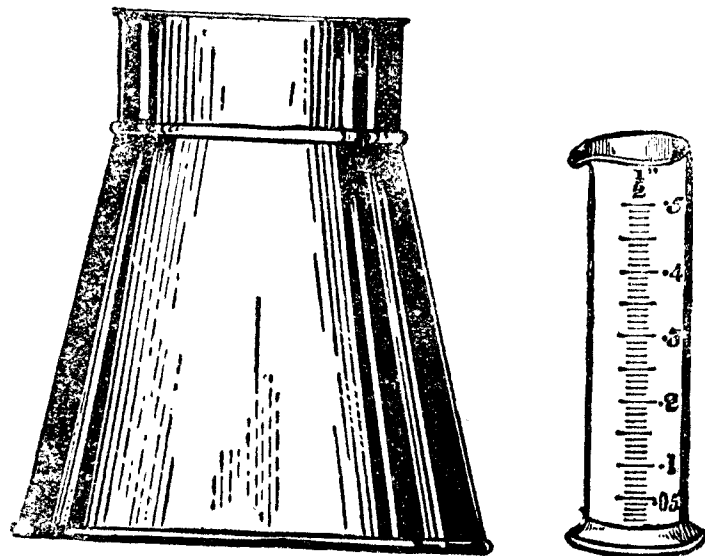


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Vol. XXIII.

JUNE — DEC. 1938.

THE MADRAS
Forest College Magazine.

(Twenty third year of Publication.)



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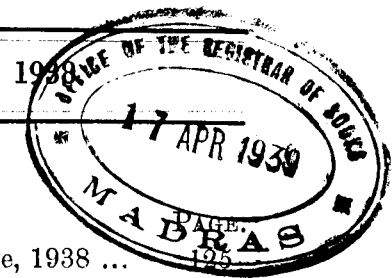
The Madras Forest College Magazine.

Vol. XXIII.

JUNE — DEC. 1938

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THE
Madras forest College Magazine.

Vol. XXII. JUNE — DEC. 1938.

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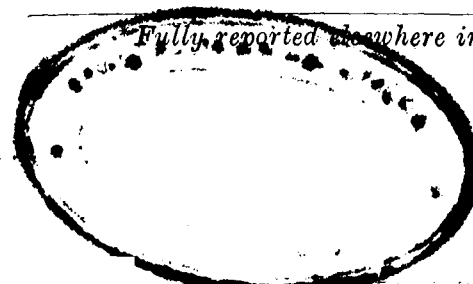
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"June week", Madras Forest College, 1938.

'June week' this year was begun on Monday afternoon, 27th June, with a good display of physical training by the students. The next morning, a number of Forest Officers visited the Research garden at Dhoni, about 40 miles from Coimbatore, in Palghat division (Malabar) which enjoys a rainfall of 110 inches a year. The excursion was arranged by Mr. A. L. Griffith, the Provincial Silviculturist. That evening witnessed the inter-divisional hockey-match (Cowley-Brown Cup)*. The Cup was won, for the second time, by the 1936-38 Division by 2 goals to nothing. A good game but not upto last year's level. The usual group photo was taken on June 29th and in the afternoon a tennis match, Forest Department *versus* Coimbatore Club, was played on the courts of the latter. The play was doubles, 3 pairs, best of 3 sets and the Forest Officers won by 2 matches to 1.

The College again won easily their annual Cricket match* against the Visitors, played on Friday, 1st July.

**Fully reported elsewhere in this issue.*



On the Saturday morning the College debating Society had a competition in the students' Club for extempore speeches.

Prize day was on Saturday, the 2nd July. The Honourable Mr. C. Rajagopalachariar, the Prime Minister, presided.

Before a large and distinguished audience, **Mr. J. H. LONGRIGG**, the Principal, opened the proceedings with the following address :—

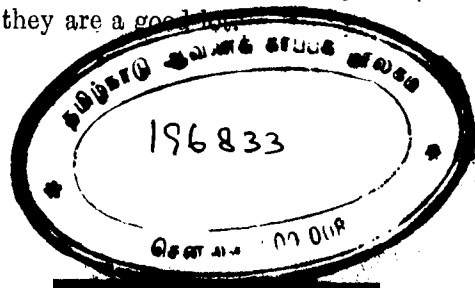
"Mr. President, Ladies and gentlemen,

"In the past, we at this College have had many distinguished visitors. Four times in the last eight years we have had the Governor of Madras to preside on Prize Day. Besides that, we have had other visits by Governors, and by Honourable Ministers, too numerous to mention. Such visits are a great encouragement to the staff, and to the students of a College. It is likely, Sir, that our good strategical position on the Mettupalayam road may have helped us to waylay distinguished personages, official and political, on their way to and from Ootacamund. But that is not the case this time because you, Sir, have not been taking any holiday on the Nilgiri Hills, and that brings me to my first point. We appreciate very much the fact that you have made the time to come among us and to preside over this function in the midst of your tour programme for the months of June and July, which as anyone who reads the newspapers knows, is an unprecedentedly heavy one.

"Therefore, on behalf of the College, I offer to you, Sir, our sincere thanks.

"Before I request you, Sir, to distribute the certificates and prizes, there are several points about the past year, to which I should like to refer. We can accommodate 66 students, and in the past we have had as many as 70 men in residence. The number at present is 41. Of these it is the Seniors, that is the outgoing division, who have completed their two years course, with whom we are chiefly concerned to-day. In my opinion, as workmen and as Foresters they are a good lot.

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"The programme of camping in selected forests which occupies 5 months of each year was carried out smoothly. The Juniors go to six different camps, and the Seniors to five. Health was good in the camps except that there were rather too many malaria cases among the Seniors when in South Malabar, and there was a case of cerebral malaria, which gave great anxiety, in Nilgiri Wynaad, among the Juniors.

"As usual at headquarters we had drill or physical training, on four days a week.

"The nett cost to the Madras Government of this College again showed a reduction. Omitting the Museum (which costs Rs. 2200) the figures in the last three years have been as follows :—

1935-36 .. Rs. 48,182

1936-37 ... Rs. 40,757

1937-38 ... Rs. 38,848

"As regards the staff of the College, two members are leaving us very soon: Mr. Ali Khan who has been an Instructor here for five years, and Rao Saheb V.N. Seshagiri Rao who has been here six years. I had very useful help and advice from both of them. They go now for a well-earned period of leave.

"Unhappily they are not being replaced, because by a decision of the Madras Government the College is to be abolished after one year more, and we are not admitting, as we should normally do, a fresh division of students next month.

"No College likes to be abolished, and we of this College quite naturally deplore it, knowing as we do that our position in relation to the tropical forests of peninsular India and Ceylon is unique and our facilities for instruction here and in our camps, unrivalled.

"Turning to games, the Cricket team has played many thoroughly enjoyable matches against other Colleges, schools and clubs, and we have in the Captain, student V. R. Holkar,

a fine all-round cricketer, but his team has not been so successful as last year's. We have won 7 and lost 6. At hockey too we were not so strong as the year before, but still we were capable of giving any team in these districts a good game, and no runaway scores were compiled against us. We also play football and tennis. Swimming was done during the year only in Malabar. No swimming was done, officially at any rate, in the Moyar river of the Nilgiri district, as it was considered too cold in January, and too likely to bring out any latent malaria in the students.

"I now come to the results of the examinations. 26 students sat for the final examinations. Of these one has obtained Honours Certificate, having secured over 81% of the total number of marks during the course, and at the final examinations, 23 students got Higher Standard Certificates, and 2 have obtained Lower Standard Certificates. All the 26 students passed the examination in First Aid, and will receive the certificate of the Saint John's Ambulance Association.

"The class average of marks obtained in the final examination conducted by outside examiners is 60%, and for the whole course is 69%.

"The Junior Division have done satisfactorily. 12 students have obtained over 60% and the rest get just below 60%. H. I. Shaikh, a student from Bombay gets the Chief Conservator's prize, as the best student of the Junior Division. He gets 78% marks.

"To all the Senior students who are now to pass out, I wish good fortune and success in the career which they have chosen, and for which they have been trained. I hope they will look back with pleasure on their stay here and they that will remember much of what they have learned.

"I thank you again, Sir, for so kindly consenting to preside to-day, and I ask you to present the certificates and prizes."

The Prime Minister then distributed the certificates and prizes in the following order of merit :—

Serial No.	Name.	Province, State or Colony.
	<i>Higher standard with Honours:—</i>	
1	G. N. Mansukhani	Sind
	<i>Higher Standard:—</i>	
2	S. R. Umbarje	Bombay
3	I. A. Fernandez	Ootacamund, Madras.
4	P. H. Uttamsingh	Sind
5	P. Perera	Ceylon
6	S. H. Bagot	Ceylon
7	L. H. Rodrigues	Bombay
8	A. Olimuthu	Salem, Madras
9	K. Andiappan	Coimbatore, Madras
10	K. V. Banuchandra Pal	Coimbatore, Madras
11	S. D. Misra	Indore
12	S. M. Wagle	Bombay
13	K. N. Raghavachary	Working Plans, Madras
14	A. A. Menon	Sind
15	S. Seshagiri Rao Naidu	Waltair, Madras
16	Satgur Saran Lal	Orchha
17	C. Varadarajulu	Bellary, Madras
18	K. Narayanamoorthy	Travancore
19	Bhagat Singh	Indore
20	G. M. A. Khuraishy	Salem, Madras
21	V. B. Koppikar	Bombay
22	E. Jacob	Bellary, Madras
23	A. R. Golandaz	Bombay
24	V. R. Holkar	Indore
	<i>Lower Standard.</i>	
25	P. Indersen	Hyderabad
26	Md. F. Hussaini	Hyderabad

No.	Name of Prize.	Name of Student who obtained it.	Province State or Colony.	Nature of prize.
1	Gold medal for the best Senior student on marks.	G.N. Mansukhani.	Sind.	Gold medal.
2	Silver medal for Honours	ditto.	do.	Silver medal.
3	"Campbell - Walker" Prize for the best student in Forestry	ditto.	do.	Leather suit case. Leather wallet.
4	"Lodge" prize for Engineering	ditto.	do.	Travelling clock.
5	"Brazier" prize for the student likely to make the best outdoor Ranger	S. H. Bagot.	Ceylon.	Leather attache case.
6	Madras Conservators' prize for Survey and Drawing	C. Varadarajulu. S. R. Umbarje. G.N. Mansukhani.	Madras. Bombay. Sind.	Wrist watch. Shooting rest stick. Leather wallet and cash.
7	Madras Conservators' prize for Botany	G.N. Mansukhani.	Sind.	Massive stone ink stand with 2 wells.
8	Madras Conservators' prize for Range Administration	ditto.	do.	Two Rosewood fruit bowls.

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No.	Name of Prize.	Name of Student who obtained it.	Province State or Colony.	Nature of Prize.
9	Chief Conservator's prize for the best Junior student	H. I. Shaikh.	Bombay.	Clock in case.
10	Indian Forester Prize for the best essay	N. P. Choksi.	Bombay.	Cash.
11	"Richmond" Cup to the student obtaining the greatest number of points in the more important events at the College sports	A. Olimuthu.	Madras.	Challenge cup and miniature.
12	"Pentland" Shield for the best all - round athlete	V. R. Holkar.	Indore.	Challenge shield and miniature.
13	"Fischer cup" for tennis singles	ditto.	do.	Challenge cup.
14	Medal for runner up	P.H. Uttamsingh	Sind.	Silver medal.
15	Tennis Doubles.	{ P.H. Uttamsingh A. Olimuthu.	do. Madras.	Silver medal.

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No.	Name of Prize.	Name of Student who obtained it.	Province State or Colony.	Nature of Prize.
16	"Mannarghat Moopil Nayar" cup for cross country race (Marathon, 7 miles.)	A. Olimuthu.	Madras.	Cup and miniature.
17	Runner up. ditto.	K. K. Somayya	Coorg.	Silver medal.
18	Aggregate cup for ditto.	Senior Division.	—	Challenge cup.
19	"Cowley Brown" cup for the inter-divisional hockey	Senior Division	—	ditto.
20	Swimming medal for 100 yards race	S. H. Bagot.	Ceylon.	Silver medal.
21	"Vira Pambhoi" Football cup	Senior Division.	—	Challenge cup.
22	Prize for the best essay in the <i>Madras Forest College Magazine</i> for the year 1937-38.	D. V. Nagarathnam	Ranger, Guddapah Division.	Cash.
		A. Yagnasamy,	Ranger, Vellore Division.	Cash.

The prize distribution over, Mr. C. C. Wilson, the Chief Conservator of Forests, made the following speech:—

Mr. Rajagopalachariar, Ladies and Gentlemen,

"We have listened with interest to what the Principal has told us of the activities of the students at this College during the past year.

"Let me refer first to the students and to the career which they have chosen.

"It is one of the finest careers there is, as it has as two of its main objects the improvement of the face of the country, and the preservation of the fertility of the soil. This is of such great importance in India owing to the fact that vast areas are arid and dry, and very rainless, so that every small tree and every shrub that will grow on the rocky hill sides is essential for the conservation of such water as does fall to the ground. All your lives you students will therefore be doing work that is for the direct and very great good of your country, and at the same time you will be enabled to spend your time out in the open, in the clean air of the forest, and close to nature. Yet there is one great drawback to this profession; in spite of the obvious and great value of your work it is, and it will, I am afraid, continue to be, unpopular. This is the case in almost every country in the world; and it is not difficult, if you think about it, to understand why it is so; forests have to be preserved in the interests of *posterity*, that is to say, of the people who will live after we are dead, and this clashes continually, all the time with the wishes and the interests of the present generation who would prefer to use them as they wish and without limit; were this permitted it would lead to their gradual destruction, with the result that floods would occur in the monsoons, covering the fields with sand and gravel, and allowing the water to run off and be wasted, instead of percolating gradually into the tanks and channels made to receive it; the fertility of the countryside

would be spoilt, the grazing grounds would disappear and no fuel or small timber for house building and for making ploughs and other agricultural implements would be available; and eventually the local population would migrate to other parts where these disasters had not overtaken the countryside, and the villages would be deserted.

"Again the Forest Officer's duty is to plant the timber supplies *of the future*, and this costs money in the present. The benefits to be derived from such planting are so far ahead, in the future, that people feel, very naturally, that it would be better to defer the expenditure for a few years as such delay will make little difference, they feel, in the end.

"There are only two countries, that I know of, where forest control has been in existence so long that every thinking man recognises the benefits it confers and wholeheartedly supports the Forest Department. These two countries are France and Germany, whose forests have been protected and worked on correct lines for several hundred years. In North and South America, in Australia, in Ireland, forest control is resented and resisted.

"The forests of India have been under control now for only some 70 to 80 years — very little in the life of a forest — but even so intelligent men in India have been realising for some years now that the forests are vital to their good, and I am glad to be able to say that the present Government of Madras very fully recognise this fact.

"Without fear of contradiction I can say that there is scarcely anybody who could pursue his ordinary avocation in life were it not for the presence of forests. The Agriculturist depends *very* largely upon the produce he gets from the forest; grazing, small timber for house building, agricultural implements, fuel etc., etc. The Industrialist cannot exist without fuel to cook his food and without wood for a variety of purposes in an infinite variety of forms; wood, or some forest product, is used in every business that is pursued in the world today, and it

always will be. Even, for instance the Stock and Share broker sits at a wooden table on a chair made of wood, and writes on paper made from wood pulp.

"And now as regards the actual benefits that Madras has received from its forests, since their control was entrusted to a Forest Department, I would like to point out, what very few people realise, and that is that the Forest Department took over the forests of this country some 70 to 80 years ago when they were in a deplorable condition. It is on record that there was no *timber* left in most of our big timber forests, and that none could grow to sufficient size to be worth exploiting for a great length of time; our fuel forests had been worked to exhaustion by the local population; all our accessible *bamboo* forests had similarly been over-exploited and had deteriorated greatly. It was the business of the new Forest Department, when it was formed in the latter part of last century, to rehabilitate this ruined property, and it was naturally anticipated that to attain this end a great sum of money would have to be expended. And what has actually happened? The Forest Department of Madras has converted these ruined forests into a magnificent and exceedingly valuable property; the fuel forests have been preserved and improved so that the supplies of fuel now available are sufficient for the needs of the country.

"And as for timber, the plantations already formed cover over 38,000 acres, and another 1200 acres and more are being planted every year. The areas already planted have a value on maturity of over $5\frac{1}{2}$ crores of rupees nett and some of them are already mature and are being cut every year, and replanted, and they are yielding over two lakhs of rupees net profit, per annum, and will continue to do so in perpetuity.

"And what has this cost Government?

"Nothing.

"On the contrary all the improvements have been paid for out of revenue and the Forest Department has given to the

Government in addition a net surplus of over four crores of rupees, — three million pounds, — in the time.

“Another fact that is appreciated by very very few people is the enormous effect that the Forest Department has on *unemployment*. The figures are most striking. We employ, in a year, nearly two crores of men, women and children on productive works, and we distribute to them in wages nearly 50 lakhs of rupees.

“Well, you students no doubt realise already that the profession you have chosen is a grand one, but you must remember that though forestry confers infinite benefits on the human race there are very few of the human race that appreciate the fact, or like the process while it is in progress. You must therefore be prepared for opposition, and even for active hostility, and you must learn to meet it with sympathy and understanding; you must use as little harshness in the enforcement of the protection of your forests as you possibly can, but nevertheless you *must preserve* your forests or you will fail in your high duty to your country.

“And that, now, is all.”

“I must congratulate the Principal and the staff on the progress of their work during the past year. From the results obtained the instruction has clearly been most efficient, since only two have been awarded the Lower Standard, and one student has earned the coveted “Honours” Certificate of the Madras Forest College.

“I must close by thanking the Hon'ble the Prime Minister most heartily and most sincerely for presiding at this meeting today. He is a man who has more to do than most of you can possibly realise, he has little rest or leisure, and he has, as the Principal has pointed out come all the way from Madras to be present at this Forest function today, and he has done this, certainly partly, in order to show to the country that he is in full sympathy with, and realises the vital importance of, the work that the Forest Department is doing.

