cater not only to 5,000 members but also to those of other co-operatives in the district through a network of nearly 86 agent societies dealing in various products of this society.

Besides advancing medium and short-term loans, the institution deals in farm machinery of various kinds. It is also on rate contract agreement with the Tamil Nadu Government for small tractors and spare parts. A service station for repairing these units, specially the sprayers is being maintained. The World Organisation "CARE" had donated to this institution, tractors with complete range of equipment machines along with other workshop faci-

lities costing nearly Rs. 8 lakhs. These were for custom service to members.

The Society since its inception is handling the entire production of pesticides in the country. Under the licence, it is storing all heavy poisonous chemicals and is using them for the benefit of agriculturists. It has also been permitted by the State Government to sell chemicals at subsidised rates to agriculturists. After having gained considerable experience of distribution of pesticides and insecticides, etc. it decided to set up a unit for manufacturing pesticides and insecticides. The State Government

SALIENT FEATURES OF THE SUCCESSFUL TUDIYALUR CO-OPERATIVE SOCIETY

forwarded its proposal for approval and financial assistance to the National Co-operative Development Corporation. The proposal was sanctioned by the Corporation last year.

After having gained considerable experience in the distribution of Agricultural machinery, the Society has also decided to establish a workshop for fabrication of agricultural implements. It has sent a project proposal to the N.C.D.C. for financial assistance.

Apart from distribution of fertilisers, the Tudiyalur Co-operative is maintaining a pesticides division handling all the pesticides and effecting sales under subsidised rates under directive from the State Government. This is the only Co-operative institution in the State having a 'A' licence under the poisonous chemicals Act and handling pesticides to the tune of 3 to 4 lakhs of Rupees per annum for the benefit of its members. Supply of pesticides is supported by organised squads with spraying equipments for effecting complete coverage of pest control activities. It has 180 sprayers under the nominal hire system on a no profit no loss basis to give complete coverage for pesticides. Besides it has its own service station (a modern and up-to-date unit with able technicians) to undertake all repair functions of sprayers and equipments. Under agency terms with Indo-German Project, Bangalore, through Rallis India Ltd., it is handling sale of sprayers throughout the district for the benefit of the agricultural community. It has a modern cotton seed multiplication-cum-processing unit with 6 numbers of Gins for multiplication and processing of seed material for the State Agricultural Department. It undertakes seed multiplication work on 2,000 acres of member lands year after year by providing all the inputs, technical, know how, etc. Under agency rights it handles all hybrid seeds as agents of the National Seeds Corporation throughout the

State. It has established a modern cattle feed unit at a cost of Rs. 3 lakhs to prepare scientific cattle feed and poultry feed under the able management of a dairy specialist. Apart from the above, through its Agro Service Centre this institution is handling basic agricultural requirements like cement, hydrose, iron materials, agricultural tools and sundry materials needed for the day to day agricultural operations.

Under the CARE donated agricultural machinery rental scheme it owns for the present 5 Nos. of tractors with all equipments, trailers, 2 Nos. of rock blasting units, 3 Nos. of winnowing and thrashing machines, power winches, ably supported by a modern training-cum-repair workshop to handle all repairs of the vehicles of the institution besides attending to the repairs of the members units as well. A training programme covering

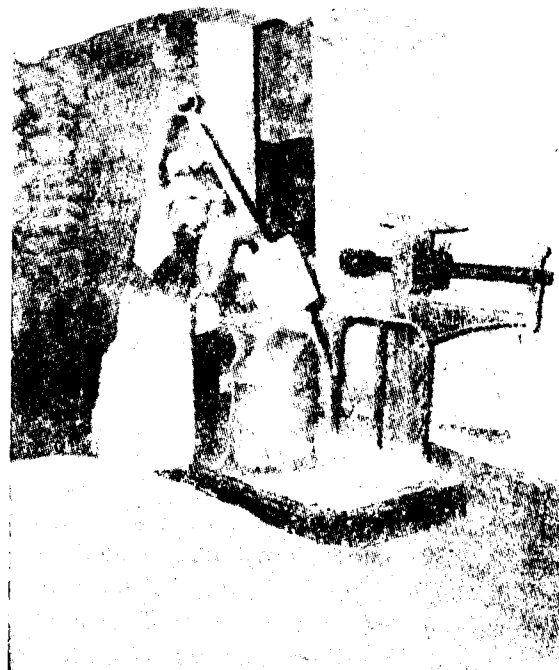


The CARE—assisted Farm Tools Centre.

six weeks is being imparted to intending farmers' sons to handle these machinery and also to drive the same under licence. The whole scheme costing Rs. 30

A massive Dairy Development Scheme and Poultry Development Scheme costing Rs. 6 lakhs per quarter is to be implemented.

lakhs. This again being the additional donation by 'Care' in view of the appreciable services to the agricultural community by way of mechanisation of farming operations. The entire project is ably handled by an Agricultural Engineer.



With best compliments from

**UNITED INDIA FLOUR MILLS
PRIVATE LTD.**

1/4, Suryanarayana Chetty Street
MADRAS-81

⊙

Manufacturers of Superior Quality

'Gopuram Brand' MAIDA and SUJI
AND
'Ship Brand' ATTA and BRAN

Phone { 52670
52673

Tele.: "MONARCH"

An Agro Tools-cum-Machinery Insurance Scheme at a cost of one per cent of the cost of machinery is being implemented through this institution to give a complete coverage for farm machinery.

The Institution is putting up a pesticides formulation unit at a cost of Rs. 5 lakhs, for the benefit of the agricultural community of this district. An agro tools fabrication workshop and a vegetable processing-cum-canning industry is to be started immediately for the benefit of the members. A scheme for the establishment of a soil testing laboratory has been sent to National Co-operative Development Corpn. To summarise.

(1) This institution has 6,000 members—actual growers covering 20,000 acres of garden land, two crops an year, 6,000 acres under dry farming covering a population of 85,000 people in its area of operations.

(2) Its activities are spread over the entire district of Coim-

batore through other co-operatives serving as its agents—for manure, mixed fertilisers, agrotols and implements, sprayers, dusters, cattle feed, poultry feed, distribution of quality hybrid seeds, etc.

(3) It has within its fold a pesticides formulating plant, seed processing plant, an agro tools fabrication plant manufacturing sprayers, electric motors, pumpsets, tractor parts and the like scheme in the offing.

(4) It has the 'Care' machinery rental project serving the members with rentals of tractors, implements, rock blasting units, winnowing and threshing machines besides a modern workshop to repair the ryot's units and offering training facilities.

(5) It has its own rental scheme of pesticides spray units with a modern workshop to repair complete range of sprayers and equipments.

(6) It has undertaken Pumpset Insurance-cum-Servicing Scheme for the benefit of its members.

(7) It is formulating a Modern Dairy Scheme for the benefit of its members.

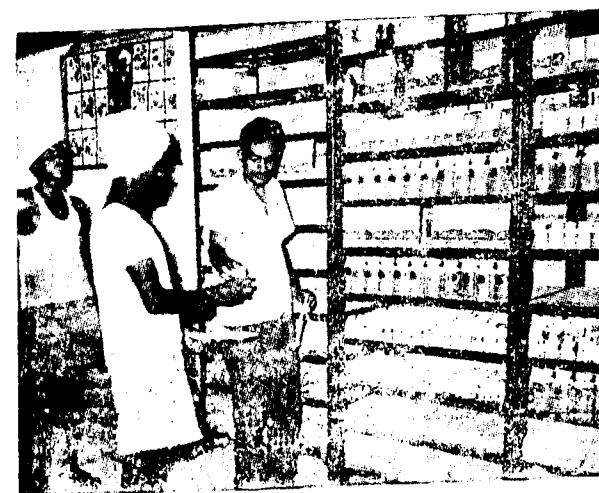
(8) It is financially viable and sound with a share capital of Rs. 5 lakhs, with a deposit of Rs. 13 lakhs and a turnover of business grossing 50 lakhs of rupees per annum and other assets running to Rs. 8 lakhs.

(9) An M.Sc. post graduate in Chemistry has been inducted as Vice-President of the society.

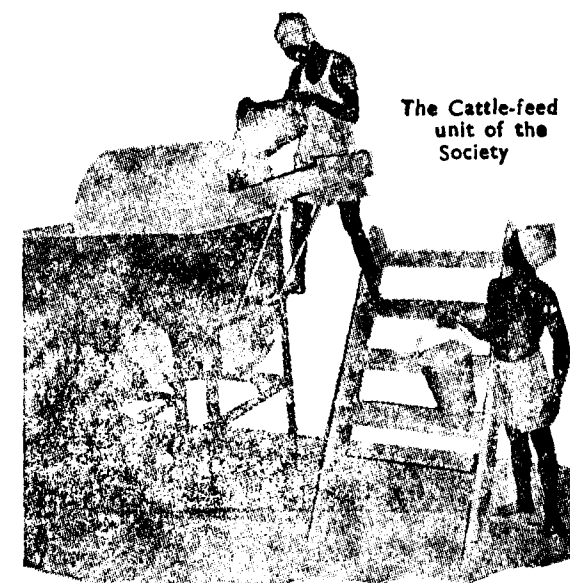
(10) It is a multipurpose organisation giving all agro services to its members under one single roof.

(11) Since inception the institution is earning good profits and succeeded in the various schemes formulated by it because of its judicious planning and prudent management.

It handles pesticides for the entire district



The Cattle-feed unit of the Society

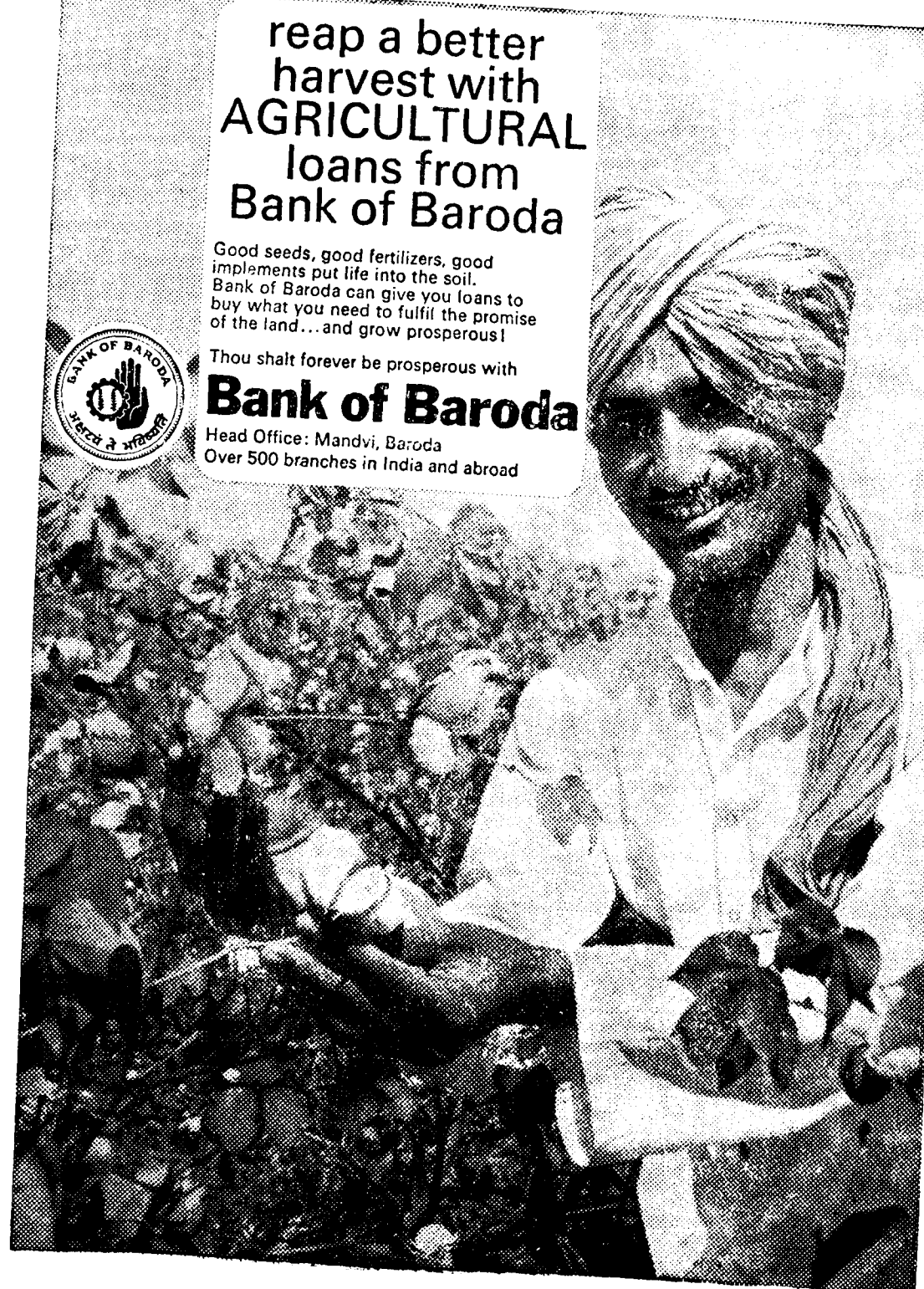


reap a better
harvest with
AGRICULTURAL
loans from
Bank of Baroda

Good seeds, good fertilizers, good implements put life into the soil. Bank of Baroda can give you loans to buy what you need to fulfil the promise of the land...and grow prosperous!

Thou shalt forever be prosperous with
Bank of Baroda

Head Office: Mandvi, Baroda
Over 500 branches in India and abroad

Shilpi BOB 21/70

SCHEME FOR ABANDONED CATTLE

The Madras SPCA (Society for Prevention of Cruelty to Animals) established in the year 1887 is the *oldest* animal welfare organisation in India.

The Patron of the Society is the Governor of Tamil Nadu and the President is always a sitting Judge of Madras High Court.

The Society functions in a vast estate of its own in Vepery High Road donated by a munificent donor of last century. The SPCA's animal hospital was made use of to train Veterinary College students to start with and for this reason, the Veterinary College was built opposite to SPCA in Vepery. Even now a part of SPCA campus is occupied by Veterinary College stables and servants quarters.

The Society has eleven Inspectors in the field, armed with

powers under the Prevention of Cruelty to Animals Act (Central Act 59 of 1960) to launch prosecutions of the offenders.

The Society believes that for the well-being of animals, it is not enough if persons perpetrating cruelties on them are punished. It has firm faith in the efficacy of continuous process of mass education against overloading, using sick animals, overcrowding, starvation, exposure to elements, neglect, animal sacrifices in "Pujas", etc.

The Society's other services are to house the

owner's pet dogs when owners leave the City till they return, to keep sick dogs in its kennels and take them up and down, the hospital and to take up post-operative care.

A Familiar sight



To do "grooming" of pets in a special Dogs' Saloon and de-ticking, hair clipping, nail cutting, shampooing and talcum applications are expertly undertaken. There is a vast clientele for this special saloon, and foreign visitors were all praise for it.

But the most challenging and rewarding problem of the day is that of stray cattle in the city.

The *stray cattle* pose a serious threat to traffic and health. The owners leave their cattle to stray about. The Police are doing their best. Still the highways and bylanes of the city are

teeming with cattle of all sorts—they range from a tender calf to a dry cow or an aged bull.

Where there is a heap of garbage, these unfortunate creatures flock and leisurely chew the impossible menu for the day. Later they select busy thoroughfares and unmindful of human activity and traffic, they settle on all fours to chew the cud. "No Parking" plots are their rendezvous.

On the spot blood transfusion for a cow injured in an accident



Accidents to animals and to vehicles on account of animals are on the increase. The SPCA's telephone rings to announce a bull hit by a taxi and the taxi driver speeding away leaving the animal unattended on the centre of the road.

There is a case of the Station Master phoning SPCA to tell the case of a pregnant cow being knocked down by a train near Perambur.

SPCA's large animal ambulance rolled fast to the

scene, lifted the unweildy beast which was profusely bleeding. It was promptly admitted in hospital and utmost was done.

The abandonment of bull calves and bulls is the "unkindest cut of all" in the matter of cruelty to animals in the city.

The milkmen as a tribe are heartless in their treatment meted out to calves in general and bull calves in particular. They decide the day they are born to do away with them because they do not benefit them, and are considered most uneconomical. Therefore, they either deliberately kill them or indirectly make them die by sheer starvation.

Milkmen who have some scruples still left in them don't kill them but drive them out as abandoned. These abandoned bulls and calves in the city are every where !

They ransack the dust bins, pull down wall posters but just to keep their body and soul together, knock down street urchins or get themselves hit by fast moving automobiles.

There is no agency to take census of such abandoned cattle, but just "by rule of the thumb" method, one can safely assume that they will touch an all time record mark of a lakh. What a National waste of cattle wealth !

A boon it shall be, if all these are salvaged, moved out of city limits, rehabilitated in a pasture land. The SPCA has sponsored a scheme to save the abandoned bulls and to supply them to farmers, free or at nominal cost.



