

Madras Fours College Magazine

V8. No. 2, December 1923

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N23

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Vol. VIII.

DECEMBER 1923.

No. 2.

THE MADRAS Forest College Magazine.



EDITED AT COIMBATORE.

MADRAS PRESIDENCY.

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JB,d,m211,n16
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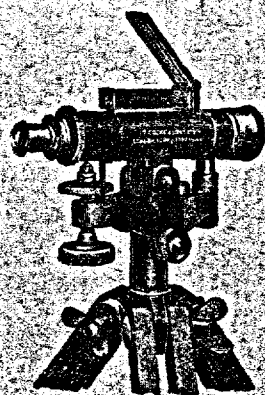
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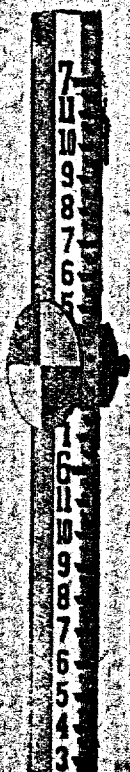
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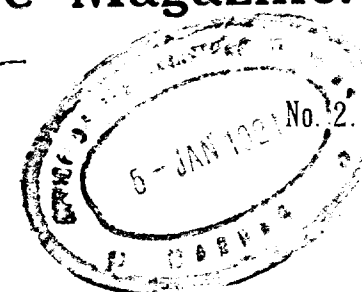
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THE Madras Forest College Magazine.

Vol VIII.

DECEMBER 1923

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Indian Forester Prize 1924.

(for PRESENT Students)

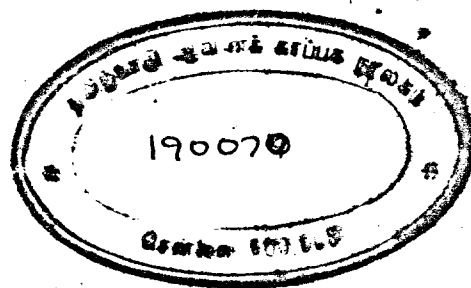
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The subject for the above Prize for the current year will be:—

“The Regulation of Grazing in Forests.”

The Prize is open to all PRESENT students of the College.

No award for either prize will be made unless a satisfactory standard is reached.

The Essays should be clearly written or typed on one side of the paper only and must reach the Principal not later than the 10th, nor earlier than the 1st, May 1924. Any Essay received after this date will not be considered.

Essays should not exceed 2000 words; in previous years students have been disqualified for infringing this rule.

Each Essay must bear a *Nom de plume*, which must also be written on the outside of a sealed envelope inside which is a paper containing the name of the competitor. The name of the competitor must not appear on the outside of the envelope or on the Essay. Each Essay must be the unaided work of the competitor submitting it.

W. G. DYSON.

Principal,
Madras Forest College.

II

Indian Forester Prize 1924.

(for PAST Students).

A Prize allotted from the 'Indian Forester' Fund will be awarded to the PAST student of the Madras Forest College, who submits the best Essay, on the following subject:

*"Fuel coupes in Mixed Deciduous Forest—their
Sylvicultural treatment and tending with special
reference to financial results."*

No award will be made unless a satisfactory standard is reached. Essays should be clearly written or typed on one side of the paper only, and should not exceed 2000 words; they must reach the Principal not later than the 10th, nor earlier than the 1st, May 1924.

Each Essay must bear a *Nom de plume*; which must also be written on the outside of a sealed envelope, inside which is a paper containing the name of the competitor. The name of the competitor must not appear on the outside of the envelope or on the Essay. Each Essay must be the unaided work of the competitor submitting it.

W. G. DYSON,
Principal,
Madras Forest College, COIMBATORE.

THE Madras Forest College Magazine.

PUBLISHED QUARTERLY.

Vol. VIII.]

DECEMBER, 1923.

[No. 2.]

*Course of Lectures on Forestry, delivered at the Agricultural College,
Coimbatore. (By C. E. C. Fischer Esq., I. F. S.)
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LECTURE 3.

SUMMARY OF INDIRECT UTILITIES. DIRECT UTILITIES. COMPARISON BETWEEN FORESTRY AND AGRICULTURE.

Summary of Indirect Benefits.

Before proceeding further with our subject, let me briefly summarise the indirect benefits derived from forests which I placed before you in the first two lectures.