In conclusion, the President, the Hon'ble Mr. C. Rajagopalachariar, Prime Minister of Madras, addressed the company as follows:—

“Mr. Principal, Chief Conservator of Forests, Ladies and Gentlemen, and successful students of this College,—

“I wish, when I look at your faces eagerly looking forward to something interesting, that I had something to say, but it is very strange that I feel rather sad just now, and have not much to say. I feel like a conscientious hangman. I have come to an institution, I do not know whether the humorous intrigue of the Principal and the Chief Conservator of Forests has been responsible for it; I have been invited and I have come to an institution over which I have been responsible for a sentence of capital punishment. This institution as has already been announced without much bitterness in the language of the Principal, is ready for abolition after a year. Mercy would have perhaps been exhibited if it had been abolished all at once, but this one year's time given to it gives added pain to all those who love the institution, and, may I add myself to that list? I have been asked to preside and say something pleasant on this occasion. Now I think you will understand why I felt as I said rather not fit at all for the function. However, I must say that I felt almost as if I forgot the doom of the college when I saw the bright young gentlemen receiving their certificates and their prizes in a style as if born to it. When I realise that they were only trained and carefully trained to it I can compliment those who were responsible for the training and the results announced show that the college has been doing very well indeed. And when I read the names and the full descriptions of the receivers of certificates given on the paper as I presented each one of them I noted that this was a cosmopolitan all-India institution that has been bringing year after year students from various parts of the country. It seems, as if therefore there is something in this college in Coimbatore, that people from Indore, Punjab and from Ceylon and from other distant places

could come and spend two or three years here of valuable time during the best period of their lives. There is something in the college which brought them together and it is a pity that we have to close it down. I say so quite sincerely. In fact, I might share with you now the truth that at the time when I signed the paper for closure of the college I did feel a great compunction as I generally do not feel with regard to other kinds of retrenchment. I asked a question again of my college, 'Is this to be' before I put it down. Well, let us hope for the best still. I do not say that the decision will be reconsidered because it is no good reconsidering decisions once come to. But forestry is a perpetual thing, a great and precious thing. The forests of our country are our greatest assets. I was of that opinion even before I heard the brilliant speech of the Chief Conservator of Forests. A college which is brought up for the purpose maintaining that valuable possession of the whole country is a great institution which could be revived at any time if we have the facilities and the resources for it. There is nothing lost by a temporary decision of this kind as all decisions of the world must be deemed temporary.

"The young gentlemen who took way the certificates and prizes are perhaps some of the best of the young men of our country and I join with you both, Mr. Principal and the Chief Conservator, in wishing them the best career in the service of the country in this department. Very good advice was given by the Chief Conservator. You have reason, young gentlemen, to be proud of the profession that you have chosen and whether you immediately get jobs or not you belong to that profession and you must retain those ideas and learning that you have acquired here.

"The sports prizes particularly charmed me. I was rather sorry that non-Madrasis were taking them all away. But I was pleased when Olimuthu came to the rescue from Tinnevely and took away some of the best prizes (cheers). Not that I grudge other parts of India at all. But it is a little more

pleasant if it is one's neighbour. Let us hope that the young men of our own province will take away more the prizes in such institutions where people from all parts of the country have a chance to compete.

"The song of the forests was sung by Mr. Wilson and very truly. A man cannot rise to heights of poetry unless there is truth at the bottom of it. These forests he claims were entirely lost or all but lost till 70 years ago and then the department came and reclaimed them. I have not read the history of the forests. If it is true that they were all but lost at that time and that they had been brought back to existence with care by the Department indeed you can be proud of the administration of the Department. I have always realised that forests are perhaps our best and most valuable possession, more valuable than what is hidden below even in the shape of gold. It is not necessary to prove the case. The indigenous culture of our country holds the vegetable world in very great esteem and value. It is considered as great a sin to cut down a green tree as to chop a man down. It is considered murder according to the religion of our land to cut down a live tree. And old-fashioned men even in these days hesitate to cut down a green-tree. I wish that that culture had not been interfered with by other ideas and that people retained towards forests the same sacred feeling as they would retain towards a body of living men. They would not then carry an axe there and cut it off for a temporary small purpose. But for various causes this idea of the sanctity of vegetable life has been upset and exigencies of life in and round forests have driven these poor people who live there to go up and steal the permanent asset of our country away in this manner that has been described, and valuable property, has been lost. It is good that the people have come to be told, 'Better late than never' and that these things must be conserved. And the extraordinarily convincing propagandist story that has been told by Mr. Wilson is very interesting especially the finance part of it. It is a fact that

great work has been done by the conservation of the Forest Department and that it should be better recognised. It will be recognised, I assure you, sir. You are right in saying and I am one with you in appreciating the philosophy of forestry and the actual need for the Forest Department in the country. I do not share the peasant's feeling who, in order to make a couple of annas which he needs very badly, — of course he is also a living tree — becomes a temporary parasite of the jungle for the moment and he goes and steals away the wood to make those two annas. However, let me assure you that he knows it is wrong not because of the department but because he knows it is wrong to cut down a living tree. It is a very good thing that you have reiterated it however. I think in course of time these things will become more appreciated. You seem inclined to resign yourself to a philosophy of despair. This Department will not be unpopular. In course of time it will become popular. Because truth must triumph. If we really preserve our sanity, if we really understand our own good, we are bound to understand the value of these things. But I hope in your admiration for the tree you will not lose your consideration for the man. You have to keep both the plants.

Reading the ancient literature of the land where forests have been described who can take an axe and cut down a tree? If you read the Ramayana of Valmiki, even Rama is not so grand as the forest itself. Certain things have happened which seem to have confused the people. I think some bad examples have been placed before the country. Large tracts of forests have been spoiled by the Government deliberately and people say, "Well, look at the tea and coffee plantations that have risen here and there" and they have lost the sense of respect for the tree to some extent on account of these things, and then ideas got all wrong, and now a belated conservation makes people hesitate to accept doctrines which are perfectly true but which are advanced belatedly. These are difficulties. We must renovate the ideas of the people with regard to these things. People accept things even without proper examination. Even

in these days people believe in all sorts of new things. Not only all forests are necessary for agriculture but even thunder and lightning are necessary. People do not hesitate to receive new truths. Therefore let us not be sad over the unpopularity of forestry. In course of time it will be quite popular.

"We must do some new things. I hope I am not trespassing on the domains of my colleague, Mr. V.I. Muniswami Pillai, if I dream on this occasion that perhaps you will discover one day how to plant new trees and then it may be quite easy to allow even the peasant to cut a few pieces of wood which he desires, here and there without great danger to the forests as a whole. There are many, many hills with nothing on them. I wish we could discover some "hair-restorer" for these. I wish he would devise some kind of cannon by which he could shoot specially strengthened seeds and spread them over the top of the hills at particularly chosen seasons so that they might thrive and live for ever and make the places hills once again where there are merely bald rocks now. That is a dream which often passes through my head when I look at these beautiful hills of ours in the south which have been once fertile, but only bones in the shapes of rocks remain now. It is possible for the Forest Department to bring up beautiful forests on some of these rocks.

"These abolitions and retrenchments go against my heart, but I do it simply out of the coercion of facts. If you give me at least the benefit of that sincere feeling I shall be content."

The Premier and the invited guests (numbering about two hundred) were entertained to tea in the Engineering hall. Later on, the Premier visited the Gass Forest Museum before taking his departure.

The Forest Fire.

The old rickety country cart with untrained new bulls and their boy driver is moving slowly in the rutted forest road which had seen days of good repair. Nothing more is wanted for a man's happiness! Of course, it will be very pleasant to travel in a double bullock cart and there will be no need for the insurance agent! But one should be careful and sit in the centre or safely lie down, as I do, else one may knock one's head in the swaying motion of the cart. In any posture you will be lulled to sleep even if it be mid-day, in spite of the roaring "thut-ghut" sound of the wheels — which had not seen any lubricant for days — and in spite of the encouraging shouts given by the driver to the bulls. No morphia nor the sleeping mixture of a quack is necessary. You know that the driver's encouragement varies according to localities. Really, reader, you should have a joy ride before you can understand what I write. The cartman, myself and everything began to sleep except the bulls.

A deep rut in the road, the sudden going down of one wheel and a severe knock on the forehead brought me to my senses again. I sat up. The bulls were slowly moving in the wheel-track. The dusty fair-weather road in June is really a hell to the traveller — the hoofs raising clouds of dust that are blown in his face.

You see far beyond, in front of you, a clump of trees and a white spot. That is the forest Rest House. Farther away you see the two hillocks one overlapping the other for a little, with a little rich valley in between, towering high in the golden brilliance of the late afternoon sunlight and then growing blacker and blacker in the advancement of the evening. It appears as if it were the end of the world as the sky appears to touch the rugged top of the hillock being connected with a ribbon of rain cloud. On the top of a big banyan tree you see a beautiful peacock stand attractively with tall slender neck lifted aloft in the air, with out-spread plumage swaying in the wind with

variegated sparkling colours, as though it were the scintillations from a thousand diamonds. You hear many birds fly back in the airways to their tree homes to take shelter for the night after their day's wanderings. You see the weary labourer with a happy face, with a yoke on his shoulder and the tired bulls before him, treading back to his hut after a day's hard work for enjoying a homely meal and a sweet and refreshing slumber. Now and again you hear the hooting of owls and the howl of jackals. You also hear the "creech - creech" sound of the bamboos when they rub against one another in the wind. You smell the pleasant fragrance of the wild Jasmine and multitudes of other flowers that have blossomed for you. Here and there some stars begin to twinkle in the clear blue sky and the west wind is blowing milder and milder. Slowly the evening advances. Now the chirpings and the twitterings of the birds die away. The rising moon behind you in its full splendour brightens up the world again. The dust-bearing wind dies away and you enjoy a refreshingly cool evening breeze dustless.

You see a patch of white cloud just emerging from the hill slope opposite to you. In a minute you see a flame. In another minute you see a continuous line of lights both big and small at places, brightening and diminishing as you observe them. Is it a permanent streak of lightning? Or is it the illumination scheme for the Dasara? Or is it the "Jubilee Day" of a cowboy? Or, is it the *kartigai* festival in the hills?

No! It is the grim reality of a forest fire. The village beyond is lit up by this illumination. Now it appears as though it were a falling sheet of water from a black hill slope with the sun shining upon it from the opposite side and the clear crystal water glittering. You hear the rush of it and it resembles the rush of wind in a pine plantation on high hills.

The cart stops suddenly. Your destination is reached. The trembling Forest Guard and the Reserve Watcher are there with a few villagers ready for a quick march. No rest,

You march straight to the scene of fire. But you are bewildered. Now the fire has crossed to another place unconnected with the first. Even now a third place is burning.

It is already 8 p. m. The fire burns the forest with all vehemence helped by a wind, and it is spreading on all sides consuming everything with its thousand tongues of flames. Somehow or other you reach the first place and try to put the already diminishing blaze. Your fire line operations, your silviculture, your departmental rules and regulations and punishments, in fact everything is blown out of mind in a moment. Who can climb up the rocky hill slopes of a scrub jungle of thorn forest at dead of night? The fire dies out also in other places naturally, having burnt everything that could be burnt.

The preliminary Forest Fire report has been duly received for submission of the final report. The final report is also submitted after full and complete investigation on paper!

“Area burnt only 50 acres. Damage only to grass and shrubs. No clue available as to cause. May be due to the mischief of some graziers.”

Oh! What a havoc and what a flimsy report! Where is 50 acres and where is 500 acres! Don't we know that the rigid protection of a year is gone? Don't we know that thousands of birds and beasts would have been made homeless? How many young ones would have perished? Don't we know that the soil is deteriorating? Don't we know that the future forest dies in the death of the young regeneration and seeds in the soil? Don't we know that natural springs and water-holes which are the real feeders of big rivers below, dry up? All the annual plants, the dead dying trees and twigs, the slender creepers and thorny climbers, all the leaf mould in the ground, in fact, everything is gone! It is gone for ever! The growth is retarded of the still living trees. Really it is a colossal damage — damage irretrievable. But what can be done against this?

To cover up a fresh big illicit removal of timber or fire wood to feed personal malice against a Forest subordinate, to grow fresh grass, to make easy illicit extraction paths, to hunt game animals or simply to enjoy the fun, forest fires are started in hills. Accidental fires like a spark from a railway locomotive or from lightning or from the rubbing of bamboos are rare. This mighty havoc of fire is washed away by the next good rain which covers the blackness with a mantle of green.

It is really illiteracy and ignorance that is the root cause of this & of all similar actions. In the words of Jesus “They know not what they do”. No notification in the gazette and the newspapers, no beat of tom-tom to proclaim the gravity of the offence, will even for a while baffle the decided thoughts of a reckless ignorant fellow who does not care for anything in this world except his royal self. No need to say much about him and the village community which he belongs to. The hills are surrounded by very poor village communities. There should come that change — a change rich and strange — when the villager will admire and will co-operate with the protective work of the Forest Department and when he will realize that the wealth of his country lies in its natural resources. He should acquire that first bit of knowledge, that all things of this transient world belongs to all living beings and that it is not the property of the ruling few who simply handle the system of administration for the welfare and safety of the present as well as of the future citizens of the land.

When will that day come? Really that day will be a record in the history of our blessed land.

Either conquer or be conquered. The middle way is always troublesome and dangerous. Either close the burned area completely for some years to men and cattle and enforce rigid protection by increasing the staff or hand over the whole hill to the public under a village panchayat.

The root cause of all the mischief should be enquired into and for the present the villagers should be made responsible for protection of the forest jointly with the beat Forest staff. The head-man of the village must somehow prevent the occurrence of forest fires. He must extinguish with the help of the villagers any which may yet occur.

— MAY.

A link with the past.

In 1924 "Mrs. Thomas" a cat belonging to Mr. Cowley-Brown, the first and most famous of Principals, was boarding with the Padre's wife in Coorg and she had kittens; but because Mrs. Thomas was old and almost beyond the kitten producing stage, all the new little cats, except one, died; and this one would have died too if a certain Forest Officer's wife had not come to its rescue, taken it away from its mother and fed it with a tiny spoon. The little cat, a female, survived though for some days it hung between life and death. It was named "Kunji Poker" after a certain Forest Contractor who, at the time of its arrival in its new home had been giving the Department some trouble.

"Kunji Poker" the cat has had a long and wonderful career; longer and more travelled than most cats in the cat world of to-day. When she was barely a year old she was lost for a whole day in a Shola forest in the Bramagiris and was found only after many hours search by Forest Guards, watchers and coolies, hopelessly entangled in a bush.

A year or two later she travelled all the way from Coorg to Kashmir and back again. In Srinagar she had many adventures fighting with other cats at night and falling off the roof of a house boat into the river Jhelum. But "Kunji" has lived to

tell the tale. In 1928 she came to live at the home of her ancestors at the Forest College and she stayed for two years. She returned again in 1937. She still lives at the College though she is now very old and is blind.

"Kunji Poker" has had many kittens and her descendents are scattered all over Southern India.

P. W. F. W.

[We regret to learn that *Kunji Poker* has since died about Oct. 1937 — Ed.]

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The Forestry Exhibits in Calicut & Madras 1938—39.

By, G. Viswanatham.

All-India Khadi and Swadeshi Exhibition. Calicut,
December 1938.

The above exhibition held in the premises of the Zamorin's College Calicut, was opened on 4th December 1938, by the Hon'ble Mr. Gopal Reddi, Minister for Local Self Government, and lasted till 18th December 1938. The number of visitors totalled about 30,000.

Except for some of the Government departments (including the Forest), the exhibition was rather poor. Among the non-Government stalls, the one in which a specialist trained at Wardha demonstrated the various stages in the manufacture of paper from small waste paper (press) trimmings, rags, and certain grasses is worth mentioning. Considering the crude apparatus and that it was a cottage industry item, the finished hand-made paper left little to be desired. I found that the grass used was *Andropogon schoenanthus* the "Botha-gaddi" of Cuddapah.

(According to the 'Indian Information Series' dated 1st June 1938, paper manufacture in India dates back to the 16th century A. D. The first authentic account of paper making in India dates from the time of the Emperor Akbar when the art is said to have been introduced into Kashmir, whence it spread rapidly all over India. The finished handmade paper shown in Calicut showed, perhaps, little improvement over the product of Akbar's time, but it is interesting to note that the hand made paper recently received from Hyderabad was a much better stuff. I understand that in Hyderabad State, there is a state *firman* that hand-made paper must be used for all state purposes — an excellent way of promoting paper-making as a cottage industry.)

An important feature of the exhibition was the display of "plywood" which was nearly cent per cent Indian, — material, labour and capital, all Indian. (The machinery presumably was not). Plywood was for the first time manufactured in South India, by the Standard Furniture Company, Kallai and put on the market. I find that the cost at present is about 10 to 20 per cent more than that of the imported material, but such comparisons are not quite fair in the case of the superior species like Rosewood and Teak. The manufacturers hope to bring down the costs appreciably and soon. The surfacing is not perhaps as good as that of the imported wood, nor have the merits of the cementing material (the adhesive) been put a technical test. It is now perhaps too early to pronounce a verdict. In plywood manufacture the adhesive used is the most important thing, as even the foreign manufacturers' casein glue, water-proofed and specially prepared, is subjected to severe strain when the destructive action of the elements, the sun and the rain, (or excessive heat and moisture) acts on the space between the veneers used in the plywood, causing or tending to cause a separation of the component sheets. Anyway the plywood exhibited was a maiden attempt and a bold attempt, likely to replace a good portion of the import. The White Cedar & *Pali* boards, particularly, were of a high standard.

Another point worthy of note was the demand for walking sticks of the kind made and sent by the District Forest Officer, Mangalore South. The sticks were prepared from young *Poeciloneuron indicum* (Malayalam: *Vayila*) plants in Someshwar Ghat forests, on the Mysore border, at Agumbe in Karkal Range. Only a dozen sticks were made and sent. As the number made was small the cost per stick came to Rs. 1-4-0. To cover cost of transport and a small margin of profit, the District Forest Officer suggested Rs. 1-8-0 each as the sale price. Even this high rate did not drive away the prospective buyer as the *Vayila* stick is really very strong and attractive, and there is a wide-spread belief in Malabar that it drives away devils from the holder of it, though I feared that owing to the high price fixed, the stick might drive away more buyers than devils! The sticks were received at the fag-end of the exhibition. No less than nine were however sold in a few hours after the receipt of the consignment, at Rs. 1-8-0 per stick. By mass-production the cost could be brought down considerably. There is a continued demand for such sticks all over the Presidency.

There were many intelligent enquiries regarding the forest produce exhibited, and a growing demand for lac products, particularly washed grain lac. The first time the department sold to the visitors to the Calicut Exhibition was in December 1937, and in December 1938 as it was just a year only since then and owing to a balance of previous year's purchase the sales effected in the 1938 exhibition were rather poor:

Sandal	Rs. 204-9-0 at 8 annas per lb.
Honey	Rs. 275-8-0 at 6 annas per lb.
Lac	Rs. 16-1-0

Lac.