The Tamil Nadu Police has crowned itself with glory at the All-India Police Duty Competitions held at Simla from November 10th to 17th, 1970. The Championship Shield in the Scientific Aids to Investigation Competition, went to the Tamil Nadu Team for the third year in succession. As a measure of improvement on last year's performance, the Tamil Nadu Team also annexed the runners-up shield in this competition of intelligence in using the new tools of crime investigation. The Tamil Nadu Team also won the coveted Lord Hardinge's Challenge Shield for First Aid and Ambulance. Individual Rolling Trophies were won by six members of the Tamil Nadu Team in the following competitions : Medico-Legal (oral), Finger-print, Photography, Police Portrait, First Aid and Revolver Shooting. The total medal tally of the team was six gold, nine silver and four bronze. The Welfare Exhibits were adjudged the best in the country, and 36 of these entries won prizes. The six individual gold medal winners are :

- | | | |
|------------------------|-----|------------------------------------|
| (1) Medico Legal | ... | Inspector D. Manoharan |
| (2) Finger Print | ... | Inspector J. Ramamoorthi |
| (3) Photography | ... | Sub-Inspector S. Selvarathinam |
| (4) Revolver Shooting. | ... | Sub-Inspector Vasudevan |
| (5) Police Portrait | ... | Assistant Sub-Inspector Kameswaran |
| (6) First Aid | ... | Constable Krishnamoorthy |

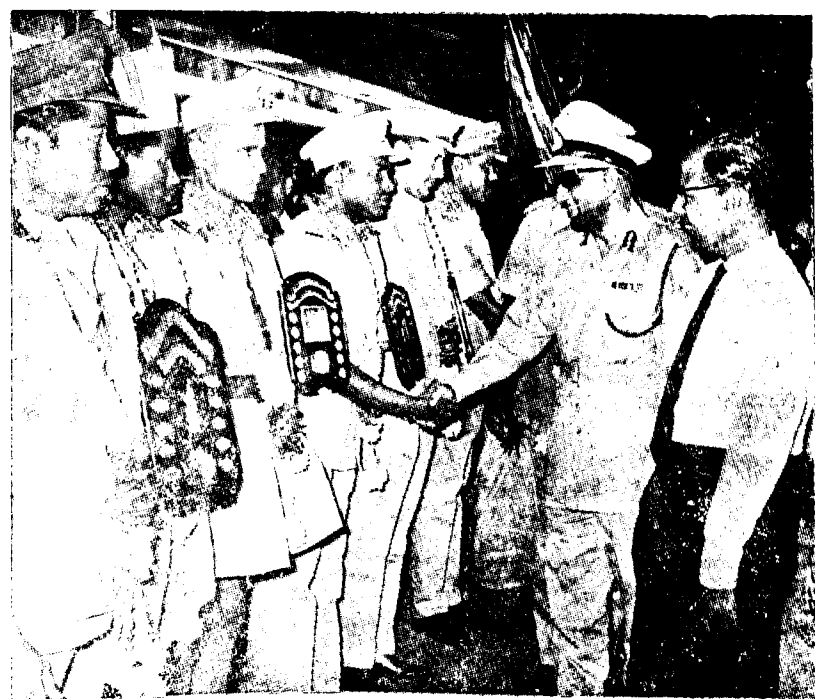
QUICK TO AND ACTIVE TO PREVENT FIRE

The Fire Service saves lives and saves property, but we think of it only in distress. In the year 1969 the department attended to 5,240 calls to save Rs. 331 lakhs in property. The Fire Service is alerted by dialling No. 101 for all emergencies and is ready to save an animal in distress with as equal facility as in rescuing men and women in danger.

The Fire Service Department attended to five thousand two hundred and forty calls in 1969 as against nineteen thousand four hundred and eighty-three in 1968. The officers of the Fire Service carried out 9,022 inspections of places licensed or to be licensed under the provisions of various Acts and Rules, with a view to preventing possible

fire accidents. They also carried out 1,999 inspections of Government buildings as against 957 in 1968 to ensure adequacy of fire protection measures.

The Village Fire Watching and Fire Fighting Squads continued to function in 1969. During 1969 they rendered assistance on 43 occasions.



HEROES' WELCOME

Heroes' Welcome to the 56-member Tamil Nadu Police Team by Inspector-General of Police at Madras Central on 23-11-70.

KHADI *and* VILLAGE INDUSTRIES

PATRONISE KVIB PRODUCTS
FOR WELFARE OF FOOD
PRODUCING PEASANTRY

KHADI AND KHADI SILKS
SOAPS, BRASSWARES MUD
& CERAMIC UTENSILS
MOULDS & LEATHER
HANDICRAFTS, PURE HONEY &
EDIBLE OILS AND A HOST OF
OTHER DELICATE HANDICRAFT
ITEMS.

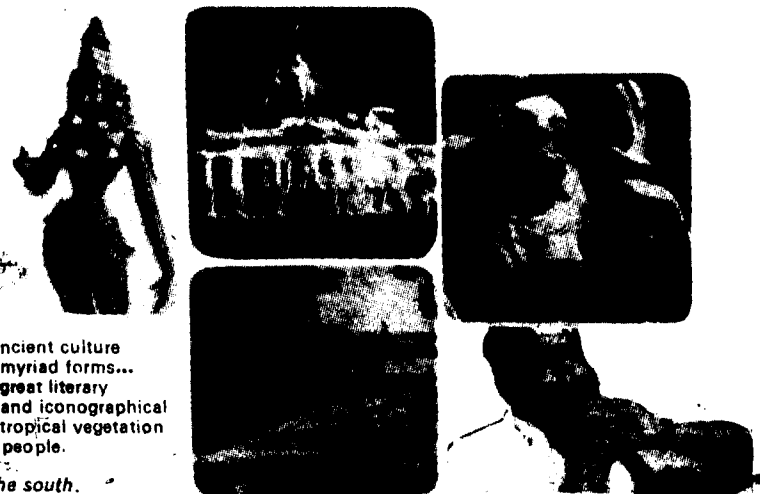
AVAILABLE AT
ALL
KHADI & VILLAGE
INDUSTRIES SALES
Euphoria

Issued by:

Registered No. M. 8856

TAMIL ARASU

WELCOME
TO THE
OF GLORIOUS
CULTURE



Come to the land of the Tamils where ancient culture and civilization have been preserved in myriad forms... Bharata Natyam... rich Karnatic music... great literary classics... imposing temples... sculptural and iconographical masterpieces... And Nature's charms of tropical vegetation and lush rivers are as hospitable as the people.

For an unforgettable holiday come to the south.

Places of interest

Madras - Mahabalipuram - Kanchipuram - Chidambaram
Tanjore - Srirangam - Madurai - Courtallam - Kanyakumari
Rameshwaram - Doty - Kodaikanal - Yercaud.

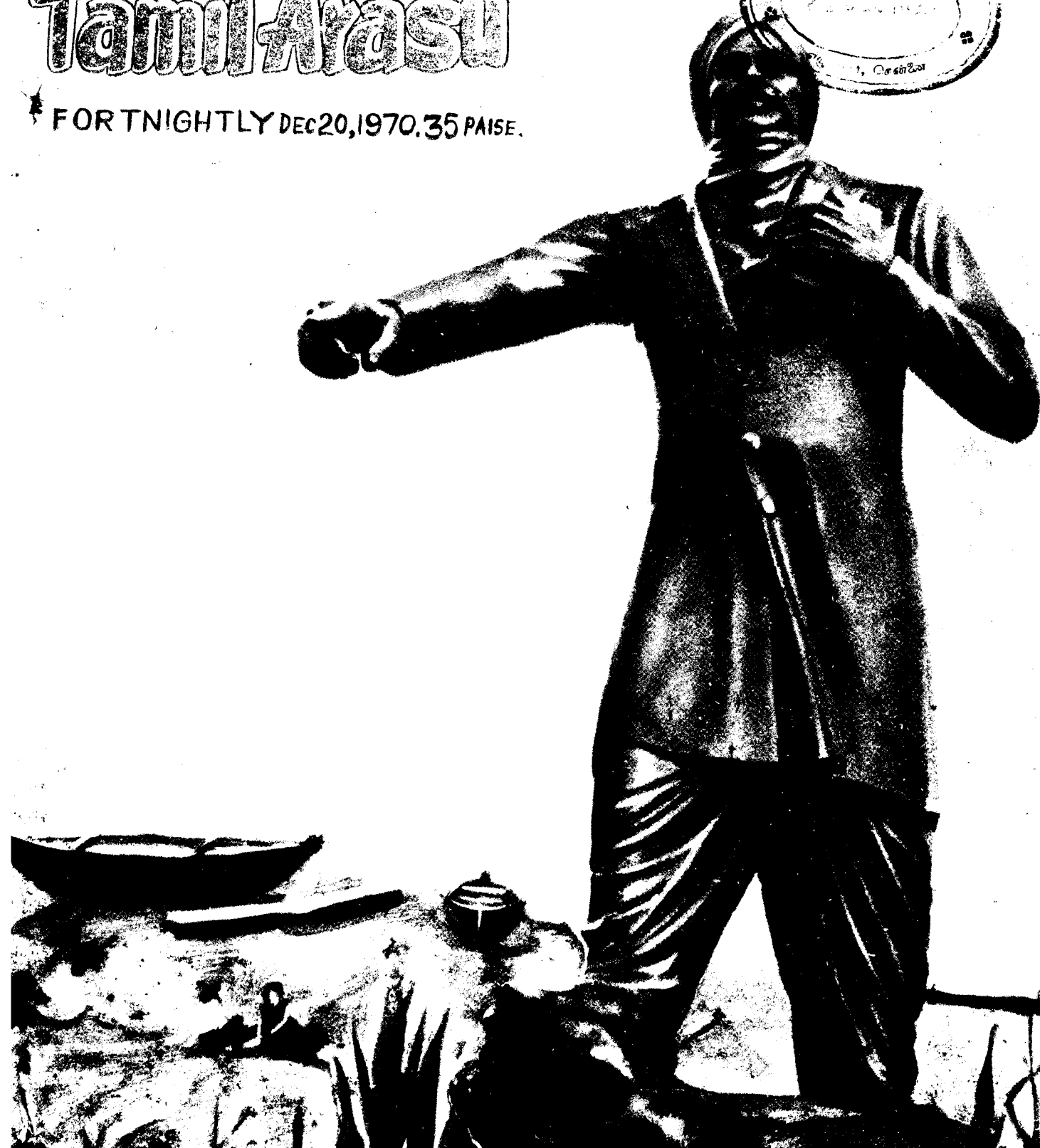
Contact:

The Director of Information, Publicity & Tourism,
Government of Tamil Nadu, Madras-9.

MOULS

K.R. 608/55
P
11273/55
Tamil Arasu

FOR T NIGHTLY DEC 20, 1970. 35 PAISE.



Swinging their way to a happy future!



Selvan and Selvi are happy and contented. Their parents lavish them with all the comforts in life so that they can face the future with a smile.

Are they born lucky? No. Their parents were wise enough to know that with their limited means they could give them

maximum attention only if they didn't have more children.

Your happiness and the future hope for your children is in your own hands. Today you can have a child by choice, not by chance. That is when you desire one, and can give it the best attention.

Ask any of your friends who have benefitted by family planning. There are 10 lakhs of them in Tamil Nadu. Visit one of the family planning clinics. You'll get free advice, help and other aids from trained staff.

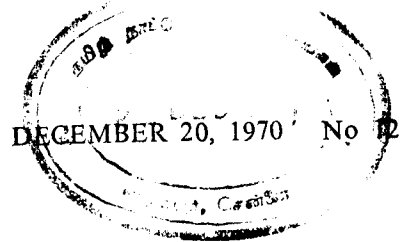


Plan your family-and live happily!

Issued by : Director of Information & Publicity,
Government of Tamil Nadu, Madras-9



Vol. I DECEMBER 20, 1970 No 12



CONTENTS

	Page
Those Twenty Days	4
Cotton is not Forgotten	9
New Surgery for Violent Mental Patients	11
Meet Miss. Susan	13
Don't Blame that Boy	15
What to see in the Art Gallery	27
Temple Administration in Tamil Nadu	31
The Saga of a Ghat Road	36
The Ramnad Sheep	38
Crash Programme for Pulses	39
Dry Farming Project, Kovilpatti	40
Prose Fragments of Poet Bharathi	43
What if the Sweet Voice is not heard?	45

Cover Page:

Poet Bharathi taught us, Tamils, to hold our heads high. The cover page depicts the Bharathiar statue in Madras Marina.

TWENTY DAYS

M. KARUNANIDHI

10. MUSSOLINI

Throughout his turbulent life, Mazzini had yearned with all his heart : "O, would the day come when my dear motherland, and other countries of the world too, shed the shackles of the past and step onto redemption by achieving the Republican form of Government !"

In the very same Italy that was the birthland of Mazzini, another being was born in the year 1883 and this freak was to declare later : "Democracy? Is it not a putrefying corpse!"

The father of the latter luminary was a blacksmith. The fond son

was to take for himself the profession of mercilessly decimating all those who happened to hold views and opinions different from his own.

Quite a few of the townsmen would gather at the smithy. Raising the fire, bright and hot, the father would be reeling off his forth right view on political affairs. As he hammered the iron, he would describe in graphic detail how the poor people of the land were leading a miserable life, as veritable slaves ; and he would go on to emphasise the urgent need to remove the social disparities. He had an apprecia-

tive and responsive audience right through the day and the intense heat of the forge would spread to them and seem to pass along their sinews and bones and arteries.

The urchin Mussolini would stand on the fringe of the audience in the smithy and as he listened to his father's steady rhetoric, the warmth of revolution would grip his heart. The boy would be filled with a wild ambition, to raise Italy once again to unparalleled heights of glory.

Is it not but natural for patriots to develop a feeling of righteous indignation when they see their precious motherland steeped in utter poverty? The only condition or limitation is that such indignation should work along channels of virtue. If, on the other hand, the righteous indignation were to pave the way for violence and stray off into anarchy then it would only help to immerse the country's history in stigma, much in the manner of wild uncontrolled floods laying waste countless cornfields, ere ending up in the brine of the sea.

Duty is the action-aspect of feeling. And Decency and Discipline are the two banks of the canal along which flows the feeling, in a flood. Anyone who seeks to improve the lot of his motherland should necessarily have to conform to and abide by these three D's.

But it so happened that this lad who, so early in his life, had come to nurture a passion to lift

Italy on to the firmament of fame had his heart set on violence as the means to achieve his goal.

It was Mussolini's firm opinion that world Peace was nothing but a mask worn by cowards; and that it was a credo of sheer deceit coined by weaklings who dared not get down to action. He also held that war was the apogee of human feelings and emotions. Progress, according to Mussolini, was the display of grand deeds achieved by kindling the war-instinct in man and goading him to the point of his having to make a definite choice between life and death.

Mussolini whole-heartedly subscribed to the axiom that it was by no means wrong to physically assault political opponents, using lethal weapons for the purpose and even to liquidate the adversaries by flinging grenades on them.

The fanaticism that had taken root in his heart when he was in the elementary school, escalated when he adopted teaching as his calling.

In the course of some professional work, he had occasion to visit the neighbouring country Switzerland and there he made a series of political speeches that were noteworthy for their fervour-content. He detailed ways and means, all based on the creed of violence, to eradicate the misery in the country. Alarmed by his activities, the Government expelled him.

Mussolini who had studied very many languages like Latin,

French, German, Spanish and English, went to France and there too he started sowing the seeds of violence. The result was predictable and he was declared *persona non grata* in France.

Returning to his motherland, Mussolini was enlisted ; and on completion of military training he reverted to teaching. But his heart that was steeped in politics

own fashion, Mussolini raised the question voiced so forcefully by our Poet Revolutionary Bharatidasan who demanded to know whether the poor many should continue to be oppressed, harassed and tortured by the strong but unscrupulous few. Mussolini was constrained to raise the question, since a large part of Italy was in the grip of penury then. As a result of such a state of affairs, the postulates of the Communist movement, were spreading fast.

It is an observed fact that the speed with which the creed of Communism pervades a country is in direct proportion to the intensity of poverty in that country. As poverty suffers eradication, Communism too gets decelerated.

While staying in Austria for a brief while, Mussolini penned an essay on the frontiers of that country and this attracted the displeasure of the Government which promptly ordered him to quit. When he reached his motherland, Mussolini commenced taking interest in Communist movement. Very soon he became the spire of the Communist party tower.

When the Italian Government stepped forward to declare war on the Ottoman Empire, the Communist movement opposed the measure. Mussolini who was then Editor of a Communist journal played a major role in the anti-war campaign. His ferocious writings caused a jolt to the Government and the reward he collected for his militant

and keen for achievements in that field, was restless in the pedagogical profession. Day and night, that heart aspired to change the face of Italy and lift the country out of anguish.

At that time a few opportunists who had neither intellectual equipment nor technical capacity had somehow managed to secure, a hold in Italian Politics. In his

journalism, was a one-year prison sentence. On his release, Mussolini became Editor of another Journal titled "Avanti" and within a few months of its inauguration, the magazine could boast of a hundred thousand subscribers.

Although Mussolini had declared his total opposition to the war waged by Italy against the Ottoman Empire, an occasion soon presented itself when the love of war which he had all along nurtured in his heart came out into the open.

The year was 1914 and the month July, when World War I got going in devastating earnest. The three countries, Britain, France and Belgium came together in a front. Ranged against them were Germany, Austria and Hungary.

Italy earlier signed a pact with Germany and Austria and so everyone believed that it would join the alliance organised by Germany. The Communists were engaged in a hectic propaganda to the effect that Italy should not participate in the War. Mussolini, however, was all for Italy jumping into the fray, on the side of Britain and France. When he proceeded to propagate his point of view, the Communists were incensed and they lost no time in dismissing him from the post of Editor of the journal 'Avanti'.