Firstly we have the forest as a moderator of the extremes of temperature, reducing excessive heat or cold, not only within its own limits, but tending to extend the beneficial influence to the surrounding country side. Correlated to, and dependent on, this action, we have seen

Humidity. that the forest possibly increases the rainfall and certainly increases relative humidity.

Through the same capacity, the thaw of snow is retarded and this together with the power of retarding the surface flow after rain, of storing up water and only allowing it to

Floods. filter slowly down, the forest prevents floods, regulates the flow of water-courses so that there is no serious fluctuation, and maintains the water-supply at a fairly constant output, thus performing a valuable service in connection with irrigation, the utilisation of water-power and the protection of dwellings, roadways, bridges and other constructions.

Closely connected with the check of flood is the prevention of erosion. The wash of small quantities of silt, we

Erosion. have established, is beneficial to agriculture by fertilising the soils. This wash is constantly being made good by the formation of fresh soils near the summits. The silt is caught up in the forest, treated, mechanically and chemically and sent down in a perfected condition. Excessive wash results in the more or less rapid removal of all the soil and

Silting. eventually in denudation, which it is difficult, if not impossible, to remedy. The ultimate results of heavy erosion are dead hill sides; waterways, canals and tanks silted up to the detriment of irrigation; harbour-bars formed, and rivers and canals closed to navigation, thus removing the cheapest

form of transport; agrarian lands made barren by the deposit of sterilising debris, and unprofitable sand piled up and spread abroad

Woods offer an obstacle to air currents, thus
Wind. protecting tender crops from hot to cold blasts, and sheltering fields and dwellings from the violence of the wind.

Hail. Hail is prevented from forming by warming the atmosphere and discharging it of electricity.

Avalanches. Avalanches are nipped in the bud, if such a term is permissible in such a connection.

Tree growth offers harbourage and shelter to the birds that are of such material assistance in protecting field crops

Birds. from damage by insects. It might be opposed that grain-eating birds are also harboured. But, firstly, the harm done by the latter is far outweighed by the benefit derived from the insectivorous ones. Secondly, some of the most mischievous of the grain-eaters, such as the sparrow, are not forest lovers but co-dwellers with man. Finally, it is far easier to adopt protective measures against birds than against insects.

We also examined the claim of the forest to a beneficial rôle in sanitation through its capacity of draining
Hygiene. swamps and of purifying water by filtering out solid particles and destroying pathogenic germs by means of the acids in the humus. The trees also break up injurious

organic compounds into their constituent elements and thus purify the soil.

Aesthetical. Finally, there is the aesthetical value, bringing wealth as well as spiritualism to the inhabitants.

Direct Utilities The direct benefits derived from forests are too obvious to require great elaboration. To discuss all their various products would occupy far more time than can be spared.

Forest Produce. A brief review of the nature of the chief products of the forest and their uses will, I trust, prove neither uninteresting nor unprofitable.

For the sake of convenience they are usually divided into two main classes. Major produce, which includes timber, large and small, and fuel, and Minor Produce, which term covers all the rest.

In spite of the numerous substitutes for wood in its multifarious uses that have been introduced and employed during the past fifty years, the demand for timber is ever on the increase and it is as essential a requirement of modern conditions as it ever was in the past. Steel and concrete are used in house and bridge construction, steel sleepers are laid on rail lines and steel is often used for furniture.

Substitutes. In a hundred different directions too other materials have been substituted for wood. Nevertheless, wood is used in ever increasing quantities and

more than one forest economist has already raised the alarm of a timber famine in the near future. As a matter of fact, wood is now being used for purposes to which it was not put fifty years ago or even more recently. Take one new use alone, that for paper pulp and cellulose. A number of different kinds of trees, mostly fairly soft-wooded, are used for this purpose. The wood is cut up into convenient sizes and ground down by machinery or its fibres separated by chemical reaction. After undergoing cleaning and bleaching processes the resulting mass is ready for the number of uses to which it can be put. This cellulose may be pressed into what is termed papier maché. It would take quite a long time to merely run through a list of the various articles made of papier maché; from boxes and furniture to tiles, building material, carriage work and even railway-carriage wheels. Cellulose has been used for almost every conceivable modern convenience, among which paper making is the chief and absorbs the largest quantity. Cellulose through chemical preparation and by the use of ingenious machinery, can be spun and used as a substitute for all kinds of textiles and even for silk. Cloth woven entirely out of cellulose has been made up into men's clothes and worn. Recently a new company has been started in England, which is engaged solely in the preparation of thread, twine and cordage of very excellent quality, twisted entirely out of cellulose.