Only a limited quantity of lac produce was brought for sale. Orders for bulk quantities were referred to the District Forest Officer North Salem direct for compliance.

Honey.

There seems to be a good demand for honey. Some of the purchasers booked our tins to Bombay direct.

On the 13th December, the Principal and the Instructor with the Senior Division, Madras Forest College, came from Nedungayam camp and visited the stalls in the exhibition, en route to the Standard Furniture Company, Kallai.

The All-India Khadi and Swadeshi Exhibition, Madras, 1938-1939.

The All-India Khadi and Swadeshi Exhibition held at Congress House, Mount Road, Madras, during 17th December 1938 to 15th January 1939 was opened on the 17th December by Srimathi Sarojini Devi.

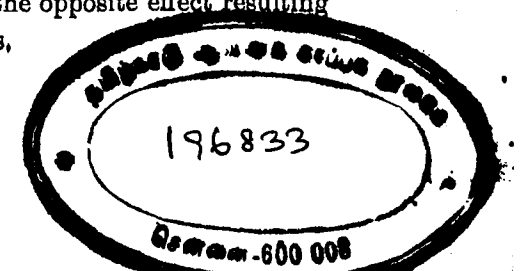
This was a very imposing one and had no less than 233 stalls, and three lakhs of visitors. The Forest Department was given a larger amount of space than usual, for its stall, and had an area of about 80 feet by 30 feet. A unique feature this year was that demonstrations were made of various processes in the manufacture of articles from the raw product to the finished one. A large share of the expenditure of such demonstrations was met by the exhibition Committee.

The lac department demonstrated the method of manufacturing "lacquer sticks" (for lacquering toys) from lac, lac polishes and varnishes from bleached and unbleached lac, sealing wax etc. The Chittoor Division sent a forester and a couple of "Dombaras" who brought billets of suitable wood from Bhakara-pet Range and demonstrated that comb making from such scrub jungle woods like *Canthium didymum*, *Pleurostylia wightii*, etc. could be made a profitable cottage industry. Combs were made by them every day by hundreds and sold at prices varying from quarter anna to three-fourth of an anna each. (Samples have been obtained by me for the Museum.)

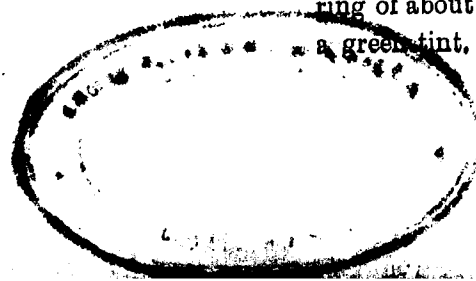
The display of about a dozen select panels sent from the Gass Forest Museum was very effective. These and the plywood (3 to 7 ply) samples sent by the Standard Furniture Co., Kallai were the cynosure of the visitors. Among other noteworthy exhibits of the year, mention must be made of the following:—

- (1) The very fascinating turnery articles of bamboo (*Bambusa arundinacea*) made and kindly loaned by the Madras School of Arts and Crafts.
- (2) Picture frames of local wood being tried by the same School. Of the frames made, those of the Indian Cork tree (*Millingtonia hortensis*) and of *Wrightia tinctoria*, were very satisfactory and bid fair to replace a quantity of the very large amount of frames still being imported from foreign countries.
- (3) The miscellaneous toys and fancy articles made in Nellore and Chittoor districts out of Red sanders, *Wrightia tinctoria*, *Carissa spinarum*, *Alstonia scholaris*, Coconut shell, etc, which were responsible for show cases housing these being besieged perpetually by a bevy of ladies, who ill appreciated our policy of exhibiting such articles without arranging a sales section for them.
- (4) The enlarged photographs of elephant capture (taken by A. A. F. Minchin Esquire, I.F.S., and sent from the Museum).
- (5) The excellent photographs of the Silviculture of Teak, loaned by the Provincial Silviculturist.
- (6) Model of earthquake proof wooden house designed and loaned by the Forest Research Institute, Dehra Dun.
- (7) Lac insects swarming on *Zizyphus xylopyra*
- (8) A model showing the disastrous effect of soil erosion on the fields below and the opposite effect resulting from protected forest areas,

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- (9) Slates made by the Standard Furniture Company, Kallai, out of slabs from Cuddapah and frames made by them from the West Coast timbers *Alstonia scholaris*, *Zanthoxylum rhetsa*, *Strombosia ceylanica*, *Antiaris toxicaria* etc; also mathematical rules (foot-rules) of the above. As a result of a large scale production of such slates, the imports of foreign slates are on the wane.
- (10) Pulp and paper: Different stages in the manufacture of paper were exhibited. It is of interest to note that the paper made on an experimental scale at Dehra Dun out of 18% bamboo pulp (*Dendrocalamus strictus*, and 82% Botha grass pulp (*Andropogon schoenanthus*) was largely appreciated by the public. It is understood that there is a proposal to print the next Forest Annual Administration report of this Presidency on paper made (at Dehra Dun) out of *Botha* grass. It is suggested that it is possible and even advisable in certain tracts to make paper out of grasses alone, for choice, *Botha* and *Spear* grass. The one is short fibred and the other long. By a judicious mixture of these one could make, it is claimed, excellent paper. The *spear* grass after flowering being unfit for grazing, such grass at this stage can well be spared for mixture with the *Botha* grass. Purely hand made unbleached and bleached paper from grass and bamboo was also on view.
- (11) An electric transmission pole of *Pali* (*Palaequium ellipticum*) treated by the *Ascu* preservative process, by the Electricity department at Coimbatore. For convenience in transport, the pole was made into three sections. It had a two-hour charge, and the cross-section showed impregnation to a peripheral ring of about two inches — the treated part showing a green tint.



Artificial Regeneration.

(LECTURE III.)

At the request of the Collector of Cuddapah, Mr. S. Ramachandran, Senior Instructor, Forest Guards Training School, 1937 Session, Bellary Circle, gave three lectures on Forest matters, to the President and members and staff of the Forest Panchayats of Cuddapah district.

*We publish below a resume of the *third lecture. No doubt the lectures were delivered in Telugu :-*

An essential feature in Forest Management is to grow trees. Many of you know how to raise agricultural crops. Though the requirements for the growth of tree species are the same, the technique of raising trees varies from that of field crops in many respects. The seeds of some forest trees have a hard coat and take a month to germinate. It is very difficult in the case of some species to raise them by seeds. A thin shell or much oil in the seed generally results in its losing the germinative power soon, whereas, some seeds such as teak, retain the power of germination for many years. Such hard seeds require a good deal of weathering before germination. Some species are better and more easily raised by cuttings. It is beyond the scope of Forestry to pay any close attention to manuring, and watering. The soil in forests varies widely from a deep alluvium to bare rocky slopes. Again the questions of rainfall, temperature, aspect etc have to be taken into consideration. Any failure in agricultural crops is seen within a few months, whereas in Forestry some years even may not suffice to reveal the true state of affairs. So it is necessary that a close study be made and a technique of raising plants successfully has to be evolved.

*The first two lectures were published in the March 1938 No. of this Magazine.

The regeneration of forest crops may be natural or artificial; where conditions for natural regeneration are favourable, artificial regeneration need not be resorted to. But there are many places where, either due to the poverty of the soil, or want of rainfall, or some other circumstances, man has to step in, and raise the plants. Artificial regeneration may be by direct sowing, *in situ*, or by planting from nursery. Direct sowing *in situ*, is what I shall tell you about.

Special attention has to be paid to (1) choice of species (2) quantity and quality of seeds, (3) Season of sowing and (4) method of sowing to secure germination.

Choice of species:— The first essential to success in direct sowing is the correct selection of the tree species suited to the locality. Hardy species which germinate easily, grow well, and are immune to grazing are to be chosen. An inspection of the locality will indicate the useful trees that easily grow in that locality. From experience, *Azadirachta indica*, (Neem), *Dolichandrone*, (Neeruddi) and *Acacia sundra* (Sandra) are found to grow well in Cuddapah terai forests. *Dolichandrone* can grow on rocky slopes. *Albizzia lebbek* and *Cassia siamea* grow well in fairly deep soil. Neem and *Albizzia* are susceptible to browsing, therefore fencing is necessary for them.

2. *Quality and quantity of seeds*:— The seeds must, no doubt, be good ones. Neem is best sown as soon as it is collected from the trees in June. Fresh seeds are always good. *Albizzia* and *Acacia sundra* must be preserved in ash against insect attack. Good seeds can be recognised from their colour, smell, filling the shell completely and freedom from insect attack. The seeds are to be preserved in a cool dry place.

Several factors prevail in forests which are inimical to the germination and growth of plants. So we cannot be parsimonious in the quantity of seeds to be used in this district. Close sowing is necessary as a set off against failure due to want

of seasonal rains, or other causes if no resowing is contemplated. If there are any excess seedlings in the 3rd year, they must be pulled out. Seeds are cheap and we cannot afford to lose the year's work for the sake of a small quantity of extra seeds. In the case of neem, it is enough if 3 seeds are dibbled, a foot apart in the lines or pit.

3. *Season of sowing*:— The seeds must weather before germination and the plants must grow sufficiently big to withstand the ensuing hot weather. The time of sowing slightly varies with the district and the best time for Cuddapah district is from the last week of May to 15th June. Even if germination takes place in September, rarely do the plants survive the next hot weather.

4. *Method of sowing*:— There are several methods of sowing. The one suited to this district will be described below. It is known as the 'Rab method' of regeneration.

The slash, the lop and top of the trees felled in an area, after taking out the useful materials, are heaped up in lines over the area to be regenerated 4' high and beaten down well. The idea of beating down is to enable the heat to penetrate the soil and loosen and sterilize it. The slash heap is burnt in February and the ash is mixed up with soil by digging with pick axe 6 inches deep to fix the ash securely in the soil. This work will be done in patches 2' x 2' or in continuous lines 2' wide according as the sowing is to be in patches or in lines.

Sowing in patches:— Before the time of sowing, the soil and ash in the pit 2' x 2' are to be worked up, clods broken, and stones, roots etc., picked out. The soil in half of the patch is turned over on the lower half of the patch allowing a depression on the upper side to catch any rain water, taking care to see that the bed formed on the lower half is within the dug portion of the patch. The lower side of the bed is further protected with a wall of stones obtained from the patch. The whole bed will have the appearance of a shallow tank bund. The bed will have not less than 1' deep of good loose soil. The seeds are sown in a line on the bed.

In the case of line sowing, the soil in 2 ft. wide strips is worked up and half of the width of soil turned on the lower side forming the bed for sowing seeds and allowing a shallow channel-like depression above to catch rain water and retain moisture for a longer period. The seeds are put in a line on the raised bed. The general rule in sowing, is to cover the seeds to their thickness. For a successful germination of seeds, a constant and moderate supply of moisture, warmth, and access of air are necessary. It is common knowledge that by working up the soil and covering the seeds we secure the last two requisites. As regards continued moisture we have to depend on rains. The method of forming the beds as described above, gives the necessary moisture and accelerates the germination and growth.

The after-care of plants is necessary for their successful establishment. One who can afford it should do monthly weeding and soil working round the plants. At any rate two soil workings and weedings are necessary, one in September and the other at the end of January for the first three years. The soil working in January greatly helps the plants to tide over the ensuing summer. Even in poor panchayat forests of this district of Cuddapah, it is possible to find some pockets of good soil here and there, especially along a stream bed, near a well, kunta or other water source. Half an acre or one acre according to the locality may be selected there, the tree and shrub felled, the slash burnt and then seeds of the tree species mentioned above sowed to form topes. Such topes may be the nuclei for further extension. They will be very useful in giving shelter to cattle from the mid-day sun. The topes will have of course to be fenced and closed to any grazing for the first 10 or 12 years, till the plants grow up and are beyond damage by cattle.

Such are the lines on which it is possible to have artificial regeneration in these dry forests and given the personal interest, the work is sure to be crowned with success.

CRICKET MATCHES.

1937-1938 Season.

Forest College v. Scouts Recreation Club.
Sunday June 19th. 1938: Won by 75 runs.

This match was played on our grounds. Five members of the regular College team were absent. Golandaz, Ali, Uttamsingh, Fernandez and Somayya filled the vacancies. The Scouts were strengthened by T. S. Venku and A. Suri. Batting first for the Scouts, Bole Reddi and G. Ramanathan put on 32, but 3 men were out for 37. Later Ramu and Lakshmanan made a valuable stand, carrying the score from 69 for 6 to 115 for 7. Golandaz, not previously known as a bowler, had the best figures taking 4 wickets for 32. Facing a total of 128 the Forest College sent in Ali and Uttamsingh. After a maiden over from Patel, Ali got 2 singles in Venku's first over, but the latter then bowled Uttamsingh and at 15 he got Ali l. b. w. and at 25 he caught and bowled Nazareth. Most of the scoring so far had been done by Bagot who was now joined by Rodrigues and they took the score from 25 to 90 before Rodrigues (35) was stumped. Holkar came in and the score was taken to 136 and then Bagot was bowled. He had come in when there were only 2 runs on the board and he had a 5 and ten 4s in his 72. Neither Golandaz nor Wagle troubled the scorer but Holkar and Sen were together until the former left with the score at 174 for 8 wickets. Holkar hit seven 4s in his 49. There was a very useful stand by Sen and Fernandez who put on 26 for the 9th wicket, hoisting 200. Fernandez left at 200 and the innings closed for 203 thus giving the College a lead of 75 runs. The Scouts batted again and mainly due to Venku (69) who hit a 6 and eight 4s they had made 105 for 7 wickets when stumps were drawn.

Scouts XI.

G. Ramanathan	b Golandaz	13	did not bat.
N. Bole Reddi	c Nazareth		
	b Golandaz	7	b Nazareth 1
T.S. Venku	c Nazareth		c Nazareth
	b Holkar	25	b Rodrigues 69

156 (b)

C.G. Krishna-						
murthi	run out	0	did not bat			
A. Suri Sastri	b Rodrigues	19	c Ratnam (sub)			
			b Holkar	20		
S.R. Ramakrishna-						
Iyer.	b Nazareth	0	did not bat			
K.S. Ramu	b Golandaz	30	b Holkar	11		
K.S. Lakshmanan	c Rodrigues					
	b Holkar	23	c Bagot b Holkar	0		
C.A. Ranganathan	l. b. w. Holkar	1	b Holkar	0		
T.B. Gopalachari	not out	5	c Bagot b Holkar	4		
K. Patel	b Golandaz	0	did not bat			
Extras	...	5	...	0		
Total		128	(7 wickets)	105		

Bowler	1st innings.			2nd innings		
	Overs.	Runs.	Wickets.	Overs.	Runs.	Wickets.
Rodrigues	11	33	1	4	29	1
Nazareth	7	17	1	6	48	1
Holkar	10	41	3	5	28	5
Golandaz	6½	32	4	did not bowl.		

Forest College.

M. Ibrahim Ali	l. b. w.	b Venku	2
P. H. Uttamsingh		b Venku	0
S. H. Bagot		b Ramu	72
F. B. Nazareth		c and b Venku	4
L. H. Rodrigues		st.....b Venku	35
V. R. Holkar		c Suri b Ramu	49
A. A. Golandaz		b Patel	0
S. M. Wagle	l. b. w.	b Patel	0
P. Indersen	not out		16
I. A. Fernandez		b Lakshmanan	11
K. K. Somayya		b Venku	3
Extras	...	...	11
Total			203

156 (c)

Bowler.	Overs.	Runs.	Wickets.
Patel	11	52	2
Venku	12	54	5
Lakshmanan	5	18	1
Murti	3	15	Nil.
Ramakrishna Iyer	3	10	Nil.
Gopalachari	1	6	Nil.
Ramu	6	26	2
Ranganathan	1	11	Nil.

*Forest College v. St. Joseph's College (Wellington)**Sunday June 26th 1938: a tie.*

Played on our ground, the visitors arriving by bus from the hills shortly before 10-30 a.m. The home team was at full strength except for V. B. Koppikar: Golandaz took his place. St. Josephs batted first and except for Burke and Navin who between them made 50 out of 60 runs from the bat, no resistance was made to some keen bowling and fielding. Six batsmen failed to score. Burke made, as usual, some good off-drives, his only scoring stroke. Shaikh opened the bowling and his first four overs were maidens. He conceded only 5 runs in seven overs, a good feat. Holkar's figures would have been better but for his second over which was expensive as 14 runs were hit off it, including three boundaries. Going in at 12-35 O'clock against the meagre score of 66 the Forest College fared even worse against the fast bowling of Burke and against Beale. The former got a wicket in his first over and Beale opened with 3 maiden overs and got a wicket in his fourth. The whole side then collapsed unaccountably and were all out for 44 at 3-35 p.m. St. Joseph's went in again but could only make 52, Burke (29) being top scorer for them again. Shaikh bowled 11 overs in this innings (7 maidens) for 17 runs and 5 wickets. This left the Forest College with the task of making 75 runs to win in exactly 30 minutes and as the start in the morning had been a little late (at 11-14 a.m.) the Captains agreed to play on a little if decision on two innings had not been reached by 6 p.m. (the usual time for drawing stumps). Holkar (18) with four 4s and a 2 and Bagot (12) opened and quickly put on 30. Then at 6 O'clock the game was a tie, the score standing at 74 for 5

156 (f)

in his big score of 122 not out. This is his highest for the College and the only century hit this year by anyone (as against three in 1936-37 season). At 3.40 p.m. Holkar declared the innings closed, the score being 213 for 5 wickets leaving plenty of time to get the visiting team out again. In their second innings Mr. Ward (30) was again top scorer. He had a 6 and three 4s before he was nicely stumped by Bagot off Holkar. No one else resisted and the College were left winners as stated, shortly before 5 O'clock.

Visitors XI.