But Mussolini was not one to be suppressed easily. He started a new journal "Popolo d' Italia" and he proceeded to write agitational articles emphasising his

policy. He also delivered speeches everywhere drawing the attention of the people to the fact that a section of the frontiers of Italy was being held by Austria. "The hour has struck for Italy to redeem its frontiers by joining the front of countries that are against Austria and help win the war. To let slip the grand opportunity would cast a slur on the manhood and the intelligence of the country", so said Mussolini in the course of a tireless campaign.

It was Mussolini's cause that won out in the end. Italy joined the front of which France was a member against Austria and Germany. That was in the year 1915.

There were some who called Mussolini a stooge of France. To establish his bona fides, he himself joined the army. Rising to higher ranks within a short space of time, Mussolini was seriously wounded in a battle against Austria and this necessitated his return. Yet, through his journal, he kept up the war effort and thereby assisted the Italian army to inflict defeat on the Austrian forces.

With all that, when the War came to an end in the year 1919 and a Treaty took shape at Versailles City, a rude shock awaited the Italians who scanned the profit and loss account.

Italy had indeed paid a stiff price for participation in the War. The number of those who had laid down their lives was 652,000. Those who had suffered loss of limbs were 450,000. And a total

of 1,000,000 people had been seriously injured. For all this sacrifice, the only region that Italy received was 'Zara'.

Bitter disappointment was writ large on the face of Italy. The frustration turned into irritation as Italy looked at its economy crushed under the wheels of the war and at the problem of unemployment that was rearing its ugly head.

It did not take long for this irritation to develop into a volcanic confusion and riots erupted all over the land and there was a chain of strikes and lockouts. The uprising on the part of the workers became a handy weapon for the Communist movement. The Government of the day existed but in name for it possessed neither the will nor the strength to deal effectively with the riots, and reform the conditions of run-down economy.

Taking full advantage of the unsettled state of affairs in the country, Mussolini proceeded to concoct a new creed. With the soldiers returning from the fields of the War, he founded a Fascist army. "Here is the panacea for all the ills confronting Italy"—with this slogan did he propagate Fascism throughout the land.

To those who asked, "What indeed is Fascism? What are its basic policies?" Mussolini himself gave a reply in 1920. He made it clear that Fascism had no permanent policy as such. Its sole objective was to uplift Italy somehow. An energetic campaign on those lines was unleashed on the streets of Italy.

Our friends of the Indian Embassy in Italy showed me the exact place in the City of Rome, from where he did the bulk of propaganda for Fascism.

Mussolini's speeches, saturated with fanatical fervour were to a large extent responsible for the phenomenal growth of the Fascist party.

Elections took place in the year 1921. Mussolini entered the parliament with 30 Members. In the House, he was a veritable tornado and very soon he became a nightmare to the Ruling Party.

He was too impatient to wait for the next Elections, for he really had no faith at all in the democratic form of Government. He injected a further dose of the technique of violence into the activities of Fascism. His army of Blackshirts started brandishing weapons and prepared the way to bring the levers of the Government under their control through the medium of the bullet since they knew they could not realise their objective through the ballot.

Towns and Cities were slipping into the hands of the Fascist army. At last in October 1922, the Fascist army set out for Rome. A scared Government promulgated military Law in order to tackle the situation that had got out of control. But the King of Italy who had been impressed by the writings and speeches of Mussolini cancelled the order declaring military rule, and the reason why he took this unprecedented step was his fond hope that Italy could once again

become an Empire through the efforts of Mussolini. The King accepted the resignation of the Council of Ministers and he called Mussolini to form the Government.

Mussolini's Council of Ministers assumed power. The very first speech he made as Prime Minister, in the Parliament, left his people in no doubt about his plans for the future. Said he in unequivocal terms: "If I so desire, it would be an easy thing for me to wind up this parliament. The reason why I suffer you Members to stay here is that I believe you would be of assistance to my endeavour and conduct yourselves with a due sense of duty and integrity. Do not for a moment dream that you could do away with the present Government, just as we of the Fascist Party put an end to the Government of yesterday. Those of you who entertain such plots and embark on any such schemes would be severely dealt with."

In liquidating opponents, Mussolini ranked next only to Adolf Hitler but that too when one takes into account the actual census of the victims. In sheer determination to eradicate adversaries, Mussolini was of course second to none.

"Why such a mushroom-growth of parties in this country?" thought Mussolini next, "Won't it be sufficient for the welfare of Italy if there is just one party? And won't it be ideal if that one Italian party happens to be my party?"

The immediate result of this line of thinking was a ban on all Opposition parties. Freedom of the press was the next casualty. And as for the parliament, it existed in name only. The Fascist Council was the organisation ruling the country and all the powers were vested in Mussolini.

All those who dared to oppose him became victims of the horrendous assaults mounted by the Fascist movement. In the name of the country's progress, Fascist youth carried out a series of political murders, robberies and wanton destruction of property. As for those who managed to survive the murderous wrath of the Fascists, they found themselves exiled under orders from Mussolini and the charge against them was that they had worked against the interests of the country and become guilty of treason.

Three uninhabited islands were allotted for accommodating Mussolini's political opponents. Within a span of three years 10,000 persons had got caught in the vice-like grip of Mussolini's despotic rule and they all paid the ultimate penalty.

Perpetrating machinations many and literally wiping out numerous opponents, Mussolini got the elections conducted. It was easy enough for him to score a spectacular victory at the hustings.

Even at that point, his thirst was far from quenched. One fine morning he told the Members of the Parliament "After

all, the whole of Italy is functioning only on my instructions. Such being the position, is there any absolute necessity that you figureheads should be assembled here?" Thus, the death-sentence was passed on the Parliament too and the last door of the mansion of democracy was slammed shut.

Amidst all these atrocities, a few benefits also flowed from Mussolini's despotic rule. He lent new strength to the point of the plough by establishing and encouraging well-organised co-operative societies and by mechanising agricultural labour. Small industries also got a fillip in his regime.

Mussolini reduced the taxes and increased medical facilities. Effective measures were initiated to tackle unemployment. Order and economy were instilled into the administrative apparatus. For the first time in history, the Italian railways learnt to adhere to the virtue of punctuality. Mussolini did much good work of such category.

If, in spite of the record of welfare activities like these, Mussolini is still detested in history, it is because he deprived the people of their democratic rights. Is it not the conduct of an absolute coward to surrender his rights in return for mere facilities? As Bharathi has put it, would not one become a laughing stock if he were to barter his eyes for a painting?

Undaunted democrats were still there voicing their protests now and then but Mussolini was not one to be deterred by them. Was

he not the Duce who had challenged the might of the international combine even? He poured scorn on the League of Nations that had allowed the few Big Powers alone to retain their armed strength.

Mussolini did not bow his head before Hitler's dictatorship either. When Hitler sought to occupy the neighbouring country Austria, Mussolini declared in forthright terms that Italy was of the view that Austria should remain an independent country and not come under German domination. The Duce had a valid reason for this policy, since a powerful German Empire coming nearer to the frontiers of Italy would have posed a permanent threat to the territorial integrity and independence of the country.

Hitler planned to win over Mussolini to his side and he met the Duce for talks at Venice in the year 1934. It was Mussolini who scored a victory in those discussions and as an outcome of this, the Nazis had to commence the winding up of the razzle-dazzle in Austria.

But the very next year, when Mussolini sent his forces to encircle Ethiopia, he came into confrontation with Britain and France. In order to meet this new hostility, Mussolini was forced into an alliance with Hitler.

His eyes clouded with imperialist fancy, Mussolini occupied Albania in the year 1939. His head turned by the Victory, he invaded Greece during the next

year. But this time he had bitten a little more than he could chew on his own, for he met with unprecedented resistance from Greece. Ultimately he could enter Greece, but only with the help of Hitler's battalions.

That was more or less the beginning of the end of his dominance. The defeats he sustained in Africa accelerated the process of his downfall; and in the midst of all this, resistance to his rule mounted within his own country. Quite a few Members of the Fascist Council itself were watching and waiting for an opportune moment to topple him.

In the year 1943, the Allied forces landed on the island of Sicily which forms one end of Italy. Mussolini's grandiose ambition had been to make the Italian army march into all the countries of the world; but now, the armed forces of just those countries of the world that he had sought to subjugate, were gathered in strength, on Italian soil. The members of the Fascist Council chose this moment to get into action. They took over the Government and placed Mussolini under arrest. But Hitler who desired the continued participation of Italy in World War II despatched his soldiers, secured the release of Mussolini in a tricky manoeuvre and deposited the Duce in Northern Italy where he still commanded some influence.

Mussolini set up a puppet Government there, but the pretence was not to last long. Hitler's dictatorship itself was

shattered to bits soon afterwards. Mussolini who sought to flee thereupon, was shot dead by partisans as he was nearing the Swiss frontier.

The corpse of the flamboyant Dictator was dragged to Milan City where it was suspended head downwards, for all to see and jeer at. He who had arrogantly described democracy as a putrefying corpse was himself reduced to a decomposing cadaver swinging macabrely in the wind.

If you look at Italy on the world-map, it would convey the

visual impression of a leg wearing a boot. Benito Mussolini was the Knight Errant of Rome who did a maniacal dance-number with a view to bringing the world under that shod foot.

It was only after some days of public display, was the corpse of Mussolini handed over to his relatives. It is the sincere feeling of the Italy of today that of the tombs for dictators, Mussolini's should be the last.

As I came to this stage of my reverie, I realised that our car

had reached the hotel where accommodation had been provided for us. The waves of thoughts about the rise and decline of Italy, that had held sway on the screen of my mind during the period of our journey from the Tivoli Garden to the City of Rome, subsided. Thoughts of a more mundane nature took their place, since arrangements had to be made for our onward travel to Zurich in Switzerland on the very next day.

(To be continued)

COTTON IS NOT FORGOTTEN

The Tamil Nadu Agriculture Department is drawing up a crash programme to step up cotton production in the State.

Tamil Nadu now produces about 4.56 bales a year against a total annual requirement of 10.5 lakhs bales.

It is proposed to raise MCU-5 (Madras-Cambodi-Uganda) cotton, recently developed at Coimbatore over 80,000 to one lakh acres out of the 2.5 to 3 lakhs acres under irrigated cotton in the State.

MCU-5 has better staple length and spinning quality.

It is also proposed to replace the Lakshmi cotton raised in

Tirunelveli district by M.C.U.-6, another new variety named "Bharathi".

It is hoped to reach a production of five lakhs bales this year and this would be further stepped up through the crash programme by stages.

Cotton is one of the important commercial crops of Tamil Nadu. It is raised both as dry and irrigated crop in about 424,270 hectares of which 115,930 hectares are irrigated in Tamil Nadu. Combodia Cotton is raised as pure crop in some districts like Coimbatore in rotation with millets and pulses. Rainfed Karunganni Cotton is grown as mixed crop with black gram, coriander and tenai.

Cotton production in Tamil Nadu has increased from 230,000 bales in 1950-51 to about 397,230 bales in 1969-70. The average yield of cotton (lint) per hectare in Tamil Nadu is 187 Kg. while the All-India average yield is 113 Kg. per hectare according to the figures of 1966-67. But the total production of cotton in Tamil Nadu is not adequate to meet the growing demand of the spinning mills of Tamil Nadu. The peculiar feature of our State is that on account of the preponderance of the handloom industry, the mill industry developed its spinning capacity more than its weaving capacity. And yarn is also an important item of the

export. Dearth of cotton will throw these mills out of work.

Since there is not much scope for expansion on the area under cotton, the Government of Tamil Nadu is concentrating of intensive cultivation methods of cotton. With a view to increase cotton yield, package programme is being implemented in Tamil Nadu. Almost the entire irrigated cotton area have been covered by package programme. The package area of irrigated cotton has shown increased yields by as much as 80 to 100 per cent when compared with the average yields in non-package areas. The package programme has been extended for rainfed cotton also from 1969-70 onwards.

A major breakthrough in the evolution of quality cottons has been achieved by the recent release of the new strain, MCU-5, in Tamil Nadu.

The new strain MCU-5 has a staple of 1-3/16. In actual mill tests, it was adjudged to be eminently suitable for spinning 60s yarns, the tensile properties of which were quite comparable to those of Sudanese cottons spun to this count.

To evolve strains possessing both yield and quality, cotton germ plasm covering a wide range of economic characters introduced from foreign countries is combined with the local types. The release of MCU-5 marks the first breakthrough which, it is hoped, will be followed by more in the near future. The pedigree of MCU-5 includes cottons of diverse origin, like the indigenous Cambodia

10

strains and varieties from east Africa, U.S.A. and West Indies.

On an average, MCU-5 yields about 19 quintals of kapas per hectare which is more or less on par with its predecessor MCU-1. It has a better micronaire value of 3.2 against 4.2 of MCU-1 and a higher bundle strength of 8.1 as compared to 7.5 of latter. It has a ginning outturn of 34. This is considered quite good. Its real merit, however, lies in its high spinning capacity of 70s HSC high stencil cotton in contrast to 45s of MCU-1. In mills, it yields yarns of standard strength when spun to 60 counts.

Another outstanding feature of MCU-5 is its wider adaptability. Although it is now released in the irrigated winter Cambodia tract of Tamil Nadu where the

normal sowing time is August-September and harvesting period February-March, it has already manifested its suitability in the preliminary trials, to the summer Cambodia tract of Tamil Nadu also. If the results prove to be consistently in its favour, it could be taken up for commercial cultivation in summer sowing also.

Steps are being taken to multiply pure seeds of this strain and from 36 hectares raised during the current season about 225 quintals of seeds, enough for raising, 1,200 hectares during the ensuing season, have been procured. When this strain ultimately spreads over the potential area of about one lakh hectares in Tamil Nadu alone, it may yield about two lakh bales matching with the imported cotton in quality.

"Sujata", the extra long staple variety evolved by the Regional Research Centre of Indian Agricultural Research Institute, Coimbatore will pave the way for a bright future for Tamil Nadu, as it has a staple of 1.21 inch. It is suitable for spinning 80 to 100 yarns.

Another outstanding feature in cotton development in Tamil Nadu is the latest release of the strain "Bharathi," i.e., MCU-6. This strain will increase the production of rainfed cotton. It will give 49.1 per cent more yield in terms of cotton kapas and 63.2 per cent more yield in terms of lint than the existing lakshmi cotton. A farmer can get additional net profit of Rs. 504 per hectare through the cultivation of "Bharathi" alone.

SEDATIVE SURGERY CONTROLS VIOLENCE IN MENTAL PATIENTS

During the recent All-India Conference on Mental Retardation held at Rajaji Hall, Madras from December 4th to 8th, 1970, Dr. V. Balasubramaniam, Hony. Clinical Professor of Neurosurgery, Madras Medical College read a paper on "Surgery in Mental Retardation" to say that some mental patients showing signs of violent behaviour were being treated with sedative neuro-surgery in General Hospital, Madras with good results. The sedative surgery is a method pioneered by Japanese Doctors and has so far been done on 146 patients in General Hospital with positive benefit to the patients, he averred.

Dr. Balasubramaniam, says:—

The brain develops at a phenomenal rate in the first few years of life. By the time the child is 3 or 4 years old the brain reaches the adult size. Subsequent changes with education and learning are more in the nature of neuronal organisation. So, if the disabling causes are not remedied within this critical period, the damage is extensive and at most times irrecoverable. This imposes a great responsibility on the family physician and paediatrician.

Some of the causes are (a) *Hydrocephalus* where due to accumulation of cerebro-spinal fluid inside the ventricles and ventricles enlarge and stretch the brain matter to a paper-thin layer.

(b) *Craniostenosis* : Here due to premature closure of the sutures the skull does not enlarge

and so the brain is not allowed to grow.

(c) *Subdural effusions* : Due to minimal trauma at the time of birth, small collections of blood, serious effusions or cerebro-spinal fluid collect between the skull and brain. These collections impede the proper development of the part of the brain immediately below. Unless they are removed in time the results are bad.

(d) *Metabolic disorders* cause brain damage but the detection and treatment are in the realm of the physicians.

Cerebral Palsy

Cerebral palsy is a common condition in our country. These children suffer from a varying degree of paralysis of the limbs. Because of this they are confined to the bed or the house. This prevents the proper development of the brain. The timely alleviation of the motor disorders helps in their mingling with other children. This facilitates the development of the brain. This has been seen again and again in our cases. Unrelieved motor paralysis with consequent failure of brain development is one of the common causes of mental sub-function.

The patient with mental retardation may have certain symptoms and behavioural alterations which may have a greater impact on the family and society. These symptoms consist of restlessness and wandering. It is difficult to restrain these children. They have to be tried to the post, otherwise

11

Ceramic Utilities

A Special display and sales of ceramic art pieces produced by the Ceramic Units of Tamil Nadu has been arranged at the Museum Centenary Exhibition Hall, Egmore, Madras-8, from 20-12-70 to 4-1-71.

The impressive lead given by Tamil Nadu has prompted the Central Govt.'s panel on ceramic and glass industry to recommend the pattern to other States for adoption.