It is not necessary for me to catalogue all the various uses to which timber is put; you are surrounded by it. It shelters you,

tsiyuo on it, sleep on it, work on it and eat off it.

In agriculture it is indispensable for many requisites:— ploughs, poles, yokes, carts, tool-handles, harrows etc. Wood for fuel, of course, is absolutely essential in many tracts, whether used directly or first converted into charcoal.

As for the minor products, they are innumerable and some of those obtained in India alone occupy several volumes of Sir G. Watt's valuable "Dictionary of Economic products". To mention briefly but a few, we have fibres and cordage from a large variety of trees, climbers and shrubs; dyes and tans such as the myrabolam, the fruit of *Terminalia Chebula*, the bark of *avaram* and a number of other species; gums, as that of the *Karuvelam*, *Acacia arabica*; resins from pines and other trees; oil for burning, for lubricants, and for the manufacture of candles and soaps, such as that obtained from the seeds of the *dhupa* tree, *Vateria indica*; scents and medicines extracted from a large number of plants; honey and wax robbed from the bees that build their combs on trees or cliffs in the forest, and other animal products such as horns, hides and ivory.

Those of you who care to come will be very welcome should they desire to pay a visit to the Gass Forest Museum, at the Forest College, where a great number of the products of the forests of Southern India are displayed for the profit and instruction of all who are interested.

Forests, of course, form a very important source of wealth.

Where the soil is suitable and there is a good demand for forest produce, coupled with facilities for cheap transport, especially by water, forests often return a very high percentage on the capital invested. As a rule, however, forest property does not offer a very tempting investment from the speculator's point of view. More especially is this so when the forest is not already mature or nearly so, and has to be established, since no revenue whatever can be expected for several years. For this reason it is rather the State that undertakes forest enterprise, or landholders. There are, of course, exceptional cases, as, for instance, the *Casuarina* plantations along the coasts of this Presidency and around Bangalore and the *Eucalyptus* and *Acacia* plantations in the Nilgris. Here, quick-growing trees have been planted near large centres of fuel consumption. The trees are sufficiently grown in from 10 to 15 years, according to the locality, to be felled for fuel and a large outturn, which sells readily at a good price, is secured, and a good rate of interest is realised.

The establishment, protection and working of Forests offer the opportunity for a considerable amount of employment of skilled and unskilled labour, and where employment is apt to be scarce at certain seasons, the possibility of obtaining work in the forest is likely to be very welcome to the labouring classes. Forest work often dovetails with

agricultural operations; the heavy work in the forest is got through at the season when work in the fields is slack and the labour is released when required for agricultural work. This is so especially in countries with a severe cold season when frost and snow suspend all farm work. Felling work can then go on in the forest and transport is facilitated by the snow, as the timber and fuel can be slid down the slopes with ease, or transported on sledges.

It will be seen, therefore, that forests play an important part in the acquisition of wealth by providing raw material for industries, employment for the labouring population, and a secure, if not always very highly remunerative, investment for capital.

At this point and in this connection it will be of interest to compare agriculture and forestry. You must not mistake my meaning. There can be no question of the substitution over a whole tract of country of forests for agricultural crops, or vice versa. Both are equally necessary and could not be pursued one without the other under the complicated system of civilisation to which our world has attained at this date. Once, no doubt, in the early dawn of human history there were forests but no agriculture, but, of course, that is a long way behind and the growth of food crops is an essential condition of modern existence. I trust that what I have told you so far has convinced you of the absolute necessity of forests for the existence

of mankind. It is usually held that the proper proportion of area under tree-growth in any country should be from 25 to 33% of the whole, according to its special conditions. A land that is naturally cool and moist owing to its latitude, its topographical characteristics and its proximity to the sea, will need a smaller proportion than one less favourably conditioned. Be this as it may, there are many cases in which the question of whether a particular area is to be devoted to the growth of field crops or set apart for forests is a debatable one, and a knowledge of the essential points of difference between them is imperative as a guide to a sound conclusion. A comparison of the estimated financial results of the two systems, though an important item in the survey, is not in itself sufficient, since there are several factors of a conditional nature that enter into the calculation, the eccentricities of which may, in the upshot, so totally disturb the forecast as to reverse the results.