J. A. Wilson	c Khan				
	b Rodrigues	3	st. Bagot b Holkar	5	
V. G. Darrington	b Shaikh	6	c Koppikar		
			b Holkar	1	
A. L. Griffith	b Shaikh	3	b Holkar	5	
H. P. Ward	b Nazareth	35	st. Bagot b Holkar	30	
C. C. Wilson	not out	20	b Shaikh	1	
J. A. Master	c Rodrigues		st. Bagot		
	b Nazareth	0	b Holkar	4	
D. L. Sathe	c Khan				
	b Nazareth	1	not out	1	
W. G. Dyson	b Nazareth	0	c Holkar b Shaikh	1	
A. A. F. Minchin	b Nazareth	0	b Shaikh	0	
T. Clear	run out	1	b Holkar	0	
E. S. Dawson	b Nazareth	1	c Koppikar		
			b Shaikh	1	
Extras	...	3	...	2	
		Totals	73	51	

Bowler.	1st innings.			2nd innings.		
	Overs.	Runs.	Wickets.	Overs.	Runs.	Wickets.
Shaikh	7	13	2	9.1	17	4
Rodrigues	7	16	1	} did not bowl.		
Nazareth	8.4	14	6			
Holkar	5	22	Nil.	8	32	6
Koppikar	3	5	Nil.	did not bowl.		

156 (g)

Forest College.

S. M. Wagle	st Ward b Master	0
V. B. Koppikar	c Sathe b Master	1
J. H. Longrigg	c Clear b Sathe	7
S. H. Bagot	c Clear b Wilson	10
A. A. Khan	c Griffith b Wilson	0
L. H. Rodrigues	retired hurt	41
V. R. Holkar	not out	122
F. B. Nazareth	not out	24
H. I. Shaikh	} did not bat	
S. R. Umbarje		
A. A. Golandaz		
Extras	...	8
Total (5 wickets)		213

Bowler.	Overs	Runs.	Wickets.
Master	14	74	2
Sathe	2	6	1
Wilson	10	46	2
Ward	5	36	Nil.
Griffith	4	26	Nil.
Clear	2	17	Nil.

156 (d)

wickets, with Rodrigues and Golandaz batting confidently and a moment later the winning hit was made. However it was soon pointed out (not by our sporting opponents be it said) that the laws of cricket make no provision to extend the hour fixed for drawing stumps so the result was at once declared to be a tie, that being the state of the game at 6 O'clock. We had the pleasure of entertaining the visitors to lunch and tea. They left a few minutes before 7 p m. on their return journey.

St. Joseph's College Club.

Bro. C. J. Bergin	c. Holkar	st. Bagot	
	b. Rodrigues 0	b. Shaikh 1	
A. Netto	c. Longrigg	c. Nazareth	
	b. Rodrigues 1	b. Shaikh 0	
L. Beale	c. Umbarje		
	b. Nazareth 5	b. Shaikh 0	
N. Navin	not out 17	b. Holkar 0	
P. Burke	b. Holkar 33	b. Rodrigues 29	
H. Browne	b. Holkar 0	c. Bagot	
		b. Shaikh 4	
Bro. F.T. Fleming	l. b. w. b. Shaikh 4	run out 7	
Bro. C.T. Kennedy	b. Holkar 0	b. Rodrigues 0	
O. McCready	c. Umbarje		
	b. Holkar 0	not out 7	
Bro. A. Fitzpatrick	st. Bagot		
	b. Holkar 0	c. and b. Shaikh 2	
G. Joseph	b. Holkar 0	b. Holkar 0	
Extras	... 6	... 2	
	Totals 66	52	

Bowler.	1st innings.			2nd innings.		
	Overs.	Runs.	Wickets	Overs.	Runs	Wickets.
Shaikh	7.1	5	1	11	17	5
Rodrigues	7	14	2	3	8	2
Nazareth	7	10	1	did not bowl.		
Holkar	7	31	6	7.5	25	2

156 (e)

Forest College

J. H. Longrigg	b Beale	2	b Beale	2
A. A. Khan	b Burke	4	did not bat	
S. H. Bagot	c Beale b Burke 12		c.....b Burke 12	
S. M. Wagle	l.b.w. b. Beale	0	did not bat	
V. R. Holkar	b Burke	3	c and b Beale	18
L. H. Rodrigues	b Beale	1	not out	32
F. B. Nazareth	l.b.w. b. Burke	0	did not bat	
P. Indersen	b Beale	12	b Burke	8
S. R. Umbarje	b Burke	0	l.b.w. b Burke	0
A. A. Golandaz	c Netto b Burke	0	not out	6
H. I. Shaikh	not out	1	did not bat	
Extras		9		3
	Totals.	44	(for 5 wickets)	81

Bowler.	1st innings.			2nd innings.		
	Overs.	Runs.	Wickets.	Overs.	Runs.	Wickets.
Beale	10.2	18	4	4	31	2
Burke	10	17	6	5	40	3
Browne	did not bowl.			1	7	Nil.

Forest College XI v. the Visitors XI

Friday July 1st 1938: won by an innings and 89 runs.

At 10-15 A.M. the Visitors went in to bat and the feature of their innings was a stand by Mr. H. P. Ward (35) who hit three 4s and the Chief Conservator (20) who was not out. Both played carefully. The innings closed at 11-40 for 73. As usual Wagle and Koppikar opened the batting for the College but the former has quite lost his form lately and he was out in the first over. The latter was ill and should not have been playing. He was out in the fourth over. However soon it began to look as if the Visitors had come to the end of their bowling and so they had, but before the flood of runs came they got three more wickets by excellent catches (two of them by Mr. Clear). Thereafter the batsmen did as they liked. Rodrigues made 41 before he put his knee out and retired. Holkar had a 6 and sixteen 4s

156 (j)

Batting averages : Season 1937-38.

Name.	Innings.	Runs.	Highest score.	Times not out	Average.
V. R. Holkar.	21	436	122*	2	22.95
L. H. Rodrigues.	18	249	41*	2	15.56
S. H. Bagot.	21	261	72	1	13.05
F. B. Nazareth.	13	115	24*	2	10.45
P. Indersen.	15	144	28	1	10.28
V. B. Koppikar.	16	144	50*	1	9.60
M. Ibrahim Ali.	10	73	20	2	9.12
Mr. J. H. Longrigg.	11	84	39	1	8.40
Mr. A. A. Khan.	7	48	23	Nil.	6.85
S. M. Wagle.	18	116	28*	1	6.82
S. R. Umbarje.	16	102	45*	1	6.80
A. A. Golandaz.	17	79	16*	5	6.58
H. I. Shaikh.	12	24	6*	3	2.66

Also batted : I. A. Fernandez 2, 19, 0, 11.
 A. A. Memon 14, 1, 18.
 S. S. Rao Nayudu 0, 2*
 K. K. Somayya 3.
 P. H. Uttamsingh 0.

Bowling analysis: Season 1937-38.

Name.	Overs.	Runs.	Wickets.	Average cost per wicket.
H. I. Shaikh.	155	324	46	7.04
V. R. Holkar.	157	525	64	8.20
L. H. Rodrigues.	136	381	36	10.58
V. B. Koppikar.	93½	223	21	10.62
F. B. Nazareth.	57¾	202	17	11.88

The following also bowled :—

A. A. Golandaz 6½ overs, 32 runs, 4 wickets.
 S. H. Bagot 4 overs, 24 runs, no wicket.
 S. M. Wagle 3 overs, 6 runs, no wicket.

*Indicates "not out"

156 (k)

CRICKET MATCHES.**1938-1939 Season.**

Forest College Cricket Club v Scouts Recreation Club.
Saturday August 13th. 1938: lost by 97 runs.

This was played on our ground, the first match of the new season and the first since the College was reduced to half strength. F. B. Nazareth, our best all-rounder could not play due an ankle sprain from a fall on the tennis court, but we included Messrs Potts and Haywood who have joined our Club since the demise of the Coimbatore Cricket Club. The Scouts were similarly strengthened by including Messrs Suri and Thangavelu, late of the C.C.C. Winning the toss the College batted first but no stand was made against the bowling of Thangavelu (who seemed to carry less spin than he does sometimes) and Subramaniam. The tail is long and we were quickly all out for 31. In reply the visitors batted well against some good bowling and declared their innings closed at 128 for 4 wickets.

Going in a second time the College did a little better against the change bowlers but had made only 29 when stumps were drawn.

Forest College C. C.

Md. Ibrahim Ali	1. b. w.				
	b. Thangavelu	2	b. Krishnamurthi	6	
J. W. Haywood	b. Subramaniam	3	c. Panchaksharao		
			b. Ramakrishnan	6	
J. H. Longrigg	b. Subramaniam	6	c. Ramakrishnan		
			b. Lakshmanan	3	
C. R. Potts	c. Reddi				
	b. Subramaniam	6	not out	8	
N. G. Dacha	b. Thangavelu	2			
H. I. Shaikh	b. Thangavelu	9	b. Lakshmanan	6	
(Capt.)					
P. W. Rutnam	b. Subramaniam	1			
J. P. D'Cunha	c. Panchaksharao				
	b. Subramaniam	0			
V. D. Mehendale	b. Thangavelu	0			
S. V. Halbhavi	b. Subramaniam	0			
N. A. N. Khan	not out	0			
Extras	...	2	...	...	Nil
	Totals	31	(4 wickets)	29	

Cricket Season 1937—38.

*Summary: Played 15; won 7, lost 6, tied 1, abandoned 1.
Results of Matches.*

Date.	Opponents.	Ground.	Scores.	Result.
8-8-1937	Coimbatore C. C.	Home	M. F. C. 107 C. C. C. 125	lost by 18 runs.
14-8-1937	Do. *	Home	M. F. C. 71 and 67 C. C. C. 65 and 59	won by 14 runs.
28-8-1937	Agricultural Students' Union *	Home	M. F. C. 121 M. A. S. U. 186 for 4	lost by 65 runs.
4-10-1937	Scouts Recreation Club *	Home	M. F. C. 164 Scouts 91	won by 73 runs.
9-10-1937	Stanesh High School *	Away	M. F. C. 63 and 42 Stanesh 56 and 52	lost by 3 runs.
13-1-1938	Agricultural Students' Union	Home	M. F. C. 134 for 8 (dec) M. A. S. U. 104	won by 30 runs.

156 (h)

26-2-1938	Stanesh High School	Home	M. F. C. 140 and 97 for 6 (dec) Stanesh 91 and 101 for 3	won by 49 runs.
19-3-1938	Do.	Away	M. F. C. 74 and 164 Stanesh 20 and 25	won by 193 runs.
16-4-1938	Ooty C. C.	Away	O. C. C. 30 for 2 M. F. C. did not bat	Match abandoned due to a death.
24-4-1938	St. Joseph's College C. C. Wellington.	Away	St. Josephs 151 M. F. C. 113	lost by 38 runs.
8-5-1938	Nizam's College Hyderabad	Away (Ooty)	M. F. C. 44 and 12 for 3 Nizam's 82	lost by 38 runs.
15-5-1938	Ooty C. C.	Away	O. C. C. 76 M. F. C. 63	lost by 13 runs.
19-6-1938	Scouts Recreation Club	Home	Scouts 128 and 105 for 7 M. F. C. 203	won by 75 runs.
26-6-1938	St. Joseph's College C. C.	Home	St. Josephs 66 and 52 M. F. C. 44 and 74 for 5	A tie.
1-7-1938	Visitors XI	Home	Visitors 73 and 51 M. F. C. 213 for 5 (dec)	won by an innings and 89 runs.
*Coimbatore Cricket Tournament (Rhondy Shield Matches)				

156 (i)

156 (l)

Bowler.	1st innings.			2nd innings.		
	Overs.	Runs.	Wickets.	Overs.	Runs.	Wickets.
Thangavelu	6	13	4	} did not bowl.		
Subramaniam	5.3	16	6			
Krishnamurthi	} did not bowl in first innings.			—	—	1
Lakshmanan				—	—	2
Ramakrishnan				—	—	1

Scouts Club.

S. R. Ramakrishna Iyer	b. Shaikh	14
A. Suri Sastri	c. Ali b. Potts	6
G. Ramanathan	not out	43
K. S. Lakshmanan	b. Potts	19
C. M. Madhava Rao	c. Longrigg b. Potts	0
Panchaksharao	not out	41
K. Subramaniam	} did not bat.	
S. R. Thangavelu		
C. G. Krishnamurthi		
N. Bole Reddi		
T. B. Gopalachari		
Extras	...	5
Total		128 for 4 dec.

Bowler.	Overs.	Runs.	Wickets.
Shaikh	11	38	1
Potts	11	53	3
Haywood	6	19	Nil.
Ratnam	3	13	Nil.

156 (m)

Forest College C. C. versus Stanes' High School.
20th August 1938 : Won by 75 runs.

This game was played on our ground and we won very easily. The school batted first and made 46. In reply the College made a bad start losing 3 wickets for a total of 3 runs. The fourth wicket fell at 38 and then our opponents' score was passed with 6 wickets in hand. We eventually reached 121, the captain (31) compiling his highest score for the College. Somayya was bowled by a full toss. Batting again, Stanes gave an improved display and R. Johnson batted really well; they reached 76 thus saving an innings defeat by one run.

Stanes' School.

T. Griffiths	c. Nazareth	b. Shaikh	1
	b. Shaikh	0	
H. Hornby	b. Haywood	3	b. Potts 9
R. Johnson	b. Haywood	8	b. Potts 27
Mr. Booley	b. Haywood	0	not out 8
A. Coyne	b. Shaikh	4	b. Shaikh 0
Mr. Pharoah	c. Haywood	b. Shaikh	0
	b. Ratnam	13	
N. Nipps	c. Ali b. Haywood	5	lbw Potts 0
H. Joseph	c. Haywood	b. Shaikh	5
	b. Ratnam	6	
R. Hodgson	b. Potts	5	b. Shaikh 0
N. Drane	c. Nazareth	b. Shaikh	7
	b. Ratnam	0	
D. Joseph	not out	0	run out 10
Extras	...	2	... 9
Totals.		46	76

Bowler.	1st innings.			2nd innings.		
	Overs.	Runs.	Wickets.	Overs.	Runs.	Wickets.
Shaikh	5	7	2	11	23	6
Haywood	6	18	4	4	17	Nil.
Ratnam	4	16	3	1	6	Nil.
Potts	3	3	1	6½	21	3

156 (n)

Forest College C. C.

Md. Ibrahim Ali	b. Coyne	2
F. B. Nazareth	c. Wicket keeper b. Nipps	0
J. H. Longrigg	retired	46
J. W. Haywood	b. Nipps	1
H. P. Murray	c. Griffiths b. Coyne	19
C. R. Potts	b. Nipps	11
H. I. Shaikh (Capt.)	b. Nipps	31
P. W. Ratnam	c. and b. Nipps	2
K. K. Somayya	b. Coyne	2
N. G. Dacha	c. and b. Nipps	3
J. P. D. Cunha	not out	2
Extras	...	2
Total		121

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Forest College C. C. versus Stanes' High School.
8th October 1938: Won by 26 runs.

Playing on their ground at 2 p. m. we batted first and made 104 against poor bowling and fielding, only A. Coyne occasionally sending down a good one but his length was uncertain. Ali (26) and Nazareth (47) were the chief scorers and neither was defeated. The latter however was very lucky, the fielders being kind to him. For Stanes' School R. Johnson (21) is a real cricketer and played a good innings. Mr. Pharoah surprised us at the end.

Korlhalli opened our bowling with a maiden over, and quickly had 2 wickets. Mr. Potts relieved him after 4 overs and bowled a maiden. His next over was expensive and yielded 13 runs, Mr. Booley getting him away to leg twice but after that he proceeded to take 7 wickets for only 9 runs more and finished off the match. D'Cunha kept wicket very well.

156 (o)

Forest College C. C.

M. Ibrahim Ali	retired ill	26
J. P. D'Cunha	b. Coyne	4
J. H. Longrigg	b. Coyne	5
F. B. Nazareth	not out	47
C. R. Potts	st.....b Coyne	3
C. R. Natarajan	b. Coyne	0
H. I. Shaikh (Capt)	run out	1
N. G. Dacha	b. Booley	1
S. H. Korlhalli	c. Nipps b. Booley	1
K. K. Somayya	b. Coyne	1
P. W. Ratnam	b. Booley	6
Extras	...	9
Total		104

Bowler.	Overs	Runs.	Wickets.
Coyne	14	37	5
Nipps	6	15	—
Booley	10.2	25	3
Roze	3	15	—
Johnson	1	3	—

Stanes' School.

R. Hodgson	c. Ali b. Korlhalli	7
B. Roze	b. Korlhalli	5
R. Johnson	c. and b. Potts	21
A. Coyne	b. Nazareth	10
Mr. Booley	b. Potts	9
N. Nipps	b. Potts	3
H. Hornby	st. D'Cunha b. Potts	0
D. Joseph	b. Potts	6
Mr. Pharoah	not out	13
H. Joseph	b. Potts	0
T. Griffiths	b. Ali b. Potts	2
Extras	...	2
Total		78

156 (p)

Bowler.	Overs.	Runs.	Wickets.
Korlhalli	4	15	2
Nazareth	6	22	1
Potts	7.3	22	7
Shaikh	5	17	—

Forest College C. C. versus Government Arts College.
15th October 1938. A draw.

Played on our ground: the visitors won the toss and put us in to bat which we gladly did all through the afternoon from 2.15 to 4 p. m. exactly, when our last wicket fell at 112 just in time for the tea interval. Ali. (16) batted quite well but it is a pity he has no scoring stroke in front of the wicket and he must not *step* in front to be dismissed l. b. w. Nazareth (22) was stylish and he made top score but he needs batting practice and he let off some loose balls. Of the later batsmen Nos. 6 to 10 have improved and now each of them looks capable of some runs, but it must be admitted that all the bowling was very erratic and the fielding bad. Requiring 113 to win the Arts College had one hour and 25 minutes to get the runs (from 4.20 to 5.45 p. m.) but they made no attempt to hurry. About 60 runs were scored in the first hour by quiet cricket. The first three, especially K. A. Natarajan (35) batted well against some good bowling by Nazareth and Shaikh. The latter, even with the new ball, was not at his fastest or best but he kept the batsman very quiet. Later on he nearly did the hat trick and it is likely we should have won this game in another 20 minutes. But Shaikh, Korlhalli and Mahendale in turn had dropped easy catches, so we did not deserve to win. Mr. Murray kept wicket in place of D'Cunha who had his appendix removed in Coimbatore hospital on the previous day.

Forest College C. C.