Madras
Doctors
Adopt
Japanese
Surgical
Innovation

they run about and upset everything and everyone. They cannot be put to school because they cannot be controlled by the teacher and further they have a demoralising influence on the rest of the children. Their parents have to be constantly on the vigil lest they run into danger. Some of these patients have other symptoms of a more serious nature. They have a very low threshold for anger and may fly into a catastrophic rage on the merest trifle. This outburst of anger might last for days when they become destructive and break everything at sight; or they may become violent and attack others on sight. This aggression is directed towards everyone young or old; and everything animate or inanimate. In some, the aggression is only an outburst which subsides after some time. In some, it is there all the time. During this period of aggression they may set fire to things and even hurt themselves. Such patients are a source of great disturbance to the family. The parents have to change their residence frequently because the neighbours cannot put up with a tornado in their midst. Many of these are picked up by the police for hurting others. Some parents actually welcome this. Some of the more practical actually disclaim these children and they land up in the mental hospital.

The Behavioural Cortex

These children till very recently could not be helped by any means. Some of the restless ones were helped by certain drugs

like amphetamine (or what is popularly known as dexedrine). But the more violent ones were not helped. Tranquilisers or sleep producing drugs failed to benefit even when given to the limit of tolerance. For a long time various operations had been done at different areas in the brain. These were not helpful.

A decade ago, the Japanese neurosurgeons had come out with operations directed at specific areas in the brain. These areas belong to a part of the brain which was once dismissed as 'old' brain. This part of the brain is now called the behavioural cortex. This controls the behaviour both of the body and mind. Following the lead of Prof. Narabayashi and Prof Sano of Tokyo, we in the Institute of Neurology at General Hospital, Madras have been operating on the various parts of the behavioural cortex. This is possible because of the new innovation in neurosurgical technique called stereotaxic surgery. By using the stereotaxic surgery technique we have been able to eliminate certain specific areas in the depths of the brain. Once this is done, the patients become quiet and are amenable to further treatment. These operations are (a) Stereotaxic amygdalotomy and (b) Stereotaxic hypothalamotomy. These operations have been called collectively as sedative neurosurgery by us. The Operation of stereotaxic surgery can be called, the three-dimensional surgery of the brain. It is an operation that can be done through a small

opening in the skull. But it is an operation that demands extreme precision. However it is of a safe procedure. *We have been operating even on very young children provided the symptoms justified the procedure.* In most cases electrophysiological studies have been done with the electrode in the depths of the brain to verify the position of the electrode and to determine the nature of the defect.

Behaviours can be rectified

Stereotaxic amygdalotomy has been done by us in 146 patients. This operation has been done on both sides at one sitting in some cases. We use a special proforma to assess these cases. The elimination of the amygdala not only induces a placidity but also confers a positive benefit on these patients. Many of them become more co-operative, more aware of the dangers and improve in psychometric rating. This has led us to postulate that these behavioural alterations follow damage to certain specific areas in the brain and surgical attack aimed at these areas gives not only relief from the symptoms but produces an overall change for the better.

Opinion, was strongly divided on the usefulness of these procedures. We can now say, on the basis of our experience, that there is a distinct place for these surgical procedures in the management of these cases.

MEET Miss SUSAN



The dreams of poets have a way of fulfilling themselves. This issue of Tamil Arasu which is brought out as a homage to the memory of Poet Bharathi is a fitting medium to carry an interview with an American girl who is studying Tamil in Madras. For, it was the ardent wish of Bharathi that Tamil should reach all corners of this earth. Miss Susan Nield is one of many, though born in other countries, heir to their own rich languages, are studying Tamil to enrich Tamil as well as to enlarge the scope of the language of their countries.

One pleasant evening! The terrace of a house in Arumbakkam made a happy setting for a pre-arranged interview with the tall and slim Miss Susan Nield, born in California, student of Chicago University and residing in Madras to study Tamil. It was an article which appeared in 'Span' that enabled 'Tamil Arasu' to seek this interview. The Arumbakkam terrace is a happy blend of the charm of a Tamil village and some measure of city sophistication and so was Miss Nield in her handloom saree, a picture of sophistication softened by simplicity. Obviously she likes the warm evening Sun, but not the glare; her choice reading material lay scattered around her as we approached her.

An Interview With An American Girl Studying Tamil In Madras

Miss Susan Nield is residing at the house of Prof. G. Viswanathan of Vaishnav College and she seems to have become a member of the family. She is endearingly called 'Susan' by the members of the family. When

our photographer wanted to take snaps, she called a small boy, the Professor's son, to be with her for the photo. She called him 'Thambi', meaning brother in Tamil. She talks to the boy and his grandmother only in Tamil. The very manner of her conversation in Tamil shows that she has become one with the family.

Miss Susan speaks her mind

Question: What is the state of Tamil Study in American Universities?

Miss Susan: To Americans, for a long time, 'Indian languages' meant only Sanskrit and Hindi. Only these two languages were taught and studied in American Universities. Scholars interested in studies about India used to concern themselves with the study of these two languages alone. It is very recently that American Scholars have come to direct their attention to South Indian languages, particularly Tamil.

Question: Are there facilities for studying Tamil in America?

Susan: Yes, there are three Professors of Tamil in the Chicago University where I studied. They are Dr. Ramanujam and Prof. E. Annamalai from Tamil Nadu and Kamil Szhvelebil from Czechoslovakia. Thanks to their interest and inspiration, many students have enthusiastically taken up Tamil study. Other American Universities also have made arrangements to facilitate Tamil study.

Question: What made you learn Tamil and when?

Susan: When I was studying in America, I didn't hear at all that "South India" as such exists. My optional subject was Government. I came to India in 1964 to learn Hindi. I stayed in Uttar Pradesh and learnt Hindi.

It was there that I was introduced to some Tamils in Delhi. I had an opportunity to hear Carnatic Music which I enjoyed most. I felt that American and North Indian Scholars had neglected Tamil and Tamil Nadu. This feeling roused my curiosity to study the history of Tamil Nadu in detail. When I returned to America, I learnt Tamil in the Chicago University for two years.

Question: When did you come to Madras?

Susan: I came to Madras once before. After staying for three months I went back. Now I have

come for the second time. Six months have elapsed. I will be here till June next.

Question: Who teaches you Tamil and where?

Susan: My Professor Thiru Balasubramaniam comes here twice a week to teach me Tamil.

Question: Is it in the method of learning in Schools?

Susan: I understand what you mean. My purpose is not just to learn Tamil.

My intention is to study the history of Tamil and South India, and the development of Madras City with reference to the changes between 1800 and 1860. I must submit a thesis. A knowledge of Tamil will be of great help in my research. Now I am able to read Tamil books and journals.

Question: Have you contacted any Tamil Scholar?

Susan: I often meet Dr. M. Varadharajan and Dr. Raghavan, and also the Director of Tamil Nadu Archives in Madras. They help me much in my research. I shall meet many other Tamil Scholars also. I want to meet members of families whose forefathers were residents in Madras City in the last century. If any such persons meet me, it would help my study much.

Question: Do you enjoy Carnatic Music now?

Susan: I haven't stopped with enjoying Carnatic Music. I am

learning it too. Mrs. Vedavalli is my Music Teacher.

Question: Have you visited places other than Madras in Tamil Nadu?

Susan: I have visited places like Tanjore and Kumbakonam. The spectacular sceneries of nature and the architectural monuments of sculptures and tall towers took me aback.

The Womenfolk of Tamil Nadu are gentle and kind. One of the main items that has attracted me is the Kanchipuram Silk Sarees. How beautiful the Kanchi Silk is! When I return, I shall take the Kanchi sarees along with Tamil books.

Question: Do you like our rice meals?

Susan: I like your rice meal very much. You people eat quickly. We do it slowly. We take a long time for dining. Wheat chapathi serves our purpose of eating leisurely, chatting with members of our family.

Question: What do you propose to do with your knowledge of Tamil?

Susan: After submitting my thesis I may become a Tamil Teacher.

Question: How did you come to stay with the Viswanathans?

Susan: I was introduced to the Viswanathans by a relative of theirs in America. Further I like to be away from the bustle of the city.

a CAPITAL opportunity!

start your small industry with

TIIC AID

TIIC
THE FINANCIAL
INSTITUTION
WITH A HEART

For details please write to us immediately.
The Tamil Nadu Industrial Investment Corporation Ltd.,
L. L. A. Building, 150-A, Mount Road, Madras-2
Criterion- TIIC-2451

DONT BLAME THAT BOY

Delinquency and crime are multifactor phenomenon, and till today we have not found the real factors underlying this phenomenon, as we are all aware, the developed as well as developing nations have this problem, though in a different form. A centralised research bureau is necessary to investigate continually the factors leading to delinquency and crime as these, factors change fast, depending upon the complexity of the society.

The Juvenile Guidance Bureau of Madras established some 15 years ago at the instance

of social workers and under the guidance of late Dr. G.D. Boaz, is rendering all help it could in this field. The 15th Annual Day of the Bureau was celebrated on 23rd November 1970.

There are categories of delinquents, whose delinquent acts may be traced to their low intelligence. These delinquents are known as mental defectives or mentally retarded or sub-normal. We diagnose the grade of defectiveness and label them as idiots morons and imbeciles and recommend to the institutions which would look after them, by providing them suitable jobs. There is

If a boy is delinquent, all of us are equally to be blamed says Dr. T. E. Shanmugam in this article.

another variety which may be characterised as epileptoid, with the tendency for impulsiveness and aggressiveness. These types of cases are referred to either Government Mental Hospital or the Neurology Department of the General Hospital. Chemotherapy controls, the brain damage in their case and their anti-social behaviour, automatically is checked. Another article by a doctor on this aspect is printed in this issue.)

In a majority of cases of delinquents referred to the Bureau the factors contributing to their behaviour lie in the social environment. It may be due to the broken-home conditions, lack of gratification of basic biological needs like hunger, emotional needs like belongingness, recognition, affection and achievement. In this, both home and school play

fatal roles. In the Guidance Bureau, after intense interview of the children and parents of the children wherever it is possible, a battery of psychological tests are used to 'diagnose' the area of difficulty. In the light of findings, recommendations are made to the agencies referring the children as to how to deal with them. In a number of cases counselling of parents is attempted and in cases where the children are recommended to be sent back to the parents, the children are asked to visit the Bureau for short term for Counselling and Guidance. If the children are orphans, they are normally sent to one of the Approved Schools. In those cases we indicate their intellectual level, personality and occupational interest and recommend how they should be handled. Let me cite two cases to illustrate our approach.

Prakash is a 15-year-old boy. He broke into a clinic of a Medical Practitioner in Kodambakkam one night and committed a theft of cash of Rs. 350 and a gold ring. In the process of carrying the stolen goods, he was taken into custody on suspicion by a party of Policemen on Patrol, during that night.

Prakash, though born in Rajasthan, has been brought up in Madras in Kodambakkam since he was two years old. His father is a pawnbroker and his mother a housewife, but chronically ill. He is one amongst four sons. He studied up to 7th standard.

At the Guidance Bureau, a thorough investigation of the boy was done. It was found

that his family background was good and his other brothers were helping their father in his business and they were well-behaved. Prakash's friends were all well behaved. However, one important factor emerged. That is, this boy had developed friendship with a criminal, who used to visit his father's shop to pledge probably stolen jewels. His father used to be afraid of him and would treat him with respect born of fear. Juvenile Prakash was attracted towards him and the reason according to him was

his strong and attractive physique. He used to spend a lot of time in his company hearing, his exploits. Fortunately, for Prakash, the first crime he committed under the guidance of this adult criminal, led him straight into the hands of Police.

The psychological tests revealed, lack of affection from mother and enforcement of an authoritarian type of treatment by father. It appeared that what the boy missed from his house, namely money and affection were found



Dr. Shanmugam and dedicated research workers probe Delinquent Children for Causes.

in abundance with this criminal associate. Added to this, it was found that the boy was easily suggestible.

Guidance to the Father!

We found in this case, guidance was necessary to the father of the boy than to the boy and the father was co-operative. After a couple of sessions with the father, which gave him insight into his son's mind and behaviour, it was recommended to the juvenile court to release the boy under a bond and probation for a period of one year and direct the Probation Officer to visit the juvenile periodically. It is almost a year, the report about the boy has been good.

Prakash was an adolescent boy and therefore he was neither treated as a child nor as an adult. It is during the period of adolescence that individuals look for ideals, often at those who excel in physical activities, as may be seen from the popularity of 'stars' athletes, etc. Prakash simply did not have a healthy ideal.

Let me cite another case which is interesting from another

point of view. It is the case of Mani, aged 14 years, an inmate of Child Welfare Home, charged for attempting to commit suicide by hanging himself.

Mani has an elder sister and a younger brother. When his mother eloped with another man, his father simply deserted the children and his whereabouts till today is not known. Mani uncared for, desperately went here and there and finally landed in the institution mentioned above.

In the institution, he studied up to III Standard and learnt mat weaving and the like. However, he found other inmates wanting in orderliness and were violating regulations of the institution. He also felt, the authorities of the institution were hostile to him. Therefore he kept himself almost aloof most of the time minding his work.

At the Bureau, a thorough investigation revealed incipient symptoms of schyzizophrenia. It also revealed strong needs for affection and belongingness along with superior intelligence. While he was at the Bureau, he often requested us to find somebody to adopt him.

Since the boy found the environment of Child Care Home hostile and since it was not possible to keep him forever with us, we

recommended that he may be sent to the Senior Approved School and given proper schooling as he had superior intelligence and special attention to his needs, which remain unfulfilled.

Now in this case, an active drug and psychotherapy are necessary at the Approved Schools, for which, I am afraid, there are no facilities at present.

So far in Madras and as in rest of the country, we have been waiting till the children and youth violate the Madras Children Act and Indian Penal Code, and brand them as delinquents and then try to find out ways and means of dealing them. In my opinion, our work should begin at the preventive side of delinquency. For this, one Guidance Bureau is not enough. The Department of Education, Government of Tamil Nadu, should be persuaded to start Child and Juvenile Guidance Clinics in different parts of the City and districts. A State or the nation is measured in terms of its citizens—citizens healthy in mind and body. A child of today is a citizen of tomorrow.

The Boy's Clubs in the City and districts have been doing effective work in the prevention of juvenile delinquency, under the presidentship of Mr. S. M. Dias, Deputy Inspector-General of Police. We should have many more such clubs located in different parts of the City and districts.

Our energy should be directed towards rehabilitation of discharged delinquents. Some of the Kleptomaniac cases must be

carefully isolated and treatment given in the Approved Schools. Otherwise, they are bound to resort to the crime, again and thus recidivism.

The main function of the Bureau is to observe, test, evaluate and counsel on the children referred by the Juvenile Court as well as by the private agencies and the public. There are four post-graduate research scholars who examine the delinquent children with deep interest and patience. The scholars are P. Jaya Chandran, M. P. Natarajan, K. Chockalingam Pillai and Miss S. Parvathi. Last year 200 cases were studied and reports were submitted. More than 20 per cent of the total cases referred by the Juvenile Court last year were epileptics, mental defectives and some form of handicapped children. With intensive effort these unfortunate children were helped to be placed in the right institutions and proper medical attention wherever necessary was recommended. Various agencies like Bala Vihar and Mental Hospital help the Guidance Bureau in their effort.

A Research Project Report namely, "A Psycho-Social Study of Institutionalised Victims of Immoral Traffic and Commercialised Vice at Madras City" has been published. Apart from innate qualities social environment is the major factor that makes or mars the child. Environment has a greater impact on the children moulding their character. The proverb "Tell me your friend, I shall tell your character" is fully proved by these helpless children. Discordant families spoil children to a great extent.

The Society and family play a great role in building up the character of the children. There are four Government Certified Schools for boys and one Senior-cum-Junior Certified School for girls, the former functioning at Chingleput, Ranipet, Thanjavur and Tattaparai, respectively and the latter at Pruasawalkam, in the Madras City. Among the boys' schools, there are two Senior and two Junior Certified Schools to suit the boys of various age-groups. Besides, there are fourteen private institutions, in the State which have been recognised

and aided by Government, to receive certified boys or girls. Among them, special mention may be made of the Seva Samajam Boys' Home and Bala Mandir in the Madras City.

The correctional treatment programme that is followed in the Government Schools, aims at reforming the boys and girls, giving them an all-round training in arts and vocational branches and rehabilitating them as useful members of society. The schools are no longer "miniature jails." The inmates are no longer locked up or guarded as criminals. Open dormitory system is successfully followed. Boys and girls are sent home on leave on their own responsibility. They are allowed to move about freely. They have their own law-classes where they own up their mistakes and prescribe and receive their own punishments. They have their School-Banks which teach them the value of saving their pocket money and School-shops, where they purchase useful things. They have their own Literary and Dramatic Societies which give full scope to their latent and original talents.

At the 15th Annual Day,



Thiru K. V. Subbiah addressing the 15th Annual Day meeting of the Juvenile Guidance Bureau.



CHANGES IN THE REGISTRATION PROCEDURE.

From 1st JANUARY 1971.

The changes introduced in the filing system of Property Registration is coming into force from 1st January 1971.

The changes effected to improve the filing system are as follows:

(i) The copies of documents (to be presented along with the original documents), that are now pasted to file books in registration offices will hereafter be bound into volumes by departmental binders ;

(ii) The size of the registration copy forms on which the copies are to be written will be bigger approximately twice the size of the present form and consequently the cost of the form will be 10 paise instead of 5 paise, the present cost ;

(iii) The requirement that copies should be prepared only in the prescribed registration copy forms will apply to all documents without any exemption. Copies of documents evidencing transactions of a temporary character relating to certain bodies and institutions like Co-operative Societies, Land Development Banks, incorporated companies, institutions, etc., which are now exempted from the above requirement, will also have to be prepared only in the prescribed registration copy forms in future.