It is patent that the great difference between the two is that of periodicity, that is to say, field crops are sown and harvested within the year, whereas forest crops take a number of years to mature; rarely, if ever, less than 10 and possibly as much as 200. This difference presents both advantages and disadvantages, which we will now discuss. It will be simpler, I think, and also more easily understood, if I take up point after point and enumerate the advantages and disadvantages of each as applied to one or other crop respectively.

Capital. 1. A smaller capital is tied up in field crops and that only for a few months.

With the forest the capital gives no return for several years; the gradually increasing capital is locked up and is not realised for a number of years.

Injuries. 2. Field crops are far more susceptible to injury from adverse meteorological conditions, such as unseasonable rain, floods, drought, extremes of temperature, high winds, hail, heavy downpour of rain or falls of snow. Also they suffer more from severe insect and fungoid attacks and depredation by animals. The entire crop may be lost through these agencies.

Forests are far less endangered by such causations and, except in the case of cataclysms of great magnitude that would also cause far more injury to agricultural interests than the mere destruction of a crop, the damage is restricted to a small portion of the woods. Even then, though individual trees may be killed or their value impaired, some revenue is usually realisable by their sale.

Single crop affected. 3. In agriculture the damage is confined to a single year's crop.

In the forest, however, the effect is more disturbing. If the crop in which the damage has taken place is already several years old the past years as well as the time required to make good the injury is lost

Also, damage to individual trees will affect the surrounding ones for the growth of each is interdependent with that of its neighbours.

Easier Protection. 4. On the other hand, it is far easier to protect field crops against insects, fungi and animals.

In the forest such protective measures are often possible only in nurseries and over very restricted areas requiring special protection.

5. While agricultural land lies fallow between **Duration of danger** crops there is no danger to be feared and the invested capital is not jeopardised.

In forestry the danger is ever present and some portion of the capital is always in jeopardy.

6. Field crops take a heavy toll of the plant **Demand on soil.** foods in the soil and practically nothing is restored, the soil is liable to be exhausted unless costly manures and fertilisers are added from time to time.

In the forest the soil is in no danger of exhaustion, the demands made on it by the trees are far less and there is not only a constant return by the decomposition of fallen leaves, twigs, fruit and the wastage of exploitation, but the micro-organisms in the humus fix free nitrogen from the air and add it to the soil constituents.

7. Agricultural soil is more constantly exposed to the direct rays of the sun, resulting in desiccation. On the other

Soil exposure and aeration hand, it is also frequently turned over by ploughing etc., and aerated.

Forest soil is very little exposed to insolation, but is rarely worked up and is not so well oxygenated.

8. It is simple to arrange for a rotation in field

Rotation of crops. crops alternating cereals and roots with leguminous crops, thus minimising exhaustion of the soil.

Such a rotation of crops is only possible in forestry at long intervals and is then most difficult to establish and very disturbing to successful management.

9. It is a simple matter to grow whatever kind of field crop is desired, provided that the local conditions are not

Kind of crop. adverse. In forestry this is not so; usually, the choice of crops is limited. Moreover, if naturally reproduced crops are desired it is very difficult to eliminate the species that are not required.

Raising new crops. 10. Raising a new field crop is a more or less simple matter and failures are rare.

In forestry the raising of a new crop is often a very precarious affair and frequently unsuccessful or only partially successful.

11. Agriculture requires more labour and transport. Moreover, these must be available at definite seasons; sowing

Quantity and urgency of Labour and harvesting cannot be deferred for more than a few days. Also the labour and transport is required throughout a whole district at approximately the same time and that urgently; consequently, wages and rates are apt to rule high.

For forest work the amount of labour and transport required is smaller, the operations are seldom urgent and can usually be deferred until the slack season, when wages and rates are low.

12. On the other hand, agricultural work lies **Location.** within reach of dwellings in more or less congenial and healthy surroundings.

In India, at least, forest work usually lies in remote and often unhealthy tracts; frequently the communications are bad and the conditions unpopular.

13. The harvest of field crops cannot be long **Urgent harvest.** deferred whatever the weather conditions may be and whether the market is favourable or not the crop must be got in.