M. Ibrahim Ali	l. b. w. Srinivasan	16
H. P. Murray	b Srinivasan	2
J. H. Longrigg	c T. R. Sundaram	
	b. Srinivasan	14
F. B. Nazareth	b Srikantan	22

156 (q)

C. R. Potts	c Srinivasan	
	b Padmanabhan	12
H. I. Shaikh (Cap.)	c V. Sundaram	
	b Padmanabhan	6
P. W. Ratnam	c Natesan b Srinivasan	11
N. G. Dacha	c and b Srinivasan	1
S. H. Korlhalli	c Padmanabhan b Natarajan	15
V. D. Mahendale	not out	5
S. V. Halbhavi	b Natarajan	0
Extras ...	...	8
		Total 112

Bowler.	Overs.	Runs.	Wickets.
Srinivasan	12	20	5
Natarajan	10	30	2
Padmanabhan	7	44	2
Srikantan	3	10	1

Arts College.

Padmanabhan	b Shaikh	7
K. A. Natarajan	c Shaikh b Nazareth	35
P. S. Srinivasan (Capt)	c Nazareth b Potts	19
H. Srikantan	b Shaikh	4
M. Natesan	b Shaikh	0
K. Varadarajan	b Shaikh	2
T. R. Sundaram	not out	8
Palaniappan	not out	5
V. Sundaram and	two others	did not bat
Extras ...	...	4
		Total 84 for 6

Bowler.	Overs.	Runs.	Wickets.
Shaikh	13	26	4
Nazareth	11	19	1
Potts	8	30	1
Korlhalli	1	5	—

Inter-Divisional Hockey for the Cowley-Brown Cup.
1936-38 Division v 1937-39 Division,
on June 28th 1938.

There were many people who thought that the Seniors must win the cup easily as they provide 8 members of the College hockey XI, the only Juniors who find a regular place in the College team being D'Cunha, Dacha and Nazareth. However, the Juniors, strengthened by K. Narayanamurthy in goal, had been taking extraordinary pains to make their team as strong as possible. On June 10th, they played a match against Stanes' School "B" team (lost 1-3) on our ground and on June 14th, they played a close game against the Central Recruits School (losing 2-3) and on June 16th, they met the Rovers XI on our ground and narrowly lost 3-4. They also practised in the mornings as soon as their examination were over.

There was a large attendance to watch the Cowley-Brown cup match. Play was even for a long time. Both sets of forwards looked dangerous in turn. Both sets of backs were defending very well. It was not until more than 30 minutes' play that the Seniors opened the scoring through L. H. Rodrigues with a very hot shot from the very edge of the "D", in front of goal. Golandaz was off the field for about 15 minutes after being struck on the knee by the ball. In the second half the Seniors had a little more of the game in their favour but several corners were forced against them. P. Indersen saved well. Try as they did D'Cunha and his inside forwards could not get the equaliser. About the middle of the second half Rodrigues scored the second goal from a corner hit. There was no further scoring and the Seniors were left winners of a good game by 2 goals to nil.

Teams.

Seniors (1936-38 Division).

Goal. P. Indersen.
 Backs.- S. H. Bagot and I. A. Fernandez.
 Halves: A. A. Golandaz, S. D. Misra and S. Seshagiri Rao
 Nayudu.
 Forwards: K.V.B.C. Pal, V. R. Holkar, L. H. Rodrigues,
 G. M. A. Khuraishy and A. Olimuthu.

Juniors (1937-39 Division).

Goal:- K. Narayanamurthy (substitute).
 Backs:- N. G. Dacha and K. K. Somayya.

Halves:- Ibrahim Ali, R. Nilakantan Nair, V.D. Mehendale.
 Forwards:- S. V. Halbhavi, H. I. Shaikh, J.P. D'Cunha,
 F. B. Nazareth and L. C. Baktani.
 Umpires:- Messrs. H. P. Ward and A. L. Griffith.

Hockey. 1938-39 season.

Starting on 4th August, we have been playing hockey on Mondays and Thursdays and as it is not possible to raise 2 teams within the College we have been getting in a few outside players to make up. The ground was put in order after the S. P. M. R. camp in July 1938 with funds provided by that corps and rains were timely for sanding and rolling, so by the time term opened on August 2nd 1938 the ground was hard, true and very fast. On August 4th, we had stroke practice in hitting the ball and shooting at goal and a few combined runs by the forwards. On August 8th, thirteen Agricultural College students came over and we made up a mixed game with 9 of our men. On August 15th., seven of our team went over there likewise. On August 25th the whole College witnessed a match in the inter-collegiate competition between the Agricultural College and the Coimbatore Arts College on the ground of the first named who won easily in a rather scrappy game. We had our first match on August 22nd, when the Forest College, strengthened with two or three outside players beat the Agricultural College on our ground 5-0. On August 29th., on our ground we met the Government Arts College and won by 4 goals (D'Cunha 3 and Suri 1) to 1 (Dominick). In both these matches the visitors seemed unaccustomed to such a fast ground. The Forest College scored through D'Cunha in the first minute and the home team had the upper hand throughout. D'Cunha was very fast and played a grand game throughout. Nilakantan Nair at half will be a fine player if he can learn stick work. He looks slow, but his anticipation and positional play are very good, he seldom puts a foot wrong and as a result he recovers well and is much faster than he looks. Baktani is another whose stick work is crude. Occasionally he bangs a good centre across. Late in the second half Somayya was hurt and went off to the dispensary. N. G. Dacha, full back, a hockey colour, umpired in this match being unfit to play. This let in Dias, an outsider, at back. Shaikh made his first appearance in goal. He had not much to do in this game but we hope that at last we have found in him a man to fill this place satisfactorily.

Forest College Club:

Goal - H. I. Shaikh.
 Backs - K. K. Somayya and M. Dias.
 Halves - Md. Ibrahim Ali, Achutaraman, R. Nilakantan Nair.
 Forwards- D. Lee, F. B. Nazareth, J. P. D'Cunha (Capt.)
 A. Suri Sastri and L. C. Baktani.

Arts College Club:

Goal - Radhakrishna Mudaliar (Capt)
 Backs - Tiruvenkataswami and K. V. Vaidyalingam.
 Halves - K. G. Gopalakrishnan, T. S. Srinivasan
 K. B. Nandi.
 Forwards - Palaniappan, Joseph, W. N. C. Hensman,
 L. S. Kedharnath and A. Dominick.

Other Hockey Matches.*Forest College Club v Stanes' School.*

Thursday 1st September 1938. Drawn 2-2.

This was played on our ground and produced an even game. F. B. Nazareth gave the College an early lead by scoring in the 2nd minute of the game (1-0) and we held this lead almost throughout the first half, despite methodical attacks by the visitors, until Mr. Axford (Stanes' School) hit a goal just before half-time (1-1). The teams crossed over level, but early in the second half R. Hodgson put the boys ahead (1-2). Seven minutes later our centre equalised (2-2). In the remaining ten minutes or so there was no further scoring although each side looked dangerous on several occasions and play was exciting.

M.F.C.

Goal. H. I. Shaikh.
 Backs. N. G. Dacha and M. Dias.
 Halves. R. Nilakantan Nair, J. Dally and M. Ibrahim Ali.
 Forwards. D. Lee, F. B. Nazareth, A. Suri Sastri,
 J. P. D'Cunha (Capt). and L. C. Baktani

Stanes' School.

Forwards. H. Hornby, D. Ealing, Mr. Axford,
 W. Hawgood and M. G. Saywell.
 Halves. H. Drane, R. Hodgson and K. Ramachandran.
 Backs. R. Johnson and N. Nipps.
 Goal. B. Roze.

Forest College club v Madukkarai Cement Works Club.

Wednesday 14th September 1938 : Won 3-1.

From our camp at Walayar we went by train to Madukkarai and won a well contested game by 3 goals to 1.

M. F. C.

Goal. Md. Ibrahim Ali.
 Backs. N. G. Dacha and I. Netto.
 Halves. K. K. Somayya, R. Nilakantan Nair and M.D'Monte.
 Forwards. T. Dawson, J. P. D'Cunha (Capt). F. B. Nazareth,
 A. Golding and L. C. Baktani.

(Note: We had a hockey match fixed for Saturday 17th. September against Victoria College, Palghat on their ground, but it rained all that morning while we were inspecting the match factories at Ottapalam, and when we reached Palghat about 1-30 P. M. it was still raining and one end of the hockey ground was under water, so the game was cancelled).

Forest College Club v Madukkarai Cement Works Club.

Friday 23rd September 1938; Match abandoned.

We went over from our camp at Walayar to the Cement Works a second time, arrived one short. It was raining slightly and after 20 minutes' play with the score at 1-2 it came on to rain heavily and the game had to be given up.

M. F. C.

Goal. S. H. Korlhalli.
 Backs. N. G. Dacha, and Md. Ibrahim Ali.
 Halves. K. K. Somayya, R. Nilakantan Nair, V.D. Mehendale.
 Forwards. S. V. Halbhavi, J. P. D' Cunha (Capt.), F. B. Nazareth and L. C. Baktani.

Association football.*Inter-Divisional match for the Vira Pambhoi Cup.**1936-38 Division v. 1937-39 Division.*

The annual contest between Seniors and Juniors at football took place on June 21st, 1938. There was a strong south-west wind blowing across the field and the ball was mostly on the east side of the field all through the game. The game was interesting although the Seniors looked slightly the stronger team. Khuraishy scored for them. The score was 1-0, at half time and it was still anybody's game. Later Fernandez, who was

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Forest College Club v Crescents H.C.
Thursday 13th October 1938: Won 6-1.

This was played on our ground. Our Captain D'Cunha stood down, being in hospital for an operation. After only a few minutes the Crescents scored through J. Rajaram (0-1) but two goals by F. B. Nazareth put us ahead (2-1). Before half time T. Dawson and Goulding each added one (4-1). In the second half the same two players each added one (6-1) That there was no further scoring by the visitors was largely due to our goal keeper who made two brilliant saves.

M. F. C.

Goal	-	M. Ibrahim Ali.
Backs	-	N. G. Dacha and I. Netto.
Halves	-	V. D. Mehendale, R. Nilakantan Nair, and K. K. Somayya.
Forwards	-	L. C. Baktani, M. Goulding, T. Dawson, F.B. Nazareth, (Capt.) and H.D. 'Monte.

Forest College Club v. Central Recruits School
Coimbatore. Monday 17th October 1938. Lost 0-2.

This was played on their ground. Unfortunately we could only field a weak team, so we did not do badly as regards the score. There was a certain amount of rough play by the Police recruits and we were told they are a new lot, lately joined and largely ignorant of the rules of hockey. We came near to hitting a goal several times but the Police goal keeper was very safe.

Tennis Match.

On Sunday June 26th, 1938, Madras Forest College, v. St., Joseph's College Wellington, on our courts.

Singles match.

S. Seshagiri Rao Naidu (M. F. C.) lost to Brother Carrold (St. Josephs). 5-7, 3-6.

Doubles.

S. Seshagiri Rao Nayudu and V. R. Holkar (M. F. C.)
(St. Josephs) beat Brother Carrold and D. Baines. 3-6, 6-2, 6-2.

College Notes.

The Hon'ble Mr. V. I. Munisami Pillai, Minister for Agriculture & Rural Development, visited the College Estate on November 19th 1938, in connection with the proposal to open a lac factory here.

Sri. G. Viswanatham, Curator, Forest Museum, Coimbatore, attended the All-India Khadi and Swadeshi Exhibitions held at Salem (7th to 21st August 1938), Calicut (4th to 18th December 1938), and Madras (22nd December 1938 to 15th Jan 1939). Ex-students Sri. K. S. Sastri 1935-37 Dn., and Sri. K. V. B. Pal, 1936-38 Dn. were deputed for the Madras exhibition. A brief note on the exhibitions held at Calicut and Madras appears elsewhere in this number.

The prize of Rs. 25 for the best article published in the Madras Forest College magazine in 1937-38, was split into two of Rs. 12-8-0 each, and awarded to Sri. D. V. Nagarathnam, Range Officer Balapalle (for his article on "rub regeneration") and Sri. A. Yagnasami, Range Officer, Vellore Dn. (for his article on "R. O. 'S and O. R. 'S.")

The College annual athletic sports were not held in October 1938 due to paucity of numbers as we have no Junior Division in residence.

It was however intended to enter a team for the Coimbatore Olympics, but this was spoilt by the dates being fixed for Jan 1939 when we shall be at Aiyur Camp: also our best sprinter is out of action after an operation for appendicitis.

Further award of colours for 1937-38 season. See *Madras Forest College Magazine* XXII, 3, page 99.)

Cricket colours were awarded to F.B. Nazareth.

Hockey colours to A. Olimuthu and I.A. Fernandez.

Athletics colours to A.A. Golandaz.

Football colours to L.H. Rodrigues, G.M.A. Khuraishy and K. Narayanamoorthy.

On 17th. June 1938 the following students of the Junior Division were appointed Captains of the respective teams for the year 1938-39.

Cricket	H.I. Shaikh.
Hockey	J.P.D'Cunha.
Football	R. Neelakantan Nayar.
Tennis	S.H. Korlhalli.

Honorary Secretary: F.B. Nazareth.

Sri K.S. Venkata Rao, Manager, Principal's office, proceeded on leave on 16th August 1938 preparatory to retirement. His place has been taken by Sri. N. Krishnasami Ayyar.

Swimming in 1938.

During the camp at Nedungayam, South Malabar, from 7th November to 17th December 1938 the students bathed in the Karimpuzha river almost every afternoon. Hardly any rain fell during the period so that there was not much stream running and every day the water was beautifully warm and perfectly clear. The annual race was held on 12th December; among those present being Mr. G. C. Robison, Conservator of Forests.

The race was from the 1933 girder bridge down to the upstanding rock (which was flagged) in the stream. This is the usual course. It is a distance of 140 yards. The race attracted an entry of 7 swimmers of whom five completed the course in the order given below. It was a very good race and none could say who would win until almost the last stroke. Baktani had been expected to win. Swimming in mid-stream he was leading for most of the way, with 3 others close at hand, but he appeared to tire at the very end and V. D. Mehendale, who finished strongly after losing a bit through going out of his course, gained the decision by a very narrow margin. S. V. Halbhavi had been well up among the leaders throughout and he finished equal second with Baktani. The next two were not far behind.

1. V. D. Mehendale (Bombay) Silver medal.
2. S. V. Halbhavi (Bombay)
3. L. R. B. C. Baktani (Sind)
4. R. Nilakantan Nair (Travancore)
5. F. B. Nazareth (Bombay).

Then came Korlhalli. N. G. Dacha unfortunately got cramp and had to be assisted.

The standard test, which is simply to swim across the river was then held and two students passed:—

Md. Ibrahim Ali (Hyderabad).

K. K. Somayya (Coorg).

The following were also declared to have passed the test:—

S. Ramakrishnan Nayar (Travancore)

S. H. Korlhalli (Bombay)

N. G. Dacha (Hyderabad).

One failed, two were absent as they had recently suffered appendix operation and several had malaria,

*Statement showing the number of students at the Mad.
Forest College on the 1st August each year 1913-1937.
(Hostel accomodation is for 66 students.)*

Year.	Senior Students.	Junior Students.	Total on the 1st August
1913	31	30	61
1914	30	33	63
1915	33	37	70
1916	37	27	64
1917	27	33	60
1918	33	29	62
1919	29	33	62
1920	30	37	67
1921	33	34	67
1922	29	27	56
1923	26	27	53
1924	27	31	58
1925	31	29	60
1926	29	33	62
1927	33	29	62
1928	27	17	44
1929	15	16	31
1930	16	20	36
1931	20	19	39
1932	19	29	48
1933	28	25	53
1934	25	18	43
1935	17	20	37
1936	21	26	47
1937	26	15	41

The Indian Forest College at Dehra-Dun.

"Since the foundation of the above College 1,249 students have secured Higher Standard, and 283 Lower Standard certificates. Amongst the former 15 have risen to be Deputy Conservators, 2 to be Extra Deputy Conservators and 66 to be Assistant Conservators. Of the latter, 2 became Deputy Conservators and 6 Extra Assistant Conservators."

EXTRACTS.

1. "Bakelised" wood: New material offering wide scope.

By "Multiply"

Plywood as an article of commerce is only about 50 years old. This is no age for such an important article, and therefore there are still many possibilities of its improvements. If we compare plywood or timber with metal we find that much more has been done regarding the improvement of metals than in wood. Stainless steel has lost nearly all its initial disadvantages and a good many of its physical and chemical reactions. Timber, or even plywood, to a certain extent still retains some of its disadvantages and does not change at all from the physical or chemical standpoint. Its main disadvantages are to take or to give up moisture and its uneven texture. Even plywood, cemented with the best waterproof glue, does not effect the physical or chemical reactions of the raw material.

But scientists, believing in the possibility of the improvement of wood, are working to find ways to eliminate the disadvantages. New glues have been invented, and the dry-cemented aircraft plywood of to-day is quite a different product altogether to the wet plywood for packing purposes which came from Russia 50 years ago. Now the scientists have given us a new material, and this time it seems that they have eliminated more disadvantages than ever before. They used all the knowledge they had from making plywood and from another raw material, bakelite, and have evolved "bakelised" wood. This is not only a different material from the chemical and physical standpoint, but it has also lost some of the drawbacks of plywood.

"Bakelised," or improved, wood is built up from very thin veneers up to a hundred and more plies, cemented together with bakelite. During the hot pressing process the bakelite forces its way into the plies and "bakelises" the wood. The resultant material is very strong, and water or heat have hardly any influence on its moisture content. These improvements represent a big success. They indicate that the material can be manufactured to any strength considered necessary. The constructor has a material with which he can work exactly as

with steel. Without testing it, he can be sure of its firmness against pulling, pressing and pushing. Moreover "bakelised" wood shows remarkably improved figures not only compared with solid wood, but in certain circumstances its use is even preferred to Duralumin or steel. The pulling firmness is 115 per cent and the pressing firmness 125 per cent. better than in solid wood. After soaking it for 60 hours it takes only 8 per cent. moisture. Solid wood absorbs during the same period over 40 per cent.

The industry to which "bakelised" wood is most important is the aircraft industry. Even though the specific weight is higher than that of solid wood, it is possible to save up to 65 per cent. in weight, as much smaller fittings can be used, and weight is one of the most important questions to the aircraft constructor. By building the airscrews from improved wood it is possible to get 6 per cent. more efficiency, and that means saving a lot in petrol.

"Bakelised" wood, however, is not only important to the aircraft manufacturer. Car and coachbuilder and the armament industry are other large users of this material. The production of gun butts has been much improved by employing it, because the wood is much stronger but not heavier than solid wood. And what is most important, it gives better shooting results. Manufactured in a special way, it is used for cogwheels and other machine parts for smooth working.