MOBILE OPHTHALMIC UNIT EYE CAMP AT TIRUVANNAMALAI.

The Mobile Ophthalmic Unit of the Madras Centre attached to Government Ophthalmic Hospital, Madras will conduct its 35th Eye Camp at the premises of the Municipal Boys High School, Tiruvannamalai at Tirukoilur Road for a period of 14 days from 25th December 1970 to 7th January 1971 for treating eye diseases of poor patients in Tiruvannamalai and surrounding villages. Eye operations (Cataract, etc.) will be performed by the Surgeons of the Government Ophthalmic Hospital, Madras on 27th, 28th and 29th December 1970. Patients requiring operations should get themselves admitted in the Eye Camp on or before 26th December 1970. After operations, the patients will have to stay in the Eye Camp till 7th January 1971 for the post operative treatment. During their stay in the Eye Camp, the patients will be supplied with free diet, medicines, etc.

CENTRAL SALES TAX

Lok Sabha Select Committee Sitting at Madras.

The Select Committee of Lok Sabha on the Central Sales Tax (Amendment) Bill, 1970 has proposed to hold its sittings at Madras on 9th and 11th January 1971 to meet and hear the views of the local trade, chambers of Commerce and industry on the proposed legislation.

HARIJANS RECONVERTING FROM CHRISTIANITY TO HINDUISM.

Production of separate certificate.

It has been represented to the Government that Harijans reconverted from Christianity to Hinduism are experiencing difficulties in getting community certificates.

The Government have examined the matter and they consider that in order to enable the officers to issue community certificates, it is desirable to publish particulars such as, parent's name, date of birth of the candidate, if he had reconverted to 'Hinduism' his native place, and the date on which he declares himself as a Hindu.

The Government also consider that S.S.L.C. is a permanent record, and any correction in the record would lead to complications and it will be enough if the Harijans reconverted from Christianity to Hinduism produce separate certificate regarding their community, age, etc. They, therefore, authorise the Director of Stationery and Printing to publish in the *Tamil Nadu Government Gazette* the particulars, such as parent's name and date of birth of the candidates, reconverted from Christianity to 'Hinduism' their native places and the dates on which they declared themselves as Hindus.

Tamil Nadu has won the President's shield for the third time in the All-India Skills Competition of Industrial Training Institutes.

Receiving the shield at Rajaji Hall on 28th November 1970 from Union Labour Minister Sanjivayya on behalf of the State, Industries Minister Madhavan disclosed that the Tamil Nadu Government was constituting "cells" in all districts to prepare a list of craftsmen needed by industries and thus to provide a need-based intake of trainees.

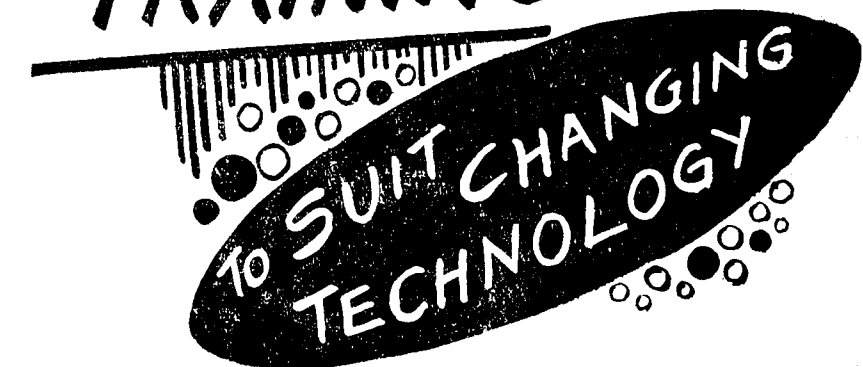
He suggested to the Union Minister to set up similar cells on an All-India basis also. Over 13,000 craftsmen were passing out from the 31 ITIs under the State Government every year, he said.

Presiding over the function, Labour Minister N. V. Natarajan expressed concern over the growing unemployment problem and stressed the need



5-A

CRAFTSMEN TRAINING



for extension of craftsmen training programmes.

The Union Minister also gave away special prizes to the eight "Best Trainees" from all over the country. He also emphasised the need for diversification in industrial training. He said it was the only answer to the changing needs introduced by new techniques.

The eight prize-winners, each of whom received a cash prize of Rs. 5,000, a medal, a merit certi-

cate and a tool kit costing nearly Rs. 1,000 were :

Kumari Nirmala Verma of New Delhi (Cutting and Tailoring), Thiru J. Hirudhayaraj (Electrician), Thiru G. Shanmugham Welder) and Thiru A. Ramaswamy (Motorvehicle mechanic), (all from Tamil Nadu ; Thiru Jyotirmoy of Hyderabad (Fitter), Thiru Mohammed Asadullah of Hyderabad (Turner), Thiru Tarlochan Singh of Ludhiana (Machinist) and Thiru Lalit Kumar Chauhan of Bombay (Instrument mechanic)

A Poet's gift to Cosmonauts!

Chief Minister Thiru M. Karunanidhi presented a set of his works to the Soviet Cosmonauts when they called on him last month.

PICTURE PAGES

Opposite Page

1. & 2. The Chief Minister, the Minister for Food and the Minister for Agriculture visited the areas hit by floods, on 23rd November 1970. The Chief Minister distributes food to the affected persons.

3. At Teynampet, the Chief Minister declared open a Corporation park. Also in the picture are Thiru Balasundaram (then Mayor), Thiru Arangannal, M.L.A. and Thiru V. Munuswamy, M.C.

4. 6. & 7. The Chief Minister distributed pattas to the landless people at Tiruvannamalai.

5. Chief Minister with the Soviet Cosmonauts at a City Reception function.

Last Page

1. The W. German journalists, on a visit to the city, called on the Chief Minister, Thiru M. Karunanidhi, at his residence on 26th November 1970.

2. At Madras, the Governor, Sardar Ujjal Singh, laid the foundation stone for the college named after Guru Nanak. The Chief Minister presided over the function. The Education Minister Thiru V. R. Nedunchezian was present on the occasion.

3. The 22nd Anniversary Day of the N.C.C. was celebrated at Nehru Stadium on 22nd November 1970. The Education Minister takes the salute.

4. Tamil Nadu has won the President's Shield for the third time in the All-India Skills Competition of I.T.I.S. Union Minister Sanjivayya presented the shield. State Labour Minister Thiru N. V. Natarajan and Industries Minister Thiru S. Madhavan were present.

5. The 3rd National Conference on mental retardation was held at Rajaji Hall on 4th December 1970. The Governor of Tamil Nadu and Minister for Agriculture visited the exhibition.

6. The Tamil Nadu Police team which annexed the championship at the All-India Police Meet held at Simla, for the 3rd year in succession arrived at Madras on 23rd November 1970. Thiru R. Mahadevan, Inspector-General of Police received the team at the Central station.

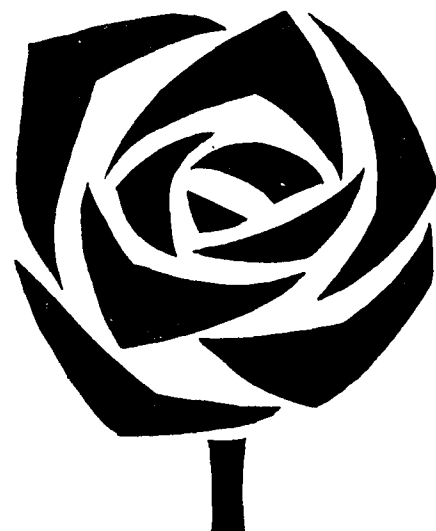
7. The Fifteenth Annual Day of Juvenile Guidance Bureau, was held at Egmore on 23rd November 1970. The Minister for Religious Endowments Thiru K. V. Subbiah was the Chief Guest.

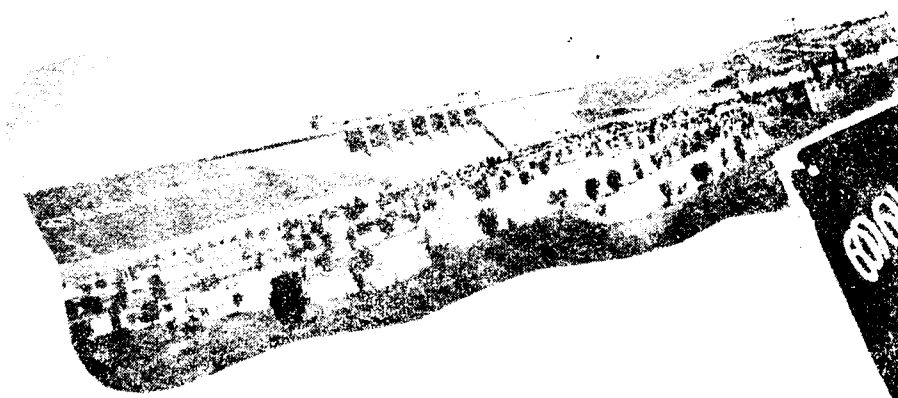
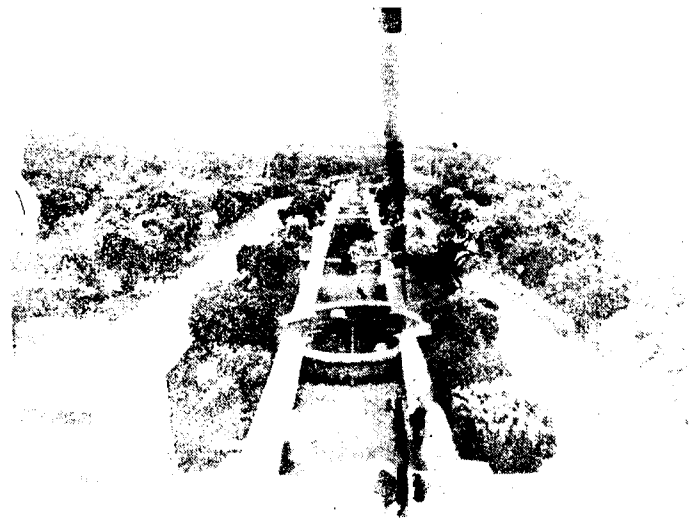
CENTRE-SPREAD

The Vaigai Dam in Madurai District has been developed as a tourist attraction. Lying half-way between Madurai and Thekkadi, most tourists find it convenient to halt at Vaigai Dam for a few hours. All conducted tours include a visit to Vaigai Dam which is 50 miles from Madurai.

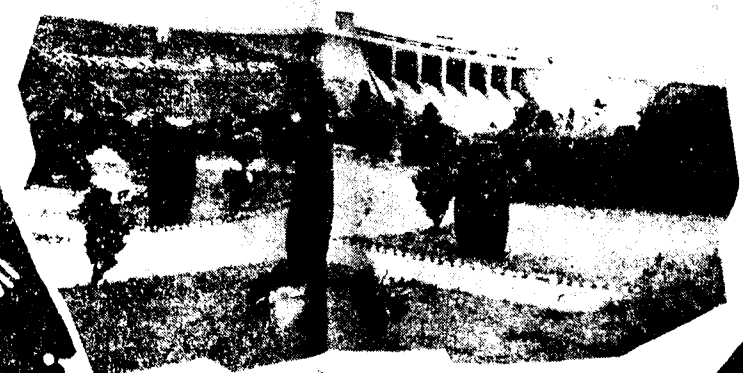
The Vaigai Dam was opened for irrigation in July 1958. It is meant to store the surplus waters of the Periyar lake and also the surplus waters of Vaigai River.

At present 17½ miles of canals take off the Vaigai Dam water to feed 20,000 acres in Madurai and Ramanathapuram districts. The Vaigai Dam was built at a cost of Rs. 3 crores as part of the II Plan. In the Fourth Plan, it is proposed to modernise the Vaigai channels at a cost of Rs. 4 crores. This scheme envisages construction of 2 regulators across Vaigai, one at Virahanur and another at Parthibanur with common channels on either side of these regulators to feed several existing tanks and channels for stabilising an extent of 95,882 acres existing irrigation.

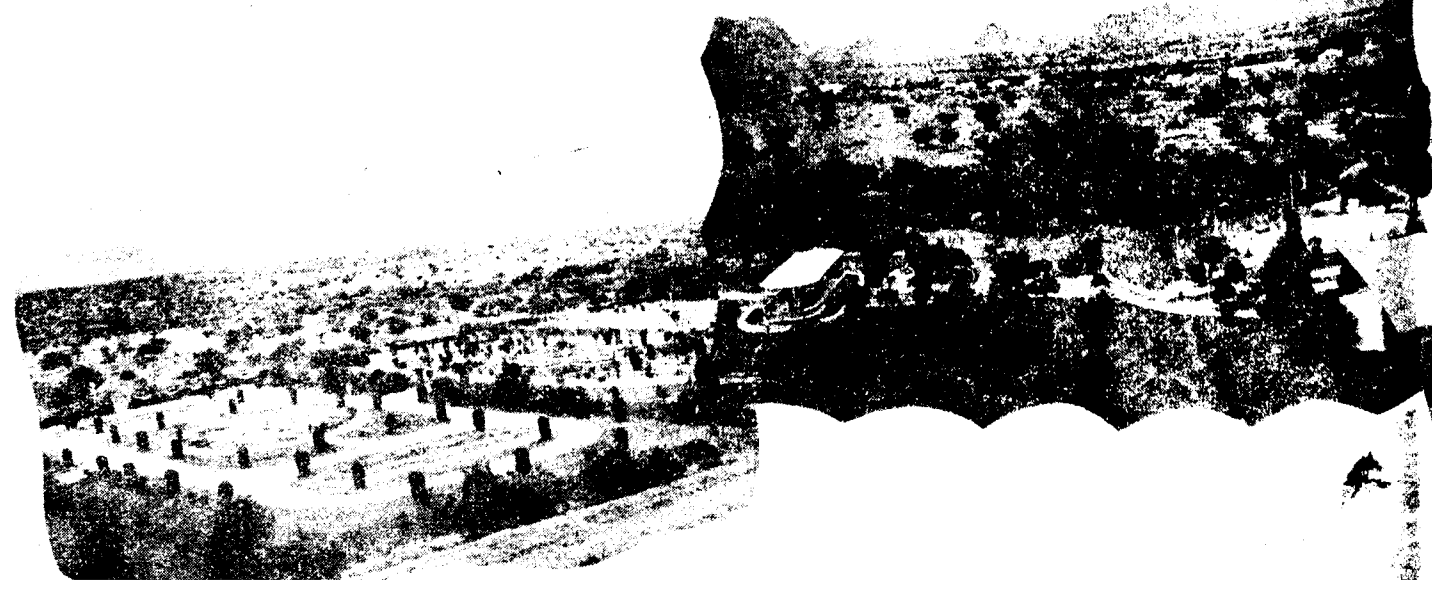


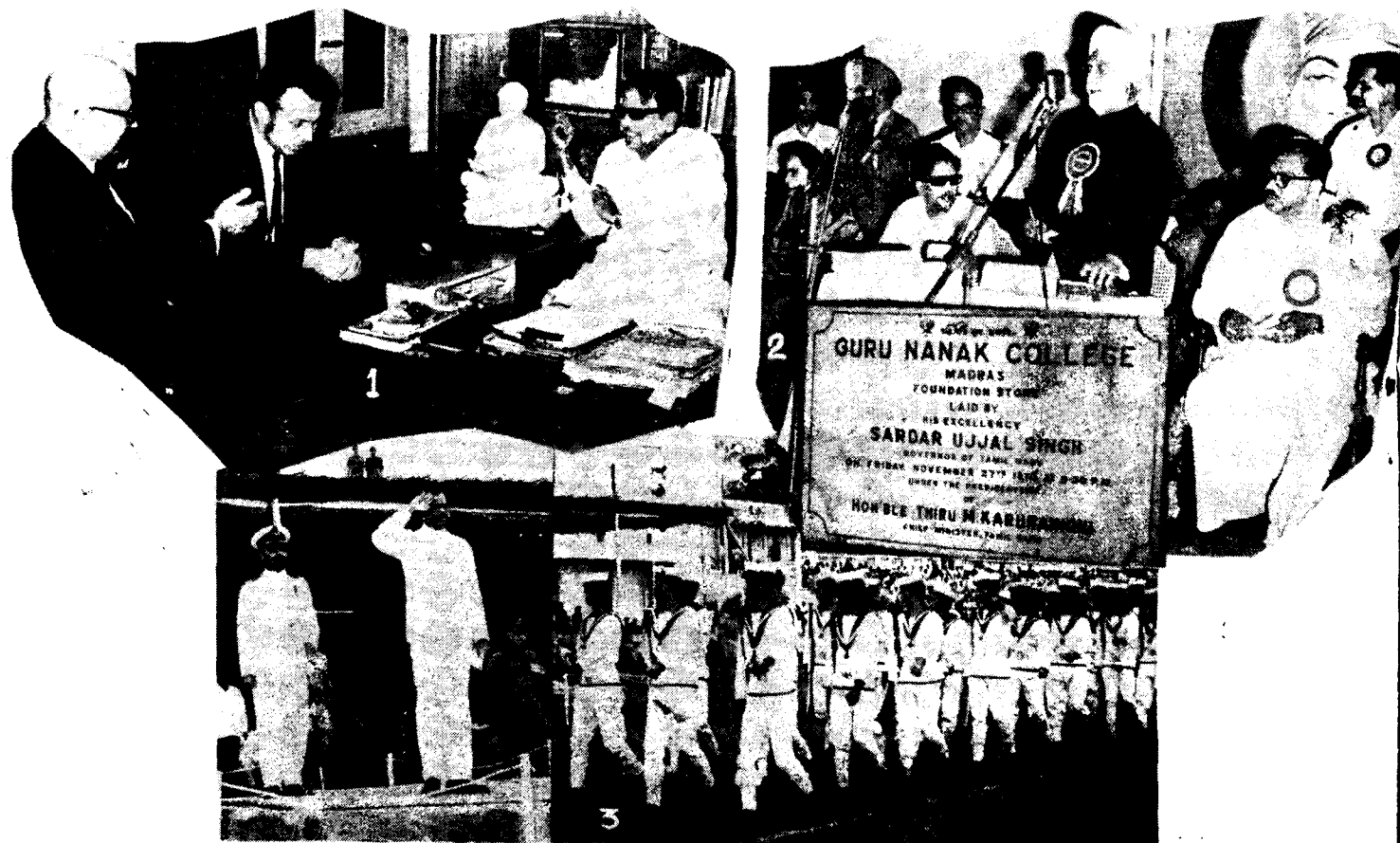


മലയാളം
വെള്ളം
തടയ്ക്കൽ



VIEWS OF
VAIGAI
DAM





WHAT TO SEE

The NATIONAL Art Gallery

R. NAGASWAMY M.A.
Director of Archives.

The art of both secular and religious paintings is well known in Southern India long before the Christian era. *Tolkappiam*, the earliest Tamil literature, refers to the art of painting then in vogue. Sangam literature which are assigned to the early centuries of the Christian era throw much light on the nature of art and its influence on the social life of the people. The ceilings of temples were decorated with paintings depicting scenes from mythology. The bed chambers, courtyards and other halls of the kings and their retinue were beautifully decorated. Since perishable materials were utilised for construction of temples and halls nothing of this period has survived.