There is no such urgency in forest matters. If the normal age for exploiting is 100 years, the difference between felling at 95 years or 105 years is negligible. Consequently, it is easy to take advantage of specially favourable conditions and a temporarily high market rate by

advancing the fellings by a few years, or, in the contrary case, fellings may be deferred during a period of depression.

14. If a field crop has to be stored for any length of time it is exposed to serious danger and to risk of deterioration. Moreover, special Store houses must

be built or godown rent must be paid.

16. There are well defined practices, rules, and customs in agricultural procedure, and it is not a very difficult

Management. matter to follow them. Errors soon become apparent and they affect a single year's crop. Finally, competent managers are numerous and there is no difficulty in securing their services at reasonable rates.

In forestry, owing partly to the length of time required to mature the crop and partly to the fact that much still remains to be learnt in silviculture, the coefficient of human error is an important one. Forest management is still, at least in the tropics, very largely a matter of personal observation and experience. It is necessarily more complicated because of the duration of the life of a crop and, consequently, errors of management are more liable to occur. Also as the latter do not usually reveal themselves for several years, the intervening time and that required to rectify them (if rectification is possible) is lost. Competent managers are scarce and their remuneration is correspondingly higher.

Reviewing the whole situation, we may safely conclude that where

irrigation is possible, where the soil is rich and conditions in general are favourable for agriculture, the growing of field crops will be more profitable than forestry. In the hills, on poor soils, and where the general circumstances are not favourable to agriculture, it will be more profitable to devote the land to forests.

Obviously there will be exceptions. Lands that could profitably serve for field crops will be used for forest growth for special reasons; for instance where the supply of fuel is short or where protective forests are required. On the other hand, it will be necessary in hill tracts and other forest regions to devote some part of the area for the growth of food and fodder crops, in the interest of the local population required for forest labour, and for transport animals.

"MY FAVOURITE TREE"

Bamboo.

Second Essay for the Indian Forester Prize for Present Students.

By Dooma Chetty; 1922-24 Dn.

IN having selected bamboo as my favourite tree in preference to any other out of the big vegetable kingdom, I am fully conscious of the first-sight criticisms likely to befall me. It may be asked that while there are numerous trees both monocotyledons and dicotyledons, important as timber or fuel, some growing as huge as to

allow a road to be cut through their trunks, why I selected as my favourite this monocotyledonous plant belonging to the grass family, the very christening of it a tree, is due to the generosity of the botanist.

While Milton loved sublimity, Shakespeare tragedy, Tennyson chivalry, it was not without cause that Wordsworth loved simplicity in nature. One father loves his child because it is fair, another because it is tall, a third because it is intelligent, a fourth because it is his future hope, and a fifth simply because it is his. If there is a father who can boast of all or the majority of such qualities in his child then such a father is really blessed. So if in endeavouring to write this essay I can justify the selection of my favourite tree, I shall think myself amply rewarded.

The importance of a tree primarily depends upon its utility, and if there is a tree which is utilized in more ways than any other, it is bamboo of one or other out of over one hundred and fifty varieties. The country is not made up of all towns or cities nor are all men born wealthy. More than two thirds of the population are poor and unable to provide themselves with storied houses built of Artocarpus beams, Hopea rafters or Teak doors and windows. For such poor, bamboo affords a cheap and easy means of constructing houses. Some make only the roof - out of bamboos, others use it for roof, posts, walls and everything including cots, tables and chairs. Had it not been for bamboos the sheltering of the poor would have been a difficult problem and the value of other timbers would have gone considerably higher

than it is now. Bamboo therefore saves the poor and helps the rich.

In the urgent constructions of temporary sheds and pandals bamboo plays a very important part and it will be almost impossible to replace it by any other timber, owing to its readiness for use without carpenter's dressing, its-lightness combined with strength and elasticity, and its sufficient length coupled with straightness.

While all other timber trees are made use of mostly in the construction of buildings etc., the scope of bamboo is by far much wider. It makes a reliable walking stick for the gentleman, a fine oar for the boatman, a durable mast, spar or helm for the sailor, a strong shoulder pole for the carrier, a pleasant fishing rod for the sportsman, a successful bow for the hunter, an agreeable mouth-organ for the musician, a fine milking pot for the village house-maid an unbreakable toddy tube for the tappar and - many other useful things which none of the other trees can boast of or can compete with.