The manufacture of "bakelised" wood is economical, as it is possible to use up a quality which otherwise could not have been used for high-class purposes. The difficulties which first existed for the manufacturers during pressing have been obviated by utilising star layers and metal layers. By means of an electric heated wire it is possible to-day to make a waterproof joint of any thickness of material in two minutes, even if this material is soaked in boiling water.

"Bakelised" wood promises a new field for plywood manufacturers, and users. As it is particularly important for aircraft manufacturers, its production may be expected to develop rapidly in view of the vast building programme of the B.A.F. contemplated by Air Ministry.

— *Timber Trades Journal, May 28th 1938.*

2. Fibre Boards Sound After Long Period in Damp Earth.

Twelve years ago some "Sundeala" fibre boards were sent for testing to the Forest Research Institute at Dehra Dun, India, by the manufacturers, The Patent Impermeable Mill-board Co., Ltd., of Sunbury-on-Thames. The boards were partially buried in earth out in the open.

The following is an extract from the annual inspection report of the Forest Research Institute:—

"These boards even new do not seem to be relished very much by the white ants. For boards of this nature to remain practically sound for over 12 years under the severe conditions experienced in our test yard is a very fine achievement. It must be remembered that these boards have been out in the open, with the bottom half buried in the earth, in a locality with a rainfall of over 100 in. per annum. Such a test is extremely severe for fibre boards and we cannot but express our admiration for these specimens of Sundeala boards which are now almost the 'oldest inhabitants' of our test yard."

— *Timber Trades Journal, May 28th, 1938.*

3. "Khanki Mixture" Special paint for irrigation works.

Satisfactory results are reported to have been obtained from the use of a coal tar paint known as "Khanki Mixture" evolved in the Punjab and extensively used in that Province for such iron and steel works as are in constant contact with water.

The average covering capacity of the mixture is about 2,500 sq. ft. per cwt. and the cost of painting is Re. 1-5-0 per 100 sq. ft. for two coats, exclusive of cleaning. Two or three coats are said to be sufficient.

The composition of one cwt. of the mixture is as follows:—

Coal tar	...	84 lbs.
Mineral pitch	...	10 lbs.
Slaked white lime	...	9 lbs.
Kerosine oil	...	9 lbs.

To prepare the mixture the tar and pitch have to be heated separately and then mixed over a fire and stirred well, the slaked lime to be added gradually while the mixture is being

stirred. It is then withdrawn from the fire and kerosine oil added and the mixture again stirred well. Care should be taken to see that the mixture is not overheated; 350°F. to 450°F. is the correct temperature. The pitch scales off if the mixture is burnt.

The surface to be treated should be cleaned and thoroughly dried and the mixture should be applied hot as soon as the surface is cleaned; too much stress cannot be laid on this point as the mixture does not adhere or spread down in fitted portions of the surface if it is cold. This mixture requires renewal every year or at the least every two years.

Work thus painted is not to be immersed in water until it is thoroughly dry. One week is said to be generally enough for this purpose.

4. Zoological Survey Takes To Floodlights.

The Gallery exhibits, which consist of a collection of unfamiliar animals represented by wrinkled or contracted specimens preserved in fluids such as alcohol or formalin which destroy the bright colours in life of many of them, are hardly a great attraction to the layman. To the hundreds of visitors, a great proportion of them illiterate, who make it a pleasant duty to visit the "Jadu-Ghar" or "House of Mystery", the serried ranks of weird and unfamiliar animals are no doubt objects of wonder, but they scarcely stimulate sympathetic and intelligent interest. The lack of colour and attractiveness offers no inducement to the lay visitor to stop, observe and be instructed by the explanatory labels, which the thoughtful scientist has put up.

To make this Gallery attractive and instructive to those visitors who merely pass by the cases from end to end, a beginning has recently been made by the addition of two small cases, illuminated by concealed electric lights, which show the colourful environment in the sea of certain sea-anemones.

A lowly-organised group of soft bodied animals, which in the still waters of the depths of the sea exactly resemble flowers, the sea-anemones of the tropics, show a great variety of colour patterns; they lead a sedentary existence during the best part of their life, attached to rocks and plants or half-buried in burrows in mud or sand or in tough leathery tubes fixed

amongst rocks or sand at the bottom of the sea. A group of these animals of differing ages with a variety of colours has been placed on show in one of the cases.

In the other show cases has been placed an interesting exhibit showing the intimate association between a group of sea-anemones and a hermit-crab. Unlike most of the crabs, whose skin is hard and shell like, the hermit-crab has a soft body, but with hard limbs and mouth-parts. To protect its body, the hermit-crab finds it expedient to take shelter inside the empty shell of a sea-snail, projecting only such parts of the body out of the shell as are actually useful to it in feeling its way along the floor of the sea and finding its food.

Unusual friendship explained.

For the benefit of the uninitiated, labels have been put up which explain in the language of the layman what the exhibits "are all about".

Sea-anemones swim about freely in their baby stages, but they seek a hard substratum to attach themselves to in the adolescent stage. The invariable choice of the sea-anemones, for attachment, of the hard shell of the sea-snail occupied by the hermit-crab suggests that the association is not altogether accidental. The benefit is probably mutual.

The Zoologist says that the sea-anemone with its batteries of stinging threads all over its tentacles and body protect the hermit-crab from attack by enemies, while the hermit-crab carries the sea-anemones about providing them with better opportunities of catching their prey in different places. The scraps of animal remains rejected by the hermit-crab may also serve as food for the anemones. The cylindrical body and tentacles of the sea-anemone are capable of being contracted to a considerable degree, and in the exhibit all but one are shown to have withdrawn their tentacles inside the partially contracted body.

It is the rows of these long tentacles surrounding the mouth in the centre of the oral disc with their batteries of stinging threads that help the anemones in catching the minute animals which dart about in their vicinity. A young crab or prawn or any other small animal may be one of such victims, but the stinging threads paralyse the active prey and serve to entangle it in their sticky coils. The tentacles which act like

is the demonstration of the fact that in years of shortage, undersized stock in the nursery can be developed into good stock for the following year. These results are particularly important in view of the very poor seed year that occurred last year and the resulting shortage of stumps that followed.

- (e) Summary of 5 years experimental work at 3 centres in the premonsoon stump planting of teak.
- (f) Large scale confirmation by districts of experimental work in the premonsoon stump planting of teak and of the beneficial effect of using stumps of the best size.
- (g) The improvement of our knowledge of the regeneration and working of bamboos.
- (h) The continued success in the control of new outbreaks of the spike disease of sandal.
- (i) The summary by the Forest Entomologist, Dehra Dun, of the results of the investigation into the spike disease of sandal.
- (j) The further information that *Lantana* can be controlled by chemical spraying and that this method is the cheapest method found so far.

(ii) *Natural Regeneration.*

By Seed.

Experiments with *Hopea parviflora*, *Calophyllum elatum* and *Mesua ferrea* so far show that clearing undergrowth and raking the soil under mother trees are not beneficial in inducing natural regeneration. The indication is not conclusive as there have only been small seed falls since the experiments were started.

Canopy opening over young regeneration of *Hopea parviflora* was found to be very beneficial but produced no notable effect with *Mesua ferrea*.

Experiments have been started to endeavour to determine why at Nilambur some mature trees of *Swietenia macrophylla* have a dense mass of natural regeneration under them while other trees produce none.

Partial canopy removal over dense regeneration of *Pterocarpus santalinus* produced a very beneficial effect in spite of a year which was very unfavourable climatically.

By Coppice.

Experiments in the dry fuel forests of Chittoor district showed that the ordinary operation of coppicing causes a mortality of approximately 7 per cent. of the stools and that trimming of the stools is definitely harmful in such areas.

Counts of natural regeneration in coupes in North Coimbatore division 5 years after the coppice felling showed that seedlings to the extent of only 3 per acre were present.

An experiment in the coppicing of *Mimusops hexandra* in the coastal forests of Tanjore showed that this species only coppices well in small sizes, that the mortality of stools increases rapidly with the girth of the stools and that even with the small sizes, mortality is high if the coppicing is done near to the ground level.

(iii) Seed.

Seed pretreatment.—Routine pretreatment tests were done with 21 species. Treatment with boiling water improved the germinative capacity of *Acacia auriculiformis*, *Acacia cyanophylla* and *Acacia dealbata* but was harmful for nearly all other species tried. Soaking in cold water was beneficial with *Gluta travancorica*, *Pterocarpus santalinus* and *Xylia xylocarpa* being very marked in the case of the *Pterocarpus*. Concentrated Sulphuric Acid hastened and greatly improved the germination of *Cassia fistula* and *Cassia marginata* while fermenting greatly improved that of *Terminalia chebula*.

Seasonal collection.—Tests made with 10 species again showed no definite variations in germinative capacity throughout the fruiting season.

Santalum album—peculiar variety.—A sandal tree in North Salem division which is in a virulently spiked area and which has all the appearances of being spiked, fruited during the year. This tree has been under observation for 10 years and by grafting its

tissue on healthy trees no disease can be induced. The seed was normal in germinative capacity and in weight and gave rise to seedlings some of which had healthy foliage and some spike like foliage. They are being kept under observation as they are possibly a variety of sandal immune to the disease.

Seed storage.—Routine tests were made with 24 species to determine the longevity of the seeds stored in different ways.

Sorting seed by size. Work done during the year confirmed previous year's results that the sorting of teak seed by size is not justified economically.

Tests with seeds from small immature, normal mature, and large over mature seed bearers with 4 species showed no appreciable differences in germinative capacity or height growth of the resulting seedlings. Large scale Experimental Plots have been established to test the effects in later growth.

Seed origin.—Small scale experiments with teak seed of 6 origins have all showed comparatively little difference between the origins in early growth. We have 2 large scale long term Experimental Plots in this subject each now 3 years old. Sample plots will be laid out in each origin when the 1st thinnings become due.

(iv). *Miscellaneous.*

Sandal spike Disease Research.—The Forest Entomologist Dehra Dun, inspected the work during the year and summarized results so far obtained as follows:—

- (i) Spike is an insect borne disease.
- (ii) The disease is excluded from a plant by barriers of cloth and of wire gauze of 20 meshes to the inch; it is not excluded by wire netting of 2 meshes to the inch.
- (iii) Small wind borne insects penetrate 20 mesh wire gauze and hence are unlikely to be vectors.
- (iv) The vector passes an aperture of half an inch, hence many large bodied and long legged species are unlikely to be vectors.
- (v) The vector frequents sandal foliage during the period dusk to dawn.

- (vi) The vector is probably either (a) an uncommon species or (b) an uncommon strain of a common species.
- (vii) The vector is active as a transmitting agent at two seasons of the year, February to May and July to December but population surveys show that the incidence of sandal sap-suckers falls very low in June.
- (viii) Artificial transmission experiments have failed to produce spike but suspicious conditions have been produced by *Moonia* and *Lantana aphids*.
- (ix) The common factors in these experiments were either (a) confinement with spiked plants and immediately after with healthy plants, or (b) confinement with spiked plants and immediately after with spiked and healthy plants and a long period of exposure. There was considerable variation in the nature and size of cage and pruning or other after treatment.
- (x) Spike has been produced in 2 cases in large cages by releasing wild insects directly after collection.
- (xi) An exposure of one month is sufficient to permit infection.

Anti-spike operations carried out indicate that such control measures are fully effective in the case of areas where only a few trees are found infected and that in the case of large blocks of forest where the disease has been allowed to spread for some years uncontrolled, the effect of the control operations is to confine the disease to the original limits of the outbreak.

* * *

Experiments on the suppression of *Eupatorium* by means of *kikiyu* grass (*Pennisetum clandestinum*) were extended and and continue to look promising. This work is most important in the reclamation of grazing areas which have been invaded by the pest.

— *Forest Research in India, 1936-37.*

7. Charcoal for Road Vehicles.

*Successful demonstration of high-speed gas lorry—
essential fuel requirements.*

Members of the National Home Grown Timber Council inspected a lorry of the gasproducer type in the neighbourhood of Victoria street London, and saw a successful demonstration of a vehicle being run on charcoal. The lorry which was manufactured by Gilford's (H. S. G.), Ltd., of London, the engine being designed by Major J. A. Macdonald, was representative of a type of vehicle which will be put on the market in the autumn by a well-known British firm of vehicle manufacturers.

A feature of the lorry is the large furnace and hopper in the front. Members of the Council saw charcoal in pieces about the size of a sixpence being loaded into the furnace. Paraffin-soaked asbestos was then lighted, and the furnace was drawn up with the aid of an electrical blower driven by battery, this process taking only about two minutes.

The Driving System Explained.

The system by which the lorry is driven is as follows: the ignited charcoal gives off carbon monoxide, which with oxygen and hydrogen, the two latter being split up from water in the engine, form the main gases for driving. The gases, after cleansing are drawn into the engine and exploded to provide the necessary power. All these processes are done within the vehicle.

The lorry is very quick starting. The engine can be turned right off if desired and it will start up again immediately if there is still a glow in the charcoal—a maximum period of about an hour.

The hopper and the furnace take enough charcoal for run of 80 miles without recharging, 1.3 lb. of charcoal driving the vehicle one mile. Recharging can be accomplished in about four minutes. A feature of this lorry is that it can also be driven by petrol, or any volatile oil, if desired, the change-over being accomplished instantly. The method of driving is the same in both cases. It will be realised, of course, that the whole apparatus for producing and cleansing the gas, including

the furnace, scrubbers, ducts. and so on, is equivalent to the carburettor of a petrol engine, though naturally it weighs more. With charcoal a speed of 50 m.p.h. has been easily attained.

Road vehicles driven by producer gas have been available commercially in continental countries for a number of years, for example in Italy, Sweden and France, but in this country progress has rather lagged behind. A difficulty, particularly in regard to charcoal, is the lack of abundant fuel of the right nature. Research has narrowed down the field to two carbonaceous materials anthracite and charcoal, the first of which is naturally the more economic in this country, though both are equally successful. It has been discovered, however, that the most successful fuel is a mixture of anthracite and charcoal.

It is in regard to the fuel that the National Home Grown Timber Council have been of great service for they have assisted in locating the best supplies of charcoal.

There are three processes of producing charcoal, and two of these have been tried with success in the producers-gas engine. The original charcoal used by Major Macdonald was supplied by Shirley, Aldred and Co., of Worksop, having been converted by the retort process from cordwood, chiefly birch and oak. The National Home Grown Timber Council later experimented with Scots pine, which was manufactured in an earth-kiln in Hampshire. This was discovered to be very successful, and was a proof that softwood as well as hardwoods could produce charcoal of a suitable nature. The main necessity of the charcoal is that carbonisation must be complete and that the tar be entirely removed from it.

This explains why raw wood has been found to be unsatisfactory as fuel—it is difficult to dispose of the volatile tarry matters which come out in distillation. In this connection however, it is interesting to note that Mr. G. H. Donald, of the Forest Products Research Laboratory, has designed—privately, it should be mentioned—a light car which uses raw wood.

The Laboratory is also interested in the task of finding a suitable charcoal fuel for lorries working on producer-gas lines. They are making analyses of charcoal from earth kilns portable kilns and retorts.

In view of the fact that vehicles of a producer-gas type will shortly be available commercially, it is interesting to note that a deputation recently approached the Minister of Transport on the subject of these vehicles, chiefly in respect of speed and weight limits. It was pointed out that, apart from the producer unit, there is no difference in the weight of a petrol lorry and a gas-producer lorry, but that the weight of this unit, which at present forms part of the unladen weight, imposes a considerable disability on the gas-producer vehicle. For example, a lorry with a pay load of five tons, which with petrol can run up to 30 m. p. h. can only run at 20 m. p. h. if it is of the gas-producer type, as the unladen weight, due to the plant, is over $2\frac{1}{2}$ tons.

It was asked that the minister should consider granting a concession similar to that regarding electric vehicles, in which the unladen weight is calculated with the batteries removed, or alternatively that he should make an allowance of one-sixth of the total unladen weight.

— *Timber Trades Journal* 4-6-1938.

Notifications Relating to Rangers.

Waltair Circle.

- 4-7-38. Sri V. N. Leapingwell, extension of leave for two months from 12-7-1938 in continuation of the leave granted.
- 17-7-38. (1) Sri Y. Vydyanathan, Bhadrachalam Range, to Vinukonda Range, Guntur Division. (2) On relief by No. 1, Sri I. Sambasivarao Naidu, to Sathiavedu Range, Nellore Division. (3) On relief by No. 2, Sri A. Suryarao Naidu, to Bhadrachalam Range.
- 2-8-38. Mr. A. S. Kaunds, Trained Forester I Grade, in charge of Narasapatam North Range, Vizagapatam Division, leave for 2 months from date of relief. 2. Sri M. Subbarao, Ranger Fourth Grade, Narasapatam South Range to be in additional charge.
- 3-8-38. The following postings of trained foresters transferred from Bellary Circle to Waltair Circle, are ordered :—
1. Sri B. M. Bopayya, trained Forester, III Grade to charge of Polavaram Range, Godavari Lower Division. 2. Sri C.J. Nanjappa, Trained Forester, Fourth Grade to charge of Palnad Range, Guntur Division
- 10-8-38. Subject to production of medical certificate of fitness, Sri Ch. Ramamurthi, on return from leave to Narasapatam North Range, Vizagapatam Division.
- 31-8-38. Sri V. N. Leapingwell, on return from leave to Narasapatam North Range, Vizagapatam Division. 2. Sri Ch. Ramamurthi on relief to Palnad Range, Guntur Division. in relief of Sri K. Subbanna or C. H. Nanjappa as the case may be.

Bellary Circle.

- 26-5-38. Sri T. Sreeramulu Naidu, to Kadiri Range. 2. The transfer to Kadiri Range of Ranger V. N. Subrahmania Ayyar is cancelled.
- 3-6-38. Sri B. T. Seetharama Ayyar, extension of leave for four months with effect from 6-6-38 in continuation of the leave already granted.
- 12-6-38. Sri. D. N. Subrahmanya Ayyar, leave for two months from the date of relief. 2. Sri. A. Vyasulu, Range Officer, Kurnool Range, to be in additional charge.