With the advent of the Pallava rule in South India paintings of

comparatively permanent nature were executed on the ceilings of rock cut caves. *Mahendra-varma* Pallava, who ruled from Kanchi about 600 A.D. was a great connoisseur of art and was called "*Chitrakalapuli*" the tiger amongst the artists. Fortunately, the paintings at *Sittannavasal* executed at his command are left intact to speak to the future generation the gaiety and splendour of art during this period. His successors continued the patronage and fragmentary paintings are still available in some of the temples.

The great Cholas who ruled the South after Pallavas rivalled the Guptas of the North in patronizing art and literature. The rhythmic and graceful paintings of Tanjore *Brahadeeswara*

temple built by the great Raja Raja Chola is the best example of this period. The Vijayanagar kings who conquered the South in about 1350 A.D. and their successors, the Nayaks, followed the footsteps of their predecessors with the result that large scale wall paintings continued to be the fancy upto the beginning of the 18th century. Paintings representing various periods in the development of South Indian art, were copied from temples and are now exhibited in the picture gallery of the National Art Gallery, Egmore. We have no knowledge of the existence of miniature paintings as that of Rajasthani or Mughal, though it is not quite improbable that some kind of illustrations to manuscripts might have been in vogue. There undoubtedly existed a traditional school of painters who prepared the ground on wooden support with gesso and executed paintings by embedding gold stipples and colour pigments. It is not uncommon amongst this school to make use of pearls, precious stones, gems, etc., for such purposes. This tradition has continued to exist upto the last quarter of 19th century and has recorded a steady decline since then. The 18th century paintings of this school are exhibited in the left side panels of the main hall, virtually marking the beginning of various schools exhibited in the gallery.

During the iconoclastic rule of Aurangazib, the painters of the Mughal school had to seek asylum in Deccan for their livelihood. Some of the artists

migrated to Andhradesa, while some of them were appointed at the Court of Tanjore. The Maratha Kings called Rajas held sway over Tanjore of about 100 years from the middle of the 18th century, and due to the patronage of these rulers the Tanjore School of Art was ushered in. But the Tanjore school had a different setting and the characteristic of the traditional and Rajput schools were met and debased by influences from outside India. The former impersonality of the figures was lost. Like the Mughal school, the Tanjore school became almost completely human with Rajas and Ranis dressed up as for a photograph and turned their eyes towards the spectators. Devotion and imagination were reduced to next to nothing. Yet in both the Andhradesa and Tamil schools the oriental love of elaboration in costume and environment remained. This school is represented after the traditional school of paintings on left side panels of the main hall.

Rajput paintings

The miniature paintings produced at the court of the Rajput kings from a distinct group and they were contemporary with the miniatures produced in the Mughal court at Delhi. From the middle of the 16th century to the end of the 18th, an extraordinary activity of the school produced an immense number of paintings whose complete total is still a matter of conjecture. Of these by far the argest majority are small in size. The chief quality of the Rajasthani

paintings is their idealistic representation of the emotional aspects of the Indian. The figures of human beings and those of animals and birds are also idealistic. The themes are varied and sentiments of love and devotion are mingled with an exuberant joy of life the common subject matter being the Krishna legends. The most important class of the Rajasthani miniatures is the series of Ragamalas or paintings of the musical modes. The best

examples are those of the 17th century. The paintings, like the poems which they illustrate, represent situations of which the emotional colouring corresponds to the feeling or burden of the musical mode. These are exhibited in the sloping central cases beginning from the 17th century Ragini paintings.

Kangra School

Between the late 18th century and early 19th century, the whole

A Ravi Varma Painting.



Kangra valley and adjacent Punjab plains were filled with very sensitive and highly emotional band of artists who were responsible for the ushering in of the Kangra school of paintings. The Krishna subject predominates in this school. Their chief feature is their expressive line in which they may be regarded as distant descendants of the Ajanta frescoes nine centuries earlier.

Mughal School

The Mughal emperors were enlightened patrons of art and they encouraged the art of painting. Akbar and some of his successors are said to have learnt the art themselves and invited master artists to their courts for illustrating many a masterpiece of Sanskrit and Persian literature. Among these illustrated works are the Hamsa Nama, Ramayana the Akbar Nama and other works. During its earlier phases. Persian influence was predominant while at later times it yielded steadily to indigenous influence. Religious and metaphysical ideas which were predominant in Rajput paintings did not enter into Mughal paintings which confined itself to visible and tangible things not thought of or imagined. Its chief subject contribution to art is its gallery of contemporary portraits, small and in water colour of the Mughal emperors and their eminent contemporaries. These were painted realistically without the atmosphere of symbolism though with a conventional departure from the normal in the halo round the head of royalty and the artificial arrangement of the feet. These



Another Ravi Varma Painting in Art Gallery.

find their place on the other side of the sloping cases.

Paintings of Ravi Varma

The extreme of foreign influence in the development of Indian paintings, was reached with the advent of Raja Ravi Varma when he won the British Governor's Prize in 1873. Though he copied the western technique, Ravi Varma chose for his subjects, themes from Indian mythology. Because of his westernisation, he was not popular with the revivalists of Bengal. His competently drawn illustrations of legends reached a wide public and fixed at least a minimal limit of technical adequacy for this type of production. His son Rama Varma and a host of others carry on the Ravi Varma traditions. Amongst

Deccani School

The Deccani paintings are an off shoot of the Mughal school, which flourished during the 17th and 18th centuries under the patronage of local rulers of the Deccan states of Golconda and Bijapur. Portraits, Ragamalas and book illustrations formed the subject of this school as was also large scale paintings on canvas. Two specimens of paintings on canvas are included in the exhibits. Representative paintings of this school are exhibited at the right side corner panel of the main hall.

his paintings, exhibited here, *Sakuntala* and *The Miser*, speak of his elegance.

Modern Paintings

A revivalist school of painting was started in Calcutta by E. B. Havell and Rabindranath Tagore who wanted to bring back to life the lost traditions of ancient Indian painting. The prominent artists of this school are Nandalal Bose, Roy Chowdhury Huldar and others. The works of these artists are characterised by a striving after the perfection of draughtsmanship and suggestion of spiritual significance unlike the ultra realistic delineation of subjects in western paintings. Further, great stress is laid on traditional technique and the choice of subjects from Indian life.

The revivalist school of Bengal is represented here by D. P. Roy Chowdhury, Sarada Charan Ukil, Abdul Rahman Chaghtai, Promode Kumar Chatterjee and others. These are exhibited in the right side panels of the main hall.

The Madras College of Arts has been able to discover a number of promising artists whose works are considered to be of a very high quality. Amongst these artists are K.C.S. Paniker, K. Srinivasulu, P. L. N. Murthy, S. Dhanapal and others. The modern trend amongst some of these artists is towards impressionism, a judicious selection from nature and a sketch improvisation rather than imitation. The near view that emphasised form is replaced by the distant view of objects seen out of door under the influence of light and atmosphere. Outlines are replaced by

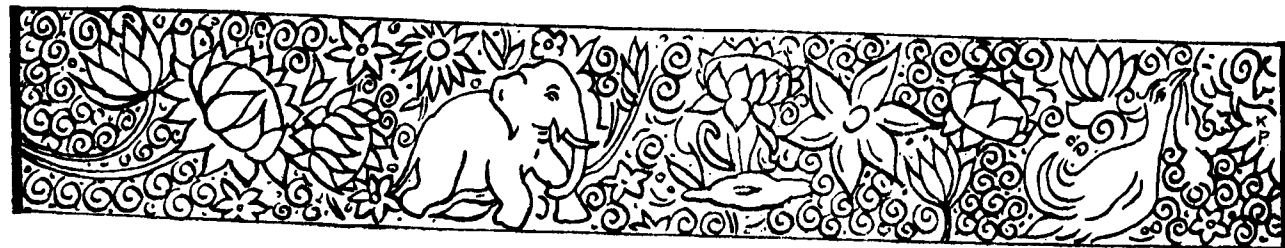
opposing patches of light and darkness. At the rear hall of the gallery, are exhibited the paintings of this school.

Recently yet another group of artists sought to revive the art traditions of rural India. The most important artist of this school is Jamini Roy of Calcutta. Two of his paintings find a place amongst the exhibits.

The National Art Gallery has also a system of making regular purchases of old and new paintings. It is sad however that there is not yet a total acceptance of the 'modern' works. Actually it is not that they are modern, rather that they express all ideas ancient and modern in the contemporary mood. The ancient Siva-Sakti cult expressed in phallic symbols take a contemporary form in the paintings of Viswanathan and Bhaskaran. It is however a representative collection that we see in the National Art Gallery.



A Roy Chowdhury Sculpture.



TRAINING FOR ARCHAKAS PROPOSED

The Tamil Nadu Legislative Assembly has passed the Hindu Religious and Charitable Endowments (Amendment) Bill, 1970 to change the hereditary system of priesthood in Hindu Temples and to create an institution to train archakas to hold this office in our temples. This is one of the recommendations of the Dr. C. P. Ramaswamy Aiyar Commission of Enquiry into Hindu Religious Endowments and it is this which is in the process of becoming a law. An Expert Committee has also been constituted to draft a syllabus for the training of temple priests.

The New Training Institution is expected to cater to the needs of 9,347 temples administered by the Tamil Nadu Hindu Religious and Charitable Endowments Department. The department, in addition, is also in administrative control of 105 mutts and 787 specific endowments.

The current annual income of all these temples, mutts and endowments is Rs. 4.87 crores. The department derives an annual contribution from these institutions totalling Rs. 43 lakhs. The Government is bestowing serious

ABOLITION OF HEREDITARY PRIESTHOOD

REFORMS FOR BETTERMENT OF TEMPLES

attention to improve the income of these temples from their respective endowments, as the last census revealed that income from the properties endowed on most of these temples is low and can be suitably improved by better management of their properties. At the same time the Government has set apart a sum of Rs. 4 lakhs every year for making lump-sum grants to poorly endowed temples.

Secular expenditures

The better endowed temples in the State maintain eight orphanages, one Thevaram School, two Arts Colleges, six Girls High Schools and two colleges of Oriental Culture. The Tamil College of Oriental Culture started by the Authorities of Manali Lakshmana Mudaliar Specific Endowments at Madras and Devi Kumari College for Women started at Kuzhithurai by Kanyakumari Devaswom Board are also functioning well. Several temples are running Siddha Medicine research centres and dispensaries.

Origin of temple worship

As has been rightly pointed out by learned authorities, Hinduism is more a way of life than a form

of worship. There are several stages in the development of Hinduism and Indian thought and philosophy. In the Vedic period, there was no reference to temple, i.e., the sacred place of adoration of God, or Mutt, i.e., the place where spiritual instruction is imparted by preceptors. In those times, the various manifestations of the Supreme being like Agni (fire), Vayu (wind), etc., were propitiated only by hymns and sacrifices without representing them in any form. In the latter Upanishads, however, the idea of a personal God was developed and devotion to such Godhead was inculcated. Such ideas were developed fully in the Ramayana and Mahabharatha. It may, therefore be said that it was from the days of the Puranas that the construction of temples assumed considerable importance. A definite mention about temple building was to be found only during the time of Kautilya. In the Kautilya's Arthashastra it is said, "In the centre of a city the apartments of houses of Gods such as Aparajita, Apratihata, Jayanta, Vajrayanta, Siva, Vaisravana, Asvina and Goddess Madira shall be situated."

REFORM RECOMMENDED BY C.P.R. AIYAR COMMISSION

HINDU RULERS HAD STRICT CONTROL OVER TEMPLES

The development of temples in South India took place only during the last 13 or 14 centuries. The construction of the rock-cut temples in the Pallava Kingdoms of Kanchi during the 7th century marked the beginning of temple building activities in this part of the country. During the regime of Chalukyas, a large number of Jain and Hindu sculptures and temples sprang up. The Chola period from 1019 A.D. onwards was another notable era in the temple history. New types like those of Thanjavur and Thiruvannamalai, Rameswaram and Madurai came up. The Vijayanagar Kings enthusiastically continued and greatly embellished the Chola tradition.

Temples under Hindu Rulers

Historical records reveal that the Hindu Kings exercised strict supervision over the temples. The inscriptions in several temples speak volumes about the piety of the Kings of the by-gone days and their handsome endowments to temples. The rulers had specially appointed officers to supervise the working of the temples in their kingdom.

In the former princely States of Travancore, Mysore and Pudukkottai, the supervision of temple management was recognised as a duty of the rulers. The very basis of the kingdoms being theocratic, the kings had a responsibility in the protection and management

of temples. In Travancore, the kings ruled over their land in the name of Lord Padmanabha. These kings styled themselves as Padmanabha Dasa or the servant of the Lord.

British administration of religious institutions

The English who arrived in 1600 A.D. in the coromandal coast respected the local laws and customs. With the acquisition of the Jaghir by the company in 1640, their contact with the religious institutions began. For about 150 years between 1640, and 1790 A.D. there were only isolated instances which signified the contact. But the period 1790 to 1817 witnessed a closer association of the British rulers with the religious institutions. It was found that the income of many endowments had been mis-spent by the persons vested with the responsibility of managing them who outwardly seemed to follow the traditions of former rulers.

The first step at Legislation in 1817

Regulation VII of 1817 for the first time gave the company powers of supervision over religious institutions. The position has been clarified in the case of Raja Muthu Ramalingam v. Periyannayagam (1817) where the Judicial Committee observed as follows :—

"It is evident that before the Regulation (VII of 1817), the

British Government by virtue of its sovereign power, asserted as the former rulers of the country had done, the right to visit and supervise endowments of this kind and to prevent and redress abuses in their management. There can be little doubt that this superintending authority was exercised by the old rulers."

The 1817 Regulation laid down that the machinery of supervision should be (1) The Board of Revenue, (2) Local agents, i.e., the Collectors, (3) Trustees, Managers, Superintendents, etc., who were the managerial staff. The Regulation enacted in 1817 operated till 1839. During this period it is on record that the endowments were protected better and administered on sounder lines.

Two decades of "No Law"

In 1839 certain Christian zealots and religious propagandists in the United Kingdom started an agitation urging that it was not one of the functions of a Christian Government to administer Hindu endowments and provide for the maintenance of Hindu temples and Muslim Mosques. During the period up to 1860 or 1861 the decision of the Court of Directors of the East India Company to relinquish the control was implemented. The Board of Revenue severed to the extent possible, its association with the management of religious institutions, although the Regulations

themselves continued to be in force. The absence of active Government control led again to mismanagement of temples and misappropriation of temple funds.

During the period 1842-1863, when no law governed the temple affairs, several attempts at legislation were made. All attempts proving futile, the Imperial Legislature, just 20 years after the Government had factually dissociated themselves, legalised the severance.

The Act of 1863 a failure

The Religious Endowment Act XX of 1863 was passed that enabled the Government "To divest itself of the management of religious endowments". The Act applied to all Hindu and Muslim public religious endowments in the Presidencies of Bengal and Madras (excluding Malabar). The enactment of this Act on 10th March 1863 marked the first step towards democratisation of temple administration. According to this Act, (1) the principle of direct election was introduced in the management of religious institutions. The committees appointed under this Act were given the powers that were hitherto exercised by the Board of Revenue and the Collectors; (2) Courts were authorised to take note of acts of misfeasance, neglect or duty, etc.