The rural industry of basket and mat making out of young bamboos supports a vast number of the aboriginal tribes of India, while the industry of bamboo fans, wall mats and other fancy articles made out of bamboo, forms one of the sources of Japan's wealth. So much is bamboo valued in Japan that it is said that a few bamboo clumps are considered as a fairly big matrimonial dowry.

Tent posts and frame works of ordinary carts are made of Dendro-

calamus strictus and umbrella handles are made of a smaller variety bamboos (lankries). A single pole of *Dendrocalamus strictus* forms a strong and light ladder, while for ladders with rungs the other variety, *Bambusa*, is resorted to. Ten to fifteen bamboos tied together like a platform affords a comfortable and suitable means of crossing rapid mountain streams. Bamboo rice takes the place of ordinary paddy rice in times of famine in the village parts. Tender rhizome shoots are pickled or made into curry and eaten. Bamboo leaves afford the best fodder for elephants. A seeding season of bamboos breeds a lot of wild fowls. Hill tribes create fire by rubbing two pieces of dried bamboos.

The function played by bamboo in the exploitation of timber is a very important one in the Forest Department. Where smooth running rivers connect the forest areas with the market towns, rafts (bundles) of fifteen to forty bamboos are tied together, and the log to be transported is tied between two rafts and floated down the river. If the passage of the river is broad enough, two logs can be tied between three rafts. One bamboo (*Bambusa arundinacea*) is ample to float one cubic foot of any timber, or even more if the logs are dry or of a light species. One floater connects a number of such rafts, with the logs tied between them and steers them quite easily. The cost of such transport comes only to half of what it is by road and cart, in addition to the bamboos reaching the market town free of transport charge. The simultaneous dying of bamboos in the districts where they were put to this use, has caused much anxiety in the Forest Officer's minds, as their trial to

introduce a suitable temporary softwooded tree substitute till the next bamboo crop comes up, has not as yet ended a complete success.

While Sal never stepped to Southern India, Teak feared to ascend the Himalayas, *Hopea parviflora* confined itself to the western coast, all trees have their own particular habitat with regard to soil, temperature, rainfall or elevation, bamboo in one or other of its varieties extends from the mean sea-level in Cape Comorin or Ceylon up to ten thousand feet elevation in the Himalayas, irrespective of soil, climate or elevation. *Dendrocalamus strictus* occupies the driest regions like Berar, *Bambusa polymorpha* thrives very well in the moistest soils, *Bambusa tulda* grows quite agreeably in the alluvial flats, *Oxytenanthera albociliata* makes little difference between low plateaux or hills, sandy or laterite soils, *Dendrocalamus longispathus* likes damp ravines, *Teinostachyum helferi* keeps even to most swampy valleys and *Bambusa arundinaria* flourishes very well in the high altitudes of the Eastern Himalayas. In a word bamboo grows in high as well as low levels, in deciduous as well as ever-green forests in dry and rocky as well as damp and fertile soils, in insular as well as continental climates, and in tracts with scanty as well as a heavy rainfall.

Reproduction is the means of preservation of the universe. It applies equally well to all the living beings comprising the universe and consequently to all trees. Other conditions remaining the same, a tree which can reproduce itself by two methods has a better scope of extending than that which can reproduce only by one method, and that which can

reproduce by three methods has greater chances than that which reproduces by two methods, and so on. Of all the forest trees bamboo is the only one which can reproduce itself by so many methods—seeds, division, offsets, stem, rhizome, cutting or layers. It may however be contended that bamboos flower only once, and that at long period of twenty to thirty years; but if we compare the amount of seeds that it produces when it flowers it will be found to be much more than the seeds produced by other trees throughout their lifetime. It was actually found that one single clump of *Bambusa arundinacea* produced as much as two hundred and fifty two seers (1 seer = 80 tolas) of cleaned and husked seeds. Natural reproduction by seeds is quite sure, and patches can be raised by broadcast sowing. Artificial regeneration by means of seedlings, cutting or rhizomes are comparatively easy and equally successful.