- 25—6—38. Sri N. Sundaresa Ayyar, Range Officer, I Grade, Madanapalle Range, Anantapur Division leave for 3 months, and 9 days from 1-9-38 preparatory to retirement with effect from 10-12-38.
- 27—6—38. Sri Y. Subrahmanyam Naidu, to Chelama Range Kurnool South Division.
- 8—7—38. Sri T. Balaramaswami Naidu, reposted to Kanigiri Range Kurnool East Division. 2. Sri C. J. Nanjappa, trained Forester and ag. Ranger on relief by No. 1 to Dhone Range, vice Sri D. N. Subrahmaniya Ayyar, Ranger, granted leave. 3. Sri A. Vyasulu, Ranger, Kurnool Range, will be relieved from the additional charge of Dhone Range on relief by No. 2.
- 20—7—38. Sri K. Venkatasam Naidu on expiry of his leave on 9-7-38 to Dhone Range, Kurnool West Division. The posting of Sri V. N. Subrahmaniya Ayyar to Dhone Range is cancelled.
- 30—7—38. Sri T. Balaramaswami Naidu, extension of leave for three months from 16-7-38 in continuation of the leave already granted.
- 11—7—38. Sri V. N. Subrahmaniya Ayyar, Ranger, Gundlakamma Range, on relief by Sri K. Venkatesam Naidu, to Dhone Range, Kurnool West Division. Sri C. J. Nanjappa reverts to his permanent appointment as Forester, Cuddapah South Division, on relief by Ranger T. Balaramaswami Naidu.
- 27—8—38. Sri B. H. Anandathirtha Rao, to Bukkapatnam Range, Anantapur Dvn. 2 Sri T. Paramasivan Pillai, Madanapalle Range, Anantapur division relieving Sri N. Sundaresa Ayyar, granted leave preparatory to retirement.

Salem Circle.

- 23—5—38. Sri S. Natarajan, trained Forester Fourth grade, (M.R.H 1936) of Salem North division, to charge of Krishnagiri range, with enhanced fixed travelling allowance of Rs. 13—2—0 in the leave vacancy of Ranger B. V. Vaideeswara Ayyar.
- 2—7—38. 1. Mr. S. A. Dawson, four months leave from date of relief. 2. Sri S. V. Doraiswami Ayyar, Ranger Fourth grade, on return from leave, to Dharmapuri Range, vice No. 1, granted leave.
- 4—7—38. Sri M. R. Doraiswami Ayyar, Denakanikota East Range, leave for four months from date of relief.
- 4—7—38. 1. Sri M. P. Halasyanatha Ayyar, on return from leave, to Anchetti Range. 2. On relief by No. 1, Sri Kalappa, Anchetti Range, to Denkanikota East Range, Vice Sri K. R. Doraiswami Ayyar, Ranger, granted leave.

- 10—7—38. Sri T. S. Ramalinga Ayyar, Ranger VII grade, Vellore West division leave on average pay without medical certificate for 3 months and 28 days, and leave on half average pay for 1 year 9 months and 18 days, and leave without pay for 5 months and 15 days from 14-10-1935 in continuation of the suspension of 6 months ordered from 14-4-1935.
- 13—7—38. Syed Munavar Saheb, on return from leave on 20-7-1938, to Anchetti Range, in relief of Sri M. B. Kalappa, Ranger VI grade, transferred to Denkanikota East Range.
- 6—7—38. 1. On return from leave on 29-7-1938, Sri T. N. Vedantaramanujam to Shevaroy's North range, Salem Central division. 2. On relief by No. 1, Sri S. Ramalinga Ayyar, to Valapadi range, Salem Central division. 3. On relief by No. 2, Sri A. P. Devanayagam, (untrained Forester, now in charge of Valapadi range) will revert to his permanent post as Forester in the same division.
- 22—7—38. Consequent on the joining duty from leave of Mr. Syed Munavar Saheb, Sri K. S. Muthanna, acting Ranger, Tamampatti Range, will continue to act as Ranger, last grade, from 20-7-1938, vice Mr. S. A. Dawson on leave (for 4 months).
- 23—7—38. 1. Sri T. K. Parthasarathi Ayyangar, extension of leave for four months from 24-7-1938 in continuation of the eight months' leave granted. 2. Sri T. R. Vijayaraghavan, trained Forester fifth grade and acting Ranger last grade, will continue to act as Ranger last grade, vice No. 1.
- 24—7—38. 1. Sri B. V. Vaideeswara Ayyar, to Krishnagiri Range. 2. On relief by No. 1, Sri S. Natarajan, trained Forester, will revert to his permanent post as Forester fifth grade, Salem North division.
- 2—8—38. Consequent on the return to duty of Sri T. N. Vedantaramanujam, on 29-7-1938, Sri C. B. Ekambaram, trained Forester and acting Ranger last grade, in charge of Rasipur range, will continue to act as Ranger, last grade, from 29-7-1938, vice Sri M. R. Doraiswami Ayyar, Range, third grade, granted 4 months' leave.
- 2—5—38. Sri M. P. Halasyanatha Ayyar, extension of leave for two months from 13-7-1938 in continuation of the four months' leave already granted. 2. Sri C. B. Pemmiiah trained Forester second grade and acting Ranger, last grade in charge of Harur range, will continue to act as Ranger, last grade, vice No. 1 on leave.
- 4—8—38. 1. On return from leave on 17-8-1938, Sri P. Shunmugasundaram Pillai, to Santhavasal Range, Vellore East division. 2. On relief by No. 1, Mr. B. Ghulam Dastagari Saheb to

Tiruvannamalai Range. 3. On relief No 2, Sri T. R. Vijayaraghavan, acting Ranger last grade, will revert to his permanent post as Forester V grade, Salem North division.

16—8—38. Mr. M. P. Philip, Chengam Range, Vellore west division leave for two months from 12-8-1938. 2. Sri S. Natarajan, trained Forester V grade of Chittoor division, will be in charge of Chengam Range, with enhanced fixed travelling allowance of Rs. 13-2-0 from 12-8-1938, or until further orders.

24—8—38. 1. Sri V. Narayanaswami Ayyar, Polur Range, leave for two months from date of relief. 2. Sri T. R. Vijayaraghavan, trained Forester V grade, and acting Ranger last grade, on relief from Tiruvannamalai Range, to Polur range, to act as Ranger last grade, *vice* No. 1 granted leave, or until further orders.

Coimbatore Circle.

24—5—38. Sri V. Maragathavelu, Assistant Ranger, Tunacadavu Range, to do Lac duty in Cumbam Range Madura Division.

7—6—38. Sri. P. J. Krishnan, Ranger Marungapuri Estate, reverted to Government Service, to Tunacadavu Range, as 1st Assistant Ranger.

7—6—38. Sri. P. Doraiswamy Ayyar, Ranger second grade granted leave from 20-6-1938 to 30-6-1938, preparatory to retirement with effect from 1-7-1938.

11—6—38. Sri V. Govinda Menon, trained Forester, Tunacadavu Range, to officiate as Ranger last Grade from 15-5-1938 to 14-7-1938 *vice* Ranger M. Gopalaswami Naidu on leave.

7—7—38. 1. Sri. A. Sitarama Sarma, to Bargur Range, Kollegal Division. 2. On relief by No. 1 Mr. W. Vores acting Ranger to Tunacadavu Range, as 2nd Assistant. 3. Sri. M. Gopalaswami Naidu, on return from leave, to Palni Range. 4. On relief by No. 3, Sri. F. B. Kunders, acting Ranger to Tunacadavu Range as Assistant Ranger.

9—7—38. 1. Mr. F. B. Kunders, Palni Range charge from 16-7-1938 to 15-11-1938 *vice* Ranger C. K. Unni who has extended his leave on medical certificate by 4 months from 16-7-1938. 2. Mr. W. Vores, Range charge, Kollegal division from 16-7-1938 to 2-8-1938 *vice* Ranger R. Alagiriswami Naidu on leave.

14—7—38. Sri. S. Nagalingam Pillai, Cumbum Range. Madura, leave for 3 months from date of relief.

23—7—38. Sri. V. Govinda Menon, Trained Forester posted as Assistant Ranger, Tunacadavu Range from 27-7-1938 till relieved by No. 2. 2. Sri R. Alagiriswami Naidu, on return from leave, posted as Assistant Ranger, Tunacadavu, in relief of No. 1. 3. Sri. P. J. Krishnan, Assistant Ranger, Tunacadavu, to Kollegal division.

25—7—38. Sri. K. V. Banuchandra Pal, Trained Forester, Kollegal division to Coimbatore North division for general work.

26—7—38. Sri. C. K. Unni extension of leave for 4 months from 16-7-38 in continuation of the 4 months leave granted.

25—8—38. Sri. R. Alagiriswamy Naidu extension of leave for 2 months from 5-8-1938 in continuation of the leave for 4 months granted.

25—8—38. The following officiating promotions of trained Foresters to the last grade of Rangers are ordered;—

1. Mr. W. Vores, Bargur Range, from 3-8-1938 to 27-10-1938 *vice* Ranger S. Nagalingam Pillai on leave.

2. Mr. V. Govinda Menon, Tunacadavu Range, from 27-7-1938 to 2-8-1938 *vice* Ranger S. Nagalingam Pillai on leave; and from 3-8-1938 to 4-10-1938 *vice* Ranger R. Alagiriswami Naidu granted further extension of leave.

Ootacamund circle.

16—6—38. Sri. K. Kunhirama Menon, Mudumalai Range, leave for 4 months from 5-7-1938 or date of relief. 2. Sri. P. K. Sankara Menon, Acting Ranger, on special duty the Mudumalai Range *vice* No. 1.

23—7—38. Sri. C. S. Mannadiar, Acting Ranger, Engineering Division, to Nilambur division as Assistant Range Officer.

23—7—38. Sri. A. K. Kunhunni Nair, leave for three months from date of relief of special duty in Nilambur Division.

29—7—38. Sri. C. P. Bhimayya, Trained Forester, Wynaad to Mannarghat Range, *vice* Sri. Rama Rao Kini, granted leave.

1—8—38. Sri. M. R. Tiruvenkatachari, Trained Forester, posted to the Nilgiris Division.

4—8—38. Sri. M. Rama Rao Kini, Mannarghat Range, leave for six months from 25th July 1938.

* * *

20—7—38. The promotions in order dated 13-3-38, will take effect from the dates noted below:—

(i) Sri. V. K. Kunhiraman Nambiar 1-4-1938

(ii) Sri. N. C. Madappa ... 1-4-1938

(iii) Sri. S. Narayana Naick ... 14-5-1938

21—7—38. The present distribution of trained Foresters in the Presidency operates unfairly on a number of them. Several

senior men at present get no opportunities for promotion, as Rangers, while their juniors in other circles get frequent chances.

2. In order to place the more senior men in Circles where they are likely to have frequent chances of acting as Rangers the following transfers of trained Foresters are ordered :-

- | | |
|--|--|
| (i) Sri. C. S. Sivagnanam, MRH (1935) | } From the Waltair Circle
to the Bellary Circle. |
| (ii) Sri. K. Subbanna, MRH (1935) | |
| (iii) Sri. B. M. Bopayya, MRH (1936) | } From the Bellary Circle
to the Waltair Circle. |
| (iv) Sri. C. J. Nanjappa, MRH (1936) | |
| (v) Sri. M. Ramajayam, MRH (1935) | } From the Working
Plans Circle to the
Bellary Circle. |
| (vi) Mr. E. Jacob, MRH (1938) | |
| (vii) Sri. M. R. Tiruvenkatachary,
MRH (1935) | } From the Coimbatore
Circle to the Ootaca-
mund Circle. |
| (viii) Sri. N. Ramakrishnan, MRH (1936) | |
| (ix) Sri. K. R. Radhakrishnan, MRH
(1936) | } From the Working
Plans Circle to the
Bellary Circle. |
| (x) Sri. K. Suryanarayana Sastri,
MRH (1937) | |
| (xi) Sri. C. Varadarajulu, MRH (1938) | } From the Bellary Circle
to the Working Plans
Circle. |
| (xii) G. Muhammad Ali Kuraishi,
MRH (1938) | |
| | } From the Salem Circle
the Working Plans
Circle. |
| | |

The Conservators are requested to intimate to each other, the places where the men should join duty.

4. Should any Conservator have any *strong reason* to advance against any particular transfer, he is requested to report it at once, and to stay the transfer until further orders from the Chief Conservator. Should there be any such cases, a copy of the letter to the Chief Conservator should be sent to the other Conservator (or Conservators) concerned, so that the hitch will be understood.

20—10—38 The following promotions of Rangers are ordered.

I.

*With effect from the 10th February 1938, vice Ranger
R. Alagiriswami Naidu, reduced.*

1. Sri K. G. Monnappa, from Third Gr. sub protem to Third permanent.
2. Sri B. S. Ramaswami Ayyar, from Fourth Gr. permanent to Third sub protem.
3. Sri K. Jayarama Ayyar, from Fourth Gr. sub protem to Fourth permanent.
4. Saiyid Munawar Sahib, from Fifth Gr. permanent to Fourth sub protem.
5. Sri S. Narayanaswami Ayyar, from Fifth Gr. sub protem to Fifth permanent.
6. Sri S. Nageswara Ayyar, from Sixth Gr. permanent to Fifth sub protem.
7. Sri M. Umapathy Mudaliar, from Seventh Gr. permanent to Sixth permanent.
8. Sri P. Krishnan from Seventh Gr. permanent to Sixth sub protem.
9. Sri T. R. Rajagopalan from Last Gr. sub protem to Last Gr. permanent.
10. Sri P. K. Sankara Menon, Ag, Ranger to the Last Gr. sub protem.

II.

*With effect from the 10th February 1938 vice Ranger,
G. Rama Rao Fourth Grade retired from service.*

1. Sri A. N. Ponnayya, from Fourth Gr. sub protem to Fourth permanent.
2. Abdul Rahim Khan Sahib, from Fifth Gr. permanent to Fourth sub protem.
3. Mr. I. John, from Fifth Gr. sub protem to Fifth permanent.
4. Sri A. Subrahmaniam from Sixth Gr. permanent to Fifth sub protem.
5. Sri P. Krishnan, from Sixth Gr. sub protem to Sixth permanent.
6. Sri C. Sreedhara Mannadiar, Temporary Ranger, to the last Gr. permanent.
7. Sri N. C. Madappa, Acting Ranger to the last Gr. permanent.
8. Sri V. Maragathavelu, Acting Ranger to be temporary Ranger.

III.

*With effect from 1st April 1938, vice Sri T. G. Sankaran
Nair Ranger II Grade, retired from service.*

1. Sri C. T. Tiruvengadam, from Third Gr. permanent to the Second permanent
2. Sri M. R. Duraiswami Ayyar, from Third Gr. permanent to Second sub protem,

3. Sri K. K. Appayya, Third Gr. sub protem to Third permanent.
4. Sri K. Dooma Shetty, from Fourth Gr. permanent to Third sub protem.
5. Saiyid Munawar Sahib, from Fourth Gr. sub protem to Fourth permanent.
6. Sri S. Nageswara Ayyar, Fifth Gr. sub protem to the Fifth permanent.
7. Sri K. Puvappa, from Sixth Gr. permanent to Fifth sub protem.
8. Mr. Marcel D' Souza, Temporary Ranger, to the Last Gr. permanent.
9. Sri P. J. Krishnan, Acting Ranger, to temporary Ranger.

IV.

With effect from 19th April 1938 vice Sri K. Karunakaran Nambiyar Ranger Second Grade invalided.

1. Sri M. R. Duraiswami Ayyar, from Second Gr. sub protem to Second permanent.
2. Sri S. G. Venkataramanan, from Third Gr. permanent to Second sub protem.
3. Sri B. S. Ramaswami Ayyar, from Third Gr. sub protem to Third permanent.
4. Sri M. P. Subbayya, from Fourth permanent to Third sub protem.
5. Abdul Rahim Khan Sahib, from Fourth Gr. sub protem to Fourth permanent.
6. Sri S. V. Duraiswami from Fifth Gr. permanent to Fourth sub protem.
7. Sri A. Subrahmaniam, from Fifth Gr. sub protem to Fifth permanent.
8. Sri D. V. Nagaratnam, from Sixth Gr. permanent to Fifth sub protem.
9. Sri S. Muthukrishna Naidu, Temporary Ranger, to the Last Gr. permanent.
10. Sri K. V. Lakshmikantha Rao, Acting Ranger, to be temporary Ranger.

V.

With effect from 1st July 1938 vice Sri P. Duraiswami Ayyar, Ranger, Second Grade, retired from service.

1. Sri S. G. Venkataramanan, from Second Gr. sub protem to Second permanent.
2. K. S. Ramayya, from Third Gr. permanent to Second sub protem.
3. Sri K. Dooma Shetty from Third Gr. sub protem to Third permanent.
4. Sri M. Narasinga Rao Naidu, from Fourth Gr. permanent to Third sub protem.
5. Sri A. Sitharamayya from Fifth Gr. permanent to Fourth sub protem.

6. Sri K. Puvappa from Fifth Gr. sub protem to Fifth permanent.
7. Sri A. Tirupati Raya du, from Sixth Gr. permanent to Fifth sub protem.
8. Sri M. Narayanan Nambiar, Acting Ranger, to Last Gr. permanent.

VI.

With effect from the 22nd July 1938 vice Sri P. Dhananjaya Rao, Ranger Fourth Grade, died.

1. Sri S. V. Duraiswami from Fourth Gr. sub protem to Fourth permanent.
2. Sri N. S. Eswara Ayyar from Fifth Gr. permanent to Fourth sub protem.
3. Sri D. V. Nagaratnam from Fifth Gr. sub protem to Fifth permanent.
4. Sri K. O. Anandan from Sixth Gr. permanent to Fifth sub protem.
5. Sri K. A. Muddayya, Acting Ranger, to the Last Gr. permanent.

VII.

With effect from 12th August 1938 vice Sri A. Ranganayakulu Ranger First Grade, retired from service.

1. Mr. Henry Mac Bride from Second Gr. permanent to First permanent.
2. Sri K. S. Ramayya from second Gr. sub protem to Second permanent.
3. Sri P. A. Krishnaswami Mudaliar from Third Gr. permanent to Second sub protem.
4. Sri M. P. Subbayya, from Third Gr. sub protem to Third permanent.
6. Sri A. Sitharamayya from Fourth Gr. sub protem to Fourth permanent.
7. Sri D. N. Subrahmania Ayyar from Fifth Gr. permanent to fourth sub protem.
8. Sri A. Tirupati Rayadu from Fifth Gr. sub protem to Fifth permanent.
9. Sri P. Gopalan from Sixth Gr. permanent to Fifth sub protem.
10. Sri M. D. Pitchai Pillai, Acting Ranger, to the Last Gr. permanent.