Owing to the inherent defects in the structure of the Act and the attitude of the people in general the Act of 1863 which was intended to provide protection to religious endowments proved by general admission, to be a dismal failure. The Act made no provision for supervision over an important and large class of temples of which the trustees, though not originally, hereditary, became hereditary between the years 1842 and 1863. There were also other defects which affected the smooth working of this Act. This Act, however, did not extend to the Indian States which were not then subject to the jurisdiction of the Indian legislative authorities. The religious institutions in these States enjoyed the encouragement and patronage of the rulers.

Attempts at Legislation again

The public voiced their opinion that the legislature and the Government should adopt a more helpful and dynamic attitude in respect of religious endowments. During 1870-1920, twelve attempts at legislation were made at Madras, Bombay and Calcutta. The Bills that were introduced in the Madras Legislative Council and the then Imperial Legislature were :

Madras Legislative Council.

1. Mr. Rama Iyengar's Bill (1872).

2. Sir W. Robinson's Bill (1877).
3. Mr. Carmichael's Bill (1883).
4. Mr. Sullivan's Bill (1886).
5. Mr. Muthuswami Aiyer's Bill (1894).

Imperial Legislature

6. Mr. Anantacharlu's Bill,
7. Dr. Rash Behari Ghosh's Bill.

Though none of the 12 Bills was placed on the Statute Book, they were on the whole useful in bringing out certain ideas. These ideas were later incorporated in Act I of 1925 which repealed the Act of 1863.

A Bill repealing the Madras Act I of 1925 and re-enacting its provisions in another Code with a clause validating all the acts carried out under the Act of 1925 was introduced in the Council in 1926. A hot debate was held in the Council on Bill V of 1926. As many as 457 amendments were brought to the 85 clauses of the Bill and its three schedules and the preamble. None of the important amendments was, however, accepted and the Bill was passed on 17th September 1926 and placed on the Statute Book as the Madras Hindu Religious and Endowments Act of 1927 (Madras Act II of 1927).

ABSENCE OF GOVERNMENT CONTROL LED TO LOSS OF TEMPLE FUNDS

THE TEN COMMANDMENTS OF 1959 ACT

The main aims of the Act of 1927 were : (1) to ensure better administration of certain Hindu Religious Endowments and (2) to remove doubts as to the legality of actions and things done under the Act of 1925. The new Act applied to the whole Presidency with certain limitations. It did not apply to the City of Madras and it was applicable only to Hindu Institutions. Only Public Endowments came under its purview. Religious and not charitable Endowments came within the ambit of this Act. The machinery of supervision was: (1) The Board of Commissioners, (2) Temple Committees, (3) Trustees of the temples and (4) Servants of Institutions.

Amendments to the Act of 1927

The Act of 1927 had to be amended several times. The amending Acts were: Madras Act I of 1928, V of 1929, IV of 1930, XI of 1931, XI of 1934, XII of 1935, XX of 1938, XXII of 1939, V of 1944 and X of 1946. All these ten amendments may be classified under one or other of the following categories :—

(a) amendment of an explanatory nature, (b) to expand the jurisdiction, (c) to facilitate administration, (d) to remove financial difficulties, (e) to make social reforms, (f) to effect a change in policy, (g) amendments arising out of judicial decisions.

The Acts V of 1944 and X of 1946 did not contain the proposals of the Congress Ministry in 1937 to Provincialise the Board. The Congress party which formed the Government in 1946 took up the proposal for re-examination in 1947. The bill aimed at (1) the consolidation of all the previous laws, (2) Provincial Government being vested with the powers of general superintendence of all religious institutions, (3) a Department of the Government taking the place of the corporate Body of the Hindu Religious and Charitable Endowments Board, (4) The Charitable Endowments coming within the purview of the proposed legislation and (5) restricting the scope of appeals to Courts. The Hindu Religious and Charitable Endowments Act of 1951 repealed the Act of 1927.

Within a few days after the Act of 1951 was placed on the Statute Book, it was challenged in the Courts of Law. The challenges aimed at (1) the consistency of some of the provisions of the Act with the constitutional provisions, especially those relating to Fundamental Rights, (2) the consistency of the Act with natural justice. The constitutional and legal implications of the 1951 Act were elaborately studied in what was

popularly known as the Shirur Mutt Case. This Act was amended by Madras Acts XXI of 1954, IX of 1956 and later replaced by the Madras Hindu Religious and Charitable Endowments Act, 1959 (23 of 1959).

Consolidation of the Law in the Act of 1959

The 1959 Act consolidated the law on the subject and it applies to all the Hindu Public Religious Institutions and Endowments except the incorporated and the unincorporated Devaswoms in Kanyakumari district and Shencottah taluk.

The salient features of the Act are briefly given below :—

1. Provision for the appointment of one member at least of the Judicial Service either as Commissioner or as Deputy Commissioner has been made compulsory under section 9 (2) of the Act.

2. Appointment of Executive Officers by the Commissioner for religious institutions other than mutts or specific endowments attached to mutts.

3. Constitution of Area Committees by Government with a Chairman and two to four members for each and ex-officio appointment of the Assistant Commissioner concerned as the Secretary of each such Committee but with no right to vote.

4. Constitution of an Advisory Committee consisting of 12 non-officials besides the Minister in-charge of the portfolio, the Secretary to the Administrative Department of Government and the Commissioner to advise Government in respect of the Administration of religious institutions and matters referred to it.

5. Provision for the removal of encroachments from lands belonging to religious institutions and the constitution of special tribunals for dealing with claims for compensation from persons dispossessed of such lands.

6. The creation of a Fund called the Madras Hindu Religious and Charitable Endowments Common Good Fund out of the contributions voluntarily made by the religious institutions from the surplus funds or by any person for the renovation and preservation of needy tem-

ples and their buildings and paintings and the promotion or propagation of tenets common to any class of such Institutions.

7. Conferment of greater rights to Matadhipathis and hereditary trustees having regard to the provisions of the Indian Constitution and the trends of decisions of the High Court and Supreme Court.

8. Provision for safeguarding the interests of religious institutions by way of surcharging trustees found to have misappropriated institution funds or expended them improperly or illegally even while inspecting the institutions without waiting for completion of audit.

9. Special provisions for the settlement of schemes for mutts by the Commissioner.

10. Provision for enabling the Deputy Commissioner, on being

satisfied that the purpose of a religious institution has from the beginning been or has subsequently become impossible of realisation, to direct by order that the endowments of the institution be appropriated to all or any of the purposes enumerated in section 66.

The Hindu Religious and Charitable Endowments (Administration) Department is constituted under the provisions of the Madras Hindu Religious and Charitable Endowments Act, 1959 (Madras Act, 22 of 1959) as amended. The Commissioner is the head of the department and he exercises supervision and control over all the religious institutions in the State subject to the provisions of the above Act. He has judicial functions both on original and appellate sides, under the provisions of the above Act.

ACHIEVEMENT UNDER HIGH YIELDING VARIETY PROGRAMME IN TAMIL NADU

The High Yielding Variety Programme was introduced in Tamil Nadu in the year 1966. This programme was a major step forward to increase production in a short period.

During 1966, as against the target of 3.00 lakh acres, 2.80 lakh acres were covered with ADT 27. An additional area of 43,500 acres was covered with Co. 25 paddy raised under a special programme. Thus the total area covered under the H.Y.V. Programme in the entire State of Tamil Nadu was 3.24 lakh acres.

The Government have taken special efforts to intensify the production, during the last three

years. The coverage of paddy under the H.Y.V. Programme during 1969-70 was 28.21 lakh acres, as against the target of 23.00 lakh acres.) The target fixed for the year 1969-70 (i.e. 23.00 lakh acres) was nearly eight times the target fixed for the year 1966 (i.e. 3.00 lakh acres). The achievement was also raised correspondingly to nearly eight times—viz., the achievement during 1969-70 was 28.21 lakh acres as against the achievement of 3.24 lakh acres in 1966.

The target fixed for the year 1970-71 for the entire State is 37.50 lakh acres. This is twelve times the target fixed for the year 1966.

The target fixed for the year 1970-71 for Chingleput district alone is 3.57 lakh acres. As against this target 5.35 lakh acres has been achieved.

The achievement made in a single district—viz., Chingleput district—is more than one and half times the achievement made during 1966 in the entire State of Tamil Nadu.

The Fourth Plan Target for the State in this particular programme of high yielding varieties was fixed at 33 lakh acres. It is of interest to note that in the second year itself the final year's target has been exceeded.

PARI'S PIRANMALAI

Parambu Malai (hills) finds frequent mention in the ancient Tamil classics. To day it is known as Piran Malai (hills). Apart from the three dynasties of the Cholas, Pandyas and Cheras there were numerous chieftians who ruled over small dominions in Tamil Nadu. Pari is also one such chieftian who ruled from this Parambu Malai. He is noted for his philanthropic outlook. He was a great patron of Tamil language and literature, art and music. So, poets and artistes always gathered at his Court, displayed their talents received generous gifts from him. Kabilar is one of the Sangam poets who presided over the Tamil academy at Madurai. Pari's great qualities attracted him. And King Pari was also eager to be always in the company of this renowned poet. Both of them became friends and Kabilar lived with Pari in that rich and fertile Parambu Malai.

There were perennial falls and numerous ponds of fresh water in the hills. Honey was plentiful in the forests and jack-fruits too. Millets were also grown in sufficient quantities besides various roots all of which served as fine delicacies of food. With such forest wealth the Parambu Malai presented a most beautiful spectacle of natural scenery in all its variegated forms.

This is the description given by the Sangam literature about these hills. Whatever may be



the reputation of these hills in ancient days, to day it has lost all its splendour. There are several hillocks adjoining this Piran Malai in a circular form which has created a dislike valley inside. Within this valley there are about fifteen villages. So far they have been completely isolated from the rest of the world. Even for the weekly purchases, these villagers will have to walk about 15 miles around the foot of the hills to reach the nearby weekly (Shandy) fair which is only at a distance of about 5 miles if a direct road is laid. That was the state of affairs until a few months back.

They Volunteered

There was a pass between two hillocks of the Piran Malai. It is about a mile in length. If a ghat road is laid through this pass the transport and communication problem of these villages can be easily solved. Though such a proposal was there for a number of years no step was taken to execute the project. All these years these villagers, were eagerly

waiting for a lasting solution to their hardship. For, even to sell their produce like paddy, groundnut and other commodities they have to make an arduous journey for about 15 miles around the hills to reach nearby Singampunari village or Piranmalai town. Then there was the problem of educating the children of these villages in the nearby High School.

A ghat road of about 3 miles was laid across the pass mentioned above at a cost of Rs. 30,000. It should be mentioned here that the entire stretch of the ghat road has been laid by the villagers themselves, as no contractor would take up this work. The village folk on the other hand volunteered for laying the road. The nature of the work can be understood from the fact that on one occasion it required about 27 men to remove a huge boulder. For professional labourers it may not be a task. But, for the villagers who are not accustomed to such work and



what too on a ghat section it was really a formidable task. Undaunted, they completed the work.

During formation of the road on an average 140 persons worked for about 40 days in the ghat section. By the formation of this ghat road Melavenniruppu and other 18 villages are connected by a very short length of 7 miles.

The work of formation of the ghat road along the Piranmalai Hilly range was taken up for execution during 1969-70 under the Drought Relief Scheme. Formation of 14 link roads connecting the interior villages of the valley have also been taken up for execution which will be connected to the ghat road. There is now a proposal for metal-ling and black topping these roads at a cost of Rs. 2 lakhs. Thus one

of the essential and long-felt needs of these villagers has at last come to be fulfilled. It is a boon to this area which has been very backward. A centuries-old need was fulfilled in a trice because the will of the people was matched by a keen desire on the part of the Government to provide funds to redress the rigours of their hardship. Pari and Kabilar may come together again, to enrich the local legends with deeds of valour and wisdom as in days of yore.



BAD ROADS CAUSE

ACCIDENTS

India, has a dubious distinction of leading the rest of the world as regards the number of persons killed annually in road accidents per unit number of vehicles. Till 1965, this index for 100 vehicles was close to 8 in the case of India, as compared to just one for a number of developed countries like France, West Germany, U.K. and the U.S.A. It is rather unfortunate not to take this seriously and many circles continue to attribute the cause of most highway accidents to human perversity, or vehicle defects and to, naively, believe that the road had little or no blame to share. It is true that the problem of highway accidents is a multi-dimensional one, comprising of man, machine and environment, in which a number of complex situation is possible. It is also true that enforcement of traffic regulations has a part to play. But more often than not, accidents could be traced, primarily, to inbuilt inadequacies of highway design. There are many instances where these inbuilt inadequacies of highway designs are solely responsible for such accidents. In fact, this was impressively demonstrated in the U.S.A. where a Spot improvement Programme was launched in 1964. It is even more gratifying that the cost of such improvements has been found to be very low but pay off high by reducing road accidents.

President, Indian Roads Congress

Ramnad Breed of Sheep for Wider Rearing

The Ramnad breed of sheep or *Keelakarisa* as it should be called obtains its name from Keelakarisa in Aruppukottai taluk of Ramanathapuram District. The breed is distributed in Ramanathapuram, Paramakudi, Aruppukottai and Mudukulathur taluks of Ramanathapuram District and in Thirumangalam, Usilampatti and Nilakottai taluks of Madurai District. The places where the breed is available in pure and true to type are Keelakarisa, Keelakaruvai, Mandapam, Mudukulathur, Kamuthi, Aruppukottai and Kariapatti of Ramanathapuram District and Thirumangalam of Madurai District. The breed is also known as Karuvai, or Ramnad Karuvai.

The object of maintaining sheep in South India is primarily for the purpose of manure and mutton and the Ramnad breed is not an exception to the above object. The individual holdings of the breed range from about 6 to 7 ewes and one ram to about 45 to 50 ewes and about 4 rams. The Government had also undertaken schemes for the improvement of this breed, under the Plan schemes. The herd under the farm conditions were maintained in Government District Livestock Farms at Chettinad, Pudukottai and Abishekapatti and in Sheep Units at Sattur and Nanguneri

and Sheep Farm at Kattupakkam. Little particulars regarding the breed characteristics and reproductive norms of this breed are available. It was therefore considered necessary to develop norms for the Ramnad breed of sheep for selection and pure breeding in farms for distribution of pure breed male progeny for the improvement of village flocks of sheep for increased mutton production.

General Characteristics of Ramnad Breed

The Ramnad breed of sheep is of medium size, but a short variety is also met with. The short variety is seen in Nilakottai Taluk and the medium variety is available in the border areas of Ramanathapuram District and in Madurai District particularly in Tirumangalam and Usilampatti Taluks. It is a purely hairy type as any sheep seen commonly in the hot districts of South India.

The weight of adult ram varies from 22.5 to 42.29 kg., the average weight being 32.17 kg. Fully grown ewes weigh from 14.54 to 28.92 kg. and the average weight of 359 ewes is found to be 19.72 kg. The age of the adult rams and ewes vary from 30 months to 50 months.

The colour of the animal generally varies from dark tan,

Mechanical Salt Harvester

The Central Salt and Marine Chemicals Research Institute, Bhavnagar, has designed a mechanical salt harvester that will halve harvesting costs. It comprises of rotors that wash and push the scraped salt, and cutting blades which remove and loosen the salt without disturbing the crystallization beds. Floating conveyors lift the salt for dumping into trailers.

Pressure Peeling

Scientists at the Soviet Krasnodar Institute of Food Technology have developed a new high pressure peeling device which causes the skins of fruits and vegetables to literally fall off. The produce to be peeled is fed into the device and subjected to a high pressure, which is suddenly released splitting the skin into fragments. The device is specially suitable for potatoes, carrots, pears, apples, etc.

light tan to red, with black fringes. The predominance of black colour is in the ventral aspect of the body, in the region of inner canthi of the eyes, extending to poll forming an inverted 'U' and in the angle of the mouth, lower lip, chin, jowl place, throat, dew lap and briskets and in the tip and border of ears and also in the inner aspects and borders of forelimbs and hind limbs below the knee and neck joints. Presence of white markings anywhere is a mark of disqualification for this breed. Detailed studies of this breed have been made for extensive distribution and improve mutton quality.

Pulses constitute about the only acceptable protein content in the average South Indian food, more so in Tamil Nadu. The situation is further aggravated in Tamil Nadu which does not have to its credit the consumption of other protein-rich food like fish and milk products to any appreciable extent as in other parts of South India. Pulses therefore are about the only protein element in the Tamilian diet at present.

Specific orders

The Government of Tamil Nadu therefore became much disturbed at the rising trend in the price of pulses and at the same time rather because of it, a lower and lower consumption of pulses in recent years. The position both in terms of area under pulses and quantity of pulses produced in Tamil Nadu is far from satisfactory. The two-year drought in 1968-69 and 1969-70 no doubt, was to some extent, responsible for the decline in production. But frankly, the Government feel, that this is not all. The Government has issued specific orders to the Directorate of Agriculture to secure increased tonnage in pulses in the current year itself, i.e., before March 1971.