Though reproduction is the means of preservation of the universe, each individual in the world has one or more enemies to contend against. As insects have their enemy in the bird, chickens in the kite, fire in water, so also have trees their enemies in heat, cold, cattle, fire, frost and drought, and in order to continue their existence they must have the capacity to struggle with all these. Most Forest trees suffer from either excessive heat or excessive cold, some from frost and some from drought, a few never come up after being browsed by cattle, and a few others are very sensitive to fire. Bamboo withstands excessive heat or cold, frost or drought survives equally well even after the heaviest

grazing for a year or two, and recovers itself quite successfully from the effects of severest of fires. Unlike most forest trees that have all their growing buds overground, bamboo has the decided advantage of having the rhizome buds clean underneath; quite unseen by cattle and unaffected by its other enemies.

'Small outlays and quick returns' is the cry of the present day Legislative Council with regard to Forest expenditures. Far reaching schemes however solid they may be are now out of time. In these days of financial stringency we do not want to spend large amounts in regenerating species which growing at the rate of half or one inch (girth) per year, reach the exploitable age a hundred years hence. Bamboo requires a small capital to raise, reaches its maximum girth in the very first year in the case of rhizome shoots and within a year or two in the case of seedlings (though for the biggest sized rhizome shoot, the clump should be at least 20 years old), grows almost a foot (in length) when we are sleeping at night, and a foot while we are awake during the day and reaches the exploitable age within so short a time as seven to fifteen years. Once a clump is established, the reproduction by rhizomes is so rapid that exploitation may go on at such short rotations as from three to six years and that too realising only interest without touching the capital, quite unlike a timber or fuel coupe. In Akola Division of Berar twenty-five acres of bamboos planted in 1885 at an initial cost of Rs. 399, with an additional expenditure of 3354 till 1913 for maintenance and thinning, have brought in a revenue of Rs. 7552 within the

same period, the capital remaining untouched. Investment on bamboos which has such a bright future before it is therefore *the* investment which will bring revenue to the department and will please the council members.

Ambition never looks back to the past, nor it deserves its name if it is contented with its present. It is but the look of the future that keeps it alive and works its progress. What bamboo did in the past or what it is doing at present is but little when compared with what it would do in future. The word 'paper-pulp' and the idea of the suitability of bamboo for the same cannot but bring a flush of joy to every Indian Forester nay to every Indian. It has been tried and proved that bamboo pulp is as good as the best sulphite spruce imported if not better and to add to that it is the cheapest pulp in the world.

The industry of manufacturing paper and paper-pulp is still in its infancy in India, the want of vast concentrated bamboo areas adjacent to equally extensive fuel areas to ensure a continued supply of raw materials, without interfering with the domestic consumption of the villages, being the chief drawback in this direction. With a liberal view of the legislative council members and earnest endeavours of the forest Officers, it will not take more than a dozen or a score of years before we would be able to raise enough concentrated bamboo areas and manufacture our country's demand of paper and pulp, and show an annual income of nearly twenty million rupees, which India at present pays to other countries. When we see that butter boxes made out of paper

pulp are already in existence, our hope of making light watertight vessels out of the same material is not too far.

"MULTUM IN PARVO."

Elephant Kraaling in Ceylon.

Elephant capturing as carried on in Ceylon is quite different from the system of capturing practised in the Madras Presidency. In Madras, the elephants are caught in pits, while in Ceylon they are drawn by men into Kraals. In the latter case "Kraaling" is the term applied to the operations which are conducted by the Revenue department, while in Madras this work is done by the Forest department.

On representations being made to the Government agent of a province, (collector), of damage to village crops caused by elephants this official in consultation with the Ratamahatmaya (Tashildar) in charge of the Pattu (Division) makes arrangements to hold an elephant Kraal in that locality. Orders to this effect are then sent to the Ratamahatmaya who seeks help from the neighbouring Rate-mahatmayas and arranges a meeting in which the various points are discussed. Each chief undertakes a certain portion of the work connected with the Kraal.

The first and foremost step will be to erect a Kraal which would be about 200 feet in length, and 100 feet broad, and is constructed of rectangular shape. Round posts of about two feet girth are well sunk into the ground at intervals of about 6 feet leaving about 10 feet above ground, and cross poles of smaller dimensions are lashed on to these main posts. About 5 tiers of cross poles are so lashed on with strong jungle creepers. Three sides of the Kraal are fenced all round in this manner, and covered with brushwood, while in the fourth side, an entrance, of about 50 feet is left open towards the direction from which the elephants will be finally driven in.

The Kraal having thus been completed, the chiefs all assemble with their subordinates and villagers, each chief bringing about 250 villagers from his Pattu. The day for the final drive is fixed in consultation with His Excellency, the Governor, and the Government agent and about 20 days prior to this date, the chiefs with their men enter the Forest, and surround an area of about 1 square mile, in which the elephants have been previously located. The chiefs divide themselves into sections, and each section beats one line, the whole line of beaters being in the form of a rectangle.

Day and night, the chiefs and their men patrol their lines, and day by day advance towards the Kraal. The elephants are kept in the centre of the rectangle, and they too are thus forced to advance towards the Kraal day by day.

As the beating progresses in the forest, a small temporary town springs up in the locality of the Kraal. The Governor, Brigadier General, Colonial Secretary, and various other officials are provided with bungalows, 'Serambis' are erected about 15 feet above ground near the Kraal for H. E. the Governor, officials, chiefs and the lady visitors. There, Sirambis are erected to enable the respective occupants to secure a good view of the Kraaling and noosing operations subsequent to the final drive in, and are decorated in accordance with oriental custom at considerable expense.

The temporary town extends for about half a mile. The land in the vicinity is temporarily leased to private individuals and those who seek admission to the Kraal area in a business capacity. Rest houses, hotels and boutiques are erected. A Forest Ranger establishes himself in the Kraal and collects Royalty on every post cut to erect the houses and sheds. A temporary telegraph line is connected on to the Kraal area and a Post office, a Police Station and a dispensary complete the requirements of the thousands of spectators who visit the area during the last week of the Kraal.

The driving in the forest continues and a day previous to the final drive in, the elephants are brought to a distance of about a quarter of a mile from the Kraal. As the appointed time approaches for the final drive in, H. E. the Governor with his staff and the various officials mount their respective Sirambis. The thousands of

spectators who have by now assembled surround the Kraal in eager expectation. Much commotion, noise and reports of Guns charged with blank cartridges are heard at a distance frightening the wild elephants and driving them into the Kraal. This commotion and noise gradually approaches the Kraal and crushing of trees and the trumpetting of fear stricken animals are heard drawing closer and closer until finally the animals are forced into the Kraal. The entrance is then immediately closed and the thousands of beaters who took part in the driving operations surround the Kraal with long spears and other weapons in order to avoid any undue attacks on the fence by the elephants.

The elephants are kept practically without food for about a day and decoy elephants and well trained noosers are then put inside the Kraal; the wild elephants are finally noosed and tied to trees by their hind legs.

In successful Kraals about 30 to 40 elephants are caught at a time. Some of these are distributed amongst the chiefs to defray their enormous expenditure and the rest are sold by auction the proceeds of which are credited to Revenue.

Thus ends a much expected and eagerly looked for incident.

The reader may perhaps be led to believe that this is a very laborious process involving a good deal of expenditure and a procedure not worth the candle, but in defence it has to be stated that this has been a Royal sport during the time of the Singhalese Kings and

that the same system is carried on by tradition by the present day chiefs of the Island, who are the decedents of these chiefs, or at least performing the functions of those chiefs who took part in kraals of this nature during the singhaale dynasty.

A. E. PERIERA,
M. F. C. 1922-24 Dn.

Study of the Care and Management of Elephants.

To a casual observer, Elephants may appear to be animals which can be handled roughly and from which any amount of work can be expected indiscriminately. Really the reverse is the case and the elephant is an animal requiring great care and regulated treatment. It is essential that owners should pay particular personal attention even to the minutest details, and to manage them efficiently, their symptoms of health and the proper method of treatment must be known.

The animal's body consists of numerous organs, each of which has a separate and definite function to perform. Each organ not only performs its own functions but works in harmony with the other organs, so that if any one of the organs become diseased, it not only fails to do its own function but also hinders the working of the other connected organs. When such a condition exists, we call the body diseased.

The main symptoms of health are:—

Constant motion such as swinging of the trunk and tail, flapping of the ears, swaying the body or the head from side to side, rubbing one leg against another and so on. The skin is soft, almost black in colour and the bristles covering the body are firm to the touch. The mucous membrane of the tongue and mouth is of a rich pink colour. The eyes are clear and bright. A moist secretion exudes above and around the nail and this can easily be observed by throwing some dust on the parts. This should not however be confounded with the offensive discharge from beneath the nails. The appetite is good and the animal sleeps a few hours every night. Immediately on waking the animal begins to feed.

In a sickly animal the following symptoms will be noticed