2. As a set off against vacancies in higher grades and with a view to have the full complement of Rangers, the following *officiating* promotions to the last grade of Rangers are ordered under Article 142 of the Madras Financial and Account Code.

1. Mr. F. B. Kunders (M.R.H.)
2. Sri. P. Narayanan Nair (M.R.H.)
3. Ahmad Sheriff (M.R.H.)
4. Sri V. R. Duraiswami Naidu (untrained)
5. Sri N. P. Chirukandan (M.R.H.)
6. Sri C. B. Pemmaya (M.R.H.)
7. Sri K. S. Muthanna (M.R.H.)
8. Mr. A. S. Kaunds (M.R.H.)

The dates from which this promotion is to have effect will be decided on receipt of information as to the dates of their assumption of charge of Rangers' duties. The Conservators concerned are requested to report on this point.

Their officiating pay should be regulated with reference to the rules issued in G. O. No. 169 Public (Services), dated the 29th January 1938.

5—11—38. The following promotions of Rangers are ordered:—

With effect from 17th September 1938, vice Sri. B. T. Sitharama Ayyar, Ranger, IV Grade, deceased.

1. Sri N. S. Eswara Ayyar, from Fourth Gr. sub protem to Fourth permanent.
2. Sri S. Sankaran, from Fifth Gr. permanent to Fourth grade sub protem.
3. Sri K. O. Anandan, from Fifth Gr. sub protem to Fifth Gr. permanent.
4. Mr. V. N. Leapingwell, from Sixth Gr. permanent to Fifth Gr. sub protem.

5—11—38. The officiating promotion to the Ranger's cadre of Forester, V. R. Duraiswami Naidu, ordered in paragraph 2 of Chief Conservator's Ref. No. 4998/38-B2, dated the 20th October 1938, is hereby cancelled, and in his place Forester K. B. Muddappa is promoted as officiating Ranger, last grade. The date from which this promotion is to have effect will be decided on receipt of information from the Conservator of Forests, Ootacamund Circle, as to the date of assumption of charge of Ranger's duties by the Forester. The Conservator of Forests, Ootacamund Circle is requested to report on his point.

2. His officiating pay should be regulated with reference to the rules issued in G. O. No. 169, Public (Service) Department dated the 29th January 1938.

2—2—29. The following errata are issued to the promotions of Rangers already ordered:—

For

Substitute.

Chief Conservator's Ref. dated 20-10-38.

VI.

With effect from 22-7-1938, vice Sri P. Dhananjaya Rao, Ranger Fourth Grade died.

* * *

4. Sri K. O. Anandan, from Sixth Grade, permanent to Fifth Grade *sub protem*.

4. Sri T. S. Sankaranarayana Ayyar, from Sixth Grade, permanent to Fifth Grade *subprottem*.

VII.

With effect from 17-8-1938, vice Sri A. Ranganayakulu, Ranger, First Grade, retired from service,

* * *

9. Sri P. Gopalan, from Sixth Grade, permanent to Fifth Grade *sub protem*.

9. Sri K. O. Anandan, from Sixth Grade permanent to Fifth *subprottem*

Chief Conservator's Ref. dated 5 11-38.

With effect from 17th Sept. 1938 vice Ranger B. T. Sitharama Ayyar Fourth Grade deceased.

3. Sri K. O. Anandan from Fifth Grade *sub protem* to Fifth Grade permanent.

3. Sri Sankaranarayana Ayyar from Fifth Grade *subprottem* to Fifth permanent.

4. Mr. V. N. Leapingwell, from Sixth Grade permanent to Fifth Grade *subprottem*.

Sri Gopalan, from Sixth Grade permanent to Fifth *subprottem*.

5—11—38. The following promotions of Rangers are ordered:—

*With effect from the 10th December 1938 vice Ranger,
N. Sundaresa Iyer First Grade retired from service.*

1. Rao Sahib Sri P. Sankunni Menon, from Second Grade permanent to First permanent
2. Sri P. A. Krishnaswami Mudaliar, from Second Grade *sub protem* to Second permanent.
3. Sri V. Narayanaswami Ayyar, from Third Grade, permanent to Second *subprotem*.
4. Sri M. Narasinga Rao Naidu from Third Grade *subprotem* to third permanent.
5. Sri S. Sankaran from Fourth Grade *subprotem* to Fourth permanent.
7. Sri C. R. Rajagopalan, from Fifth Grade permanent to Fourth *subprotem*.
8. Sri K. O. Anandan from Fifth Grade *sub protem* to fifth permanent.
9. Mr. V. N. Leapingwell, from Sixth Grade, to Fifth *subprotem*.

3. As a set off against vacancies in higher grades and in order to maintain the full complement of Rangers, the following *officialting* promotions to the last grade of Rangers are ordered:—

1. Mr. S. A. Augustine.
2. Sri K. M. Achayya.
3. Sri A. Vyagappa Pillai.

The dates from which their promotions will take effect will be decided on receipt of information as to the dates of their assumption of charge of Rangers' duties.

Examination Humour

Surveying & Shikar.

(Heard at Arambi Camp on May 13th., 1938, during the Final Examination in Survey & Drawing)

Based on the fact that the Pole Star is vertically above the true meridian when the Pole Star and the middle star of the Great Bear are in the same vertical plane:—

Examiner — How would you determine the true or geographical meridian?

Student :— I would take a shot at the stars.

Examiner :— Which particular star would you shoot at?

Student :— (*Somewhat confused over the Pole Star, the Great Bear and the middle star in the tail of the latter*)
I would shoot at the Polar Bear.

Examiner :— Where would you aim?

Student :— I would aim at the middle point of its tail.

Reviews.

Plant Growth -Substances.

By Hugh Nicol, Ph. D., F. I. C.

Published by Leonard Hill, London,

Pp. xii + 108.

Illustrated 1938. Price 3 s. 6 d. net.

The author is Assistant Bacteriologist at Rothamsted. His book contains useful tips for horticulturists, botanists, chemists and possibly arboriculturists. The first two chapters are devoted to the layman to guide him in the use of the new plant growth - regulating substances in horticultural work. Indole-acetic acid and phenyl-acetic acid, for instance, are two commercially available growth substances advocated for inducing root-growth. One paints these chemicals on stems of plants. It is said they are now commonly used to accelerate the rooting of plant cuttings. Chapter III is more technical and deals with the chemistry of the compounds: Chapter IV with modes of application.

To us on the Madras Forest College estate, the application would seem to lie in promoting the growth of avenue trees and of trees in the arboretum and particularly in helping early and strong rooting of cuttings like those of *Ficus bengalensis* and *Thespesia populnea*. But the author admits (page 40) that the initiation of roots on woody plants is a problem which has not yet been solved satisfactorily in all respects. There remains great scope for experiment. The lanolin-smear method appears to be less generally effective with the woody plants, than with others. However the immersion of the cut (basal) ends of cuttings for 24 hours or more in weak solutions of indole-acetic, indole-butyric and α -naphthyl-acetic acids followed by two to four days in a potting compost has given good rooting with cuttings of holly, yew and maple (page 41) and it is further claimed that a deliciously fragrant flowering shrub like *Viburnum Carlesii* can be more cheaply and widely propagated by use of the new synthetic growth substances. This work, English and American is new, dating only from 1936.

At the end of the book is an index of plants which have been tested with these treatments. It contains the following trees *Acer* (Japanese Maple), apple, *Citrus*, *Cupressus*, *Ficus*, holly, lemon, pear, plum, quince, *Taxus cuspidata* (Chinese yew) and in the same place it is mentioned that encouraging results with rooting of *Coffea arabica* cuttings were obtained in E. Africa by treating them with 10 parts indolyl-acetic acid per 100,000 of water.

Perhaps the Madras Silviculturist will like to try these chemicals experimentally and see whether greatly improved rooting can be induced on cuttings of some of our more refractory timber species.

— G. V.

International Yearbook of Forestry Statistics 1933-35 Volume II America.

*International Institute of Agriculture; Rome, Villa
Umberto I, 1938. XI, 201 p. 30 Lire.*

The second volume of the International Yearbook of Forestry Statistics 1933-35, which has been published recently in French and English, deals with almost the entire American continent.

It aims at providing, first a collection of data that will be of use in the study of certain economic questions and secondly, a description of existing official statistics which may serve as a basis for future improvement and unification; it also provides forest statistics and statistics of trade in wood.

The matters dealt with in the *forest statistics* of the various countries are very heterogeneous. Consequently, the figures given in the volume relate to subjects which differ considerably from country to country. However an attempt has been made to secure a certain degree of uniformity in compilation. The volume supplies, country by country, as far as the existing statistics permit, some indications of the area of forest lands, the nature of forest ownership, the forest area divided according to various subjects, the growing stands of forests and the production of wood, and also information on many other details. Descriptive notes amplify or replace the pure statistical material.

The book also furnishes information on the very serious menace of the destruction of forests. In general, the most recent statistics have been utilized; where possible, they are compared with earlier ones. To facilitate further research, the sources employed have been indicated.

In the *statistics of trade in wood*, the quantities imported and exported in the years 1930 to 1935 are given country by country. Special tables contain supplementary data for 1936. The various categories of wood and wood products have been classified as uniformly as possible in order of progressive elaboration. Many figures both in this section and in the forest statistics section have been converted to a uniform basis so as to obtain comparability.

Some tables contain important but incomplete data on the origin of imports and the destination of exports of some countries.

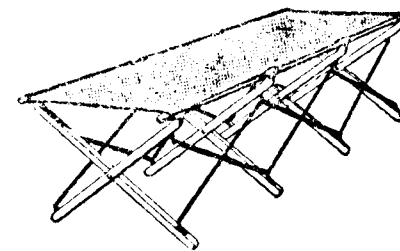
In the summary tables on the first pages of the new publication the figures of forest area of most of the American countries have been reproduced; further a summary of the wood trade of Canada and the United States and of the American wood trade in general is given for the years 1930 to 1936.

— G. V.

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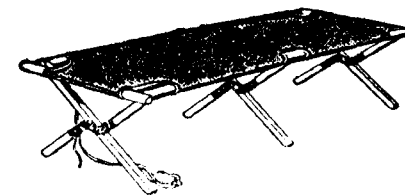
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"Indian Forester" Essay Prizes, 1939.

Past students.

"Some aspects of your work, and experiences in, the first few months or years after you joined the Forest Department of your Province, State or Colony, on completion of your training at the Madras Forest College"

Present students.

"Of the nine forest camps *which you have visited as a student of the College, describe the one which appealed to you most."

Note:— Suggested points of view are:— (i) of the camp itself its situation, comforts and facilities, natural beauty, wild life etc. and (ii) of the work being done in the vicinity by the Forest Department; technical interest or excellence, money value to the Government, direct or indirect value to the local or remote populations, or other feature which has pleased and impressed you.

If there are sufficient entries to warrant it, the prize will be awarded as follows:—

1st Prize Rs. 30 in cash; 2nd prize Rs. 20 in cash.

No award will be made unless a satisfactory standard is reached. The essay should be clearly written or typed on one side of the paper only, and should not exceed 2000 words. It should be submitted to reach the Principal, Madras Forest College, Coimbatore. not later than 1st May 1939. Any not received by this date will not be considered. The essay should be the unaided work of the competitor.

J. H. Longrigg, I. F. S.

Principal.

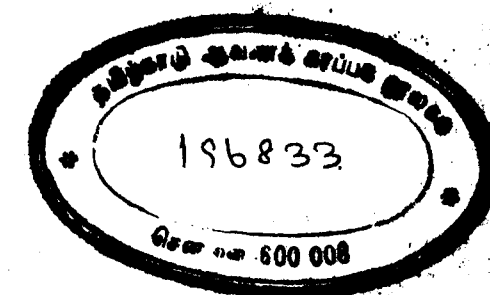
	Duration.	Miles from
		M.F.C.
*Ayyalur (Madura-Trichy border)	2 weeks	120
Mount Stuart (Anaimalais)	2 "	43
Sadivayal (Coimbatore District)	3 "	21
Kargudi (Nilgiri-Wynaad)	4 "	94
Bandyshola (Nilgiris)	6 "	47
Walayar (Palghat Division)	3 "	18
Nedungayam (Nilambur Division, South Malabar)	6 "	103
Aiyur (Hosur taluk of Salem District)	2 "	216
Aramby (Ootacamund, Nilgiris)	6 "	54
(Bangalore camp in barracks of Q. V. O. Madras Sappers and Miners for field engineering course is omitted)		

CORRIGENDA.

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College Notes.

The Hon'ble Mr. V. I. Munisami Pillai, Minister for Agriculture & Rural Development, visited the College Estate on November 19th 1938, in connection with the proposal to open a lac factory here.

Sri. G. Viswanatham, Curator, Forest Museum, Coimbatore, attended the All-India Khadi and Swadeshi Exhibitions held at Salem (7th to 21st August 1938), Calicut (4th to 18th December 1938), and Madras (22nd December 1938 to 15th Jan 1939). Ex-students Sri. K. S. Sastri 1935-37 Dn., and Sri. K. V. B. Pal, 1936-38 Dn. were deputed for the Madras exhibition. A brief note on the exhibitions held at Calicut and Madras appears elsewhere in this number.

The prize of Rs. 25 for the best article published in the Madras Forest College magazine in 1937-38, was split into two of Rs. 12-8-0 each, and awarded to Sri. D. V. Nagarathnam, Range Officer Balapalle (for his article on "rub regeneration") and Sri. A. Yagnasami, Range Officer, Vellore Dn. (for his article on "R. O. 'S and O. R. 'S.")

The College annual athletic sports were not held in October 1938 due to paucity of numbers as we have no Junior Division in residence.

It was however intended to enter a team for the Coimbatore Olympics, but this was spoilt by the dates being fixed for Jan 1939 when we shall be at Aiyur Camp: also our best sprinter is out of action after an operation for appendicitis.

Further award of colours for 1937-38 season. See *Madras Forest College Magazine* XXII, 3, page 99.)

Cricket colours were awarded to F.B. Nazareth.

Hockey colours to A. Olimuthu and I.A. Fernandez.

Athletics colours to A.A. Gollandaz.

Football colours to L.H. Rodrigues, G.M.A. Khuraishy and K. Narayanamoorthy.

On 17th. June 1938 the following students of the Junior Division were appointed Captains of the respective teams for the year 1938-39.

Cricket	H.I. Shaikh.
Hockey	J.P.D'Cunha.
Football	R. Neelakantan Nayar.
Tennis	S.H. Korlhalli.

Honorary Secretary: F.B. Nazareth.

Sri K.S. Venkata Rao, Manager, Principal's office, proceeded on leave on 16th August 1938 preparatory to retirement. His place has been taken by Sri. N. Krishnasami Ayyar.

Swimming in 1938.

During the camp at Nedungayam, South Malabar, from 7th November to 17th December 1938 the students bathed in the Karimpuzha river almost every afternoon. Hardly any rain fell during the period so that there was not much stream running and every day the water was beautifully warm and perfectly clear. The annual race was held on 12th December; among those present being Mr. G. C. Robison, Conservator of Forests.

The race was from the 1933 girder bridge down to the upstanding rock (which was flagged) in the stream. This is the usual course. It is a distance of 140 yards. The race attracted an entry of 7 swimmers of whom five completed the course in the order given below. It was a very good race and none could say who would win until almost the last stroke. Baktani had been expected to win. Swimming in mid-stream he was leading for most of the way, with 3 others close at hand, but he appeared to tire at the very end and V. D. Mehendale, who finished strongly after losing a bit through going out of his course, gained the decision by a very narrow margin. S. V. Halbhavi had been well up among the leaders throughout and he finished equal second with Baktani. The next two were not far behind.

1. V. D. Mehendale (Bombay) Silver medal.
2. S. V. Halbhavi (Bombay)
3. L. R. B. C. Baktani (Sind)
4. R. Nilakantan Nair (Travancore)
5. F. B. Nazareth (Bombay).

Then came Korlhalli. N. G. Dacha unfortunately got cramp and had to be assisted.

The standard test, which is simply to swim across the river was then held and two students passed:—

Md. Ibrahim Ali (Hyderabad).

K. K. Somayya (Coorg).

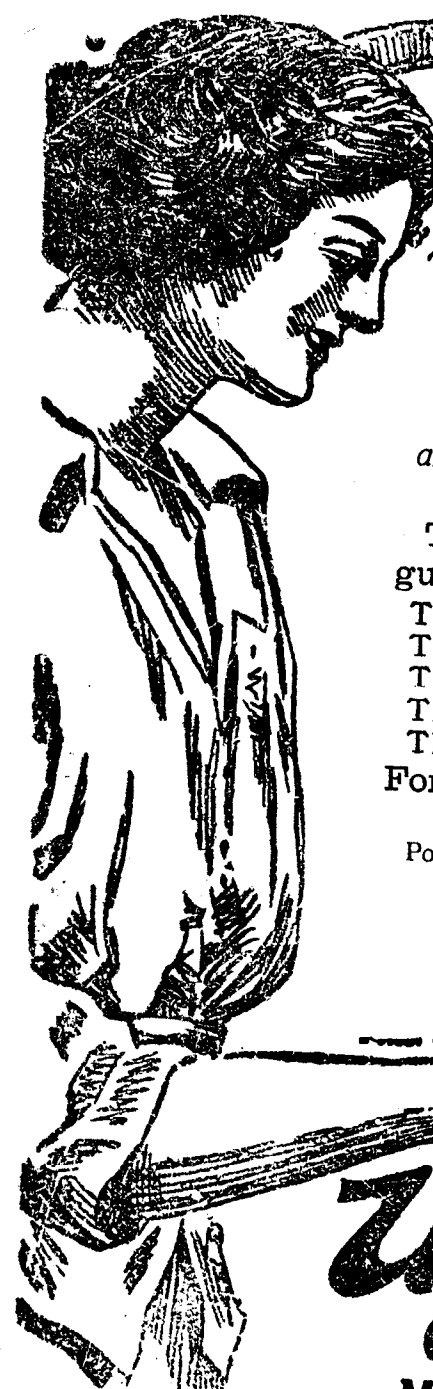
The following were also declared to have passed the test:—

S. Ramakrishnan Nayar (Travancore)

S. H. Korlhalli (Bombay)

N. G. Dacha (Hyderabad).

One failed, two were absent as they had recently suffered appendix operation and several had malaria,



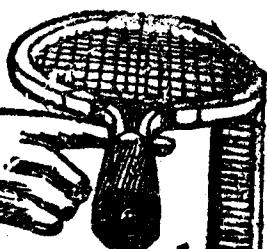
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