As in the paddy high yielding variety programme and its concomitant package practices of sowing and growing under careful supervision, pulses are to be grown on an extent of over

THE CRASH P R O G R A M M E FOR PULSES

5 lakhs acres with good quality seeds. Rice fallow land to an extent of 3 lakhs acres, i.e., 1 lakh in Thanjavur district, 1,40,000 acres in Tiruchirappalli district and 60,000 acres in Tirunelveli district are to be utilised for this purpose. Another 1 lakh acres are to be found in the rain-fed cotton areas of Tirunelveli district for this purpose. The cashew and coconut gardens of Tiruchi, Thanjavur, Tirunelveli and Madurai districts will provide 50,000 acres for horsegram. The bund and border crop of redgram in the sugar and banana fields of Tiruchi, Thanjavur and Madurai will constitute 10,000 acres. Lastly redgram will be raised as a pure crop in summer in 25,000 acres and mixed with groundnut in 50,000 acres in all the above districts.

War Footing

This will be a crash programme to be executed on a sort of war-footing and each agricultural division is expected not only to achieve the targets to be fixed by the Directorate of Agriculture, but also to exceed such targets. All the requisites for the organised package approach animating the high yielding varieties programme in the Intensive Agricultural Development Project areas in respect of paddy have been ensured for this crash pulses programme and the Government expect that this should be the corner stone for the 'more pulses in the shortest possible time' programme.

THE SCOPE OF

The success of the green revolution ushered in, in our river basins, are now to be applied to the arid dry land tracts of Tamil Nadu. Money, man-power, science and technology—all will be harnessed in a determined effort to banish the poverty of the dry land farmer. For three centuries these dry land farmers in sheer desperation colonized distant countries; the sweat of his brow shall henceforth fertilise our own soil. As over half our foodgrains come from these dry lands, this scheme is being implemented on a priority basis. The implementation of the Integrated Dry Land Agricultural Development Project in the Kovilpatti taluk of Tirunelveli district will be the harbinger of a new means of plenty for Tamil Nadu. The project is so immense that it will confer a permanent benefit on the 2,000 acres of land at a considerable cost and this process will spread to another 6,000 acres in the same taluk.

As a first step, the Regional Research Station, Kovilpatti, will

initiate research on dry farming at specially selected centres. The best methods of soil and moisture conservation practices will be made practicable for farmers. Drought tolerant and short duration crops will be cultivated in this area. New techniques of fertilisation like foliar spraying (i.e., making the leaves consume the fertilisers direct instead of through the roots) will be applied. Timely plant protection measures will be adopted.

Subsidised inputs

The project is being implemented in an area of 2,000 acres in 1970-71 and will be progres-

sively extended to cover 8,000 acres in Kovilpatti taluk. The first stage area of 2,000 acres have been chosen in the villages of Thittankulam, Chidambarapuram, Ilambhuvanam and Vijayapuri—all lying close to the main road for easy accessibility to rush inputs.

Pre-treated seeds will be distributed in the project area at half the cost and the same subsidy will be afforded to fertilisers and pesticides. Such subsidy for the 2,000 acres will work out to Rs. 3 lakhs for the current year.

The land in the project area will be improved on a permanent basis, consisting of soil conservation, land development and water harvesting, at a cost of another Rs. 3 lakhs. The soil conservation methods include arresting surface run-off with bunds, grass-turfed water-ways and 500 rough-stone packing at the rate of one for each 4-acre plot.

Land Development

Major area in this dry farming tract does not require any drastic levelling. However to remove pernicious weeds like hariyali, systematic digging is to be taken up and giving a disc ploughing followed by tillering will be advantageous in as much as it will enable easy removal of harmful weeds besides providing a good tilth which will aid conservation of moisture. A sum of rupees one lakh will be provided under this head at the rate of Rs. 50 per acre of which 25 per cent will be subsidy.

DRY FARMING PROJECT

KOVILPATTI

Water harvesting

Small ponds which are scattered in abundance in this tract will be strengthened in order to improve their potentiality both for supplying water for spraying the crop and also providing drinking water to the cattle. Incidentally this will improve the sub-soil water resources that will ensure a good crop under dry farming. Linking of existing channels with brick work will also be attempted to prevent excessive drainage water from entering into the field and destroying standing crops and also to enable taking the excess rain water to nearby tanks. Application of sand to improve soil texture for allowing seepage of water and for preventing heavy cracking. The entire grant of Rs. 2 lakhs provided under this head will be profitably spent.

Infra Structural arrangement

In order to make effective on-farm demonstration of the economic results obtained in the research station it is envisaged to layout 30 demonstration plots in farmers'

holdings. There will be thus 20 demonstration plots for HB-3 cumbu and 10 demonstration plots for cotton where the utility of adopting the fertiliser level, line sowing and plant protection measures will be demonstrated. The entire cost of these demonstrations amounting to Rs. 5,000 will be treated as grant.

Farmer's Training

The Farmer's Training Centre, Koilpatti will undertake to impart training to progressive farmers in improved technology for which it is to be given a grant of one lakh of rupees.

ATTACK

The Crops

It is proposed to raise dry cotton and cumbu in blocks of 1,000 acres each during 1970-71. While HB-3 will be the cumbu strain selected either K-7 or MCU-6 cotton (Bharathi) will be recommended for cultivation. HB-3 has been chosen for its short duration, high yield and resistance to pest and diseases like ergot while K-7 and MCU-6 have been selected based on their yield and quality. Research work done at the Regional Agricultural Research Station, Kovilpatti on these two crops have indicated that the application of 16 kg.

ON POVERTY

of N and 8 kg. of P-205 per acre and the adoption of line sowing with gorru following a spacing of 45 c.m. between rows and 15 c.m. between plants in a row as the most suited practices to maximise the yield of both rainfed cotton and cumbu. Plant protection schedules have also been evolved. These recommendations will be adopted and the following Package of practices will be recommended.

A massive programme of animal husbandry is also being undertaken in the project area at cost of another Rs. 3 lakhs for supplying grades cows, bulls, ewes and rams as also poultry. Provision of cattle sheds also forms part of the scheme. A Project Officer assisted by an Animal Husbandry Officer and a complete establishment will be located on the spot. The State Level Committee formed for the project with the Secretary to Agricultural Department will also have a representative of the Reserve Bank as one of its members.

MULTI PRONGED

GANDHI MEMORIAL SCHOLARSHIP SCHEME FOR SCHEDULED CASTE STUDENTS.

The Government of Tamil Nadu have decided to institute a Special Scholarship Scheme for the benefit of Scheduled Castes students in memory of the Father of the Nation, Mahatma Gandhi, who had dedicated his life for the cause of the Harijans and the down-trodden. The scheme will be known as the 'Gandhi Memorial Scholarship Scheme.'

Two students from each district, who belong to the Scheduled Caste (Hindu) Community and who get the highest percentage of marks in the P.U.C. examination held in March-April every year shall be selected for the award of the scholarships (one boy and one girl will be selected from each district.)

Regarding selection of beneficiaries, the district in which the student studied the P.U.C. shall be the criterion and not his/her native district e.g. a boy/girl from Madurai District who studied P.U.C. in South Arcot District, shall be counted against the quota for South Arcot District. Only students who pass the P.U.C. in the first attempt shall be eligible.

The scholarship under this scheme shall be in addition to the Residential/Non-Residential scholarship amounts which the student is normally eligible to receive from the Harijan Welfare Department.

CONCRETE BOATS FOR OUR FISHERMEN.

Nothing floats like cement

Italian engineer Pier Luigi Nervi is making concrete to float. His company has just finished two fishing boats in "ferro-cement"—a technique Dr. Nervi pioneered—for the F.A.O.

Dr. Nervi's new cement boats may have considerable importance for India's young fishing industry which is faced with the rising cost of wooden boats and lack of suitable boat types for expanded operations.

Dr. Nervi's process is gaining acceptance as the least costly form of marine construction. It involves the use of several layers of mesh reinforcing combined with steel rods and covered with a thin layer of cement. When hardened, the hull is waterproof, fire-resistant, rot-proof, resistant to vibration and high impacts and impervious to shipworms. The technique is particularly suitable for developing countries where sand, wire-mesh and cement are readily available. In addition, building and maintenance are rapid and do not require skilled labour. Hull thickness of only 3/4 inch is possible, and the lack of framework inside, increases capacity.

INDIAN SPACE TECHNOLOGY.

Rate gyroscope

The Space Science and Technology Centre near Trivandrum has successfully developed India's first prototype of a rate gyroscope an instrument which is an integral part of the auto-pilot system of aircraft and rockets. It marks a major step in India's efforts to acquire inertial guidance capability.

Rate gyroscopes are used to measure rates of angular motion of space vehicles in flight with respect to inertial space, a system of co-ordinates hypothetically at absolute rest. The performance, size and weight of the indigenous rate gyroscope is suitable for use in the satellite launch vehicles. It comprises of a hysteresis synchronous spin motor mounted on a gimbal and running at the synchronous speed of 24,000 rpm. The angular motion of the gimbal is constrained by a set of springs, which results in the angular deflection of a gimbal being proportional to the angular rate to be measured. The deflection of the gimbal is detected with a microsyn signal generator. The auxiliary electronic circuits and other components for this instrument have also been developed.

have ever been and are doing, for food and shelter.

What the Westerners call socialism is not clearly understood here. But still for the West as well as the East, there is only one decent way of living, viz., to make the earth common property and live on it as fellow-workers and co-partners. We have a tradition that in the *Krita-yuga*, men lived like that in this country. That may or may not be true. But human will shall yet succeed in bringing about that *Krita-yuga* in all countries and in not a far-off future. The higher Will of Man has been balked till now because for some reason or other it could not direct the main part of its energy towards rectifying the root of all our social ills. Justice must be made to triumph in the very formation of human society. And then she will naturally triumph in all human affairs and relations. So long as the principle of competition holds sway over the structure of human associations, so long as land and water do not belong commonly to all human beings, men are bound to behave worse than brutes in their "economic" relations at any rate. They are fools, who think that the sages had no knowledge of political economy. The Rishis were wise not merely in their teachings about the other world, as certain people imagine, they were equally wise in their teachings about this world. When the majority of men realise this fact fully, we shall have taken the next step in our upward evolution. ☉

The Coming Age

From the beginning of history the higher human Will has been consistently striving to bring about perfect fellowship, or at least mutual harmlessness, among human beings. The poets of the race have sung of it, prophets have preached it, and even legislators have often pretended to work for it. But the construction human of society could only appeal to the intellects and emotions of a few classes, who had to be content with regarding the higher teachings as ideal counsels which yet could never be made practical in ordinary

human life. So the Will of Man, aspiring towards the heights, has ever been defeated by the old animal custom of treating human life as a theatre of "competition"—that is to say, mutual injury and endless strife for securing physical necessities and luxuries. Competition is said to be the declared rule of life among animals but human "civilisation" has aggravated that evil principle into such terrible forms that we are worse than the lower animals in certain respects. There are plenty of crows in the town where I am living. But I find that the crows do not fight each other a thousandth part so badly as men

Bharathi's Warning to the English-educated Minority

VERNACULARS

I do not blame the Madras "Council of Indian Education" for their anxiety to have Prof. Geddes' views on the subject of employing Indian languages as the media of instruction in Indian schools. For I am aware that men's thoughts are ordinarily moulded by their environments. Nor do I blame the good and learned Prof. Geddes for his innocent comparison of the revival of Indian languages with the Gaelic revival in Wales and in Ireland. I do not know if Gaelic has any extensive and living literature. But I feel it is high time to remind all parties concerned in discussions like this, that most of the Indian languages have great, historic and living literatures. Of course their lustre has been slightly dimmed by economic conditions during these later days. The English-educated minority in this country can be pardoned for being frightfully ignorant of the higher phases of our national literatures; but they will do well to drop that annoying attitude of patronage and condescension when writing and talking about our languages. The Tamil language, for instance, has a living philosophical and poetical literature that is far grander, to my mind, than that of the "vernacular" of England.

For the matter of that, I do not think that any modern vernacular of Europe can boast of works like the Kural of Valluvar the Ramayana of Kamban and the Silappadhikaram (Anklet Epic) of Ilango. And it may not be irrelevant to add that I have read and appreciated the exquisite beauties of Shelley and of Victor Hugo in the original English and French "vernaculars" and of Goethe in English translation.

C. SUBRAMANIA BHARATHI

Poet Bharathi's above two articles were published in the form of a book in 1923 by Bharathi Prasura Alayam, Triplicane, Madras.

THE VOICE THAT SENDS A THRILL OF JOY

PARENTS AND DEAF CHILDREN

How sweet are the first few babblings of a six month old baby! What joy beams into the minds of parents when they hear the half uttered rhymes and words of their one or two years old children. Parents seldom realize the great satisfaction which they get from the words of the talking child.

When a child is deaf or is considerably bad of hearing, he cannot talk because he does not hear. Very rarely do parents realise the enormous blockage in the mind of the child. They are generally bewildered with this problem. They go on speaking to the deaf child for some time and when no response comes, they intend to wait and see and resort to sign language. Often they find fault with the child, rebuke him and in many cases neglect the child, leave him in the care of God and pay attention to other children if they have some. They seldom realize that the child

cannot talk because he does not hear. Consequently, in many cases deaf children are left unattended and uncared for. Some become dumb, others produce horrible unintelligible sounds meaningless to all in and outside the family.

If parents consult some E.N.T. specialist or some other parents who have got deaf children they will be able to know that even deaf can talk. Language is the most powerful weapon with man by which one finds one's path of progress in this world. One sends across one's ideas to other people, gets one's requirements fulfilled starts educating himself.

Children are capable of understanding the speeches of their parents, particularly of the mother from their infancy. They look at mothers with smiling faces, hear her repeating sweet words with rhythm. They look at the movements of the lips and the

beaming meaningful eyes and facial expressions of the mothers and try to smile back and utter interesting and amusing sounds which lead to charming, babbling and sweeter sentences within a few months and eventually become meaningful speech. When the child is deaf, he does not hear he only sees. He loses 50 per cent of the facility by which a normal child acquires speech. From the audio-visual process half is gone. By stoppage of the sound of words he has not only lost the hearing portion but he has also lost all chances of finding any meaning in the rest of the silent movements of the lips and faces. But parents need not be disappointed. So long as the child has not a retarded mind, so long as his eyes are

perfect, there is every chance for him to acquire speech almost like a normal child. As soon as parents find that their children are not responding to normal sounds or they are not articulating sounds like 'BA', 'BA' 'DA' 'DA' 'MA' 'MA', etc., they should test by clapping from behind by loud sounds behind their backs and find out if the child really does not listen. If deafness is confirmed, they should not lose heart. Positive and calm thinking should be resorted to and definite course of action chalked out. The first step is that they should take their children to E.N.T. specialists and find out what is wrong in their ears. Where possible, the capacity of hearing should be measured by an audiogram and a full report should be sent to the nearest Deaf and Dumb School for further guidance. There may be other cases where experienced men might be available nearby who have practical knowledge in handling such boys or girls. Parents should take their help and guide themselves, and try to train up their own children. Efforts will be very rewarding and at times exemplary.

It is necessary for parents to, first of all, understand and believe that their deaf children can talk. Parents should watch their children and when they look towards them they should talk and relate such talks to interesting actions or objects with which the child is involved, everyday, e.g., papa, mama, ball, hand, leg, come, go,

etc. The words should be so selected that they are, as far as possible, monosyllabic and labial. The child will slowly start paying attention. As he grows up, the child should be made to sit on the lap during talking and observe parent's face and lips in a mirror. This will give the child a chance to see the lip movement and to feel the vibrations of the talker's body. All these will enable him to reproduce the vibrations during his attempts to imitate lip movement. Repeated practice for about two or three months will surely enable the child to pronounce small words like papa, ball, go, up, and so on. One can

easily imagine what joy will be created in the mind of the parents when they will hear their deaf child first utters a meaningful word. A hearing child hears same words and sounds over and over again—20 times, 30 times and perhaps 100 times a day from his parents, brothers, sisters, friends whereas a deaf child gets a chance to see the lip movement of one word perhaps 4 to 5 times a day and with effort of all about 10 times and that also very irregularly. So he needs more attention, more patience, more systematic repetition and gradual progress from known words to unknown words.

(To be Continued)

KHADI and VILLAGE INDUSTRIES

PATRONISE K.V.I.B. PRODUCTS
FOR WELFARE OF FOOD
PRODUCING PEASANTRY

KHADI AND KHADI SILKS
SOAPS, BRASSWARES MUD
& CERAMIC UTENSILS
MOULDS & LEATHER
HANDICRAFTS, PURE HONEY &
EDIBLE OILS AND A HOST OF
OTHER DELICATE HANDICRAFT
ITEMS.

AVAILABLE AT
ALL
KHADI & VILLAGE
INDUSTRIES SALES
Emporia

Issued by:

Registered No. M. 8656

TAMIL ARASU

WELCOME
TO THE LAND
OF GLORIOUS
CULTURE



Come to the land of the Tamils where ancient culture and civilization have been preserved in myriad forms... Bharata Natyam...rich Karnatic music...great literary classics...imposing temples...sculptural and iconographical masterpieces...And Nature's charms of tropical vegetation and lush rivers are as hospitable as the people.

For an unforgettable holiday come to the south.

Places of interest

Madras - Mahabalipuram - Kanchipuram - Chidambaram

Tanjore - Srirangam - Madurai - Courtallam - Kanyakumari

Rameshwaram - Ooty - Kodaikanal - Yercaud.

Contact:

The Director of Information, Publicity & Tourism,
Government of Tamil Nadu, Madras 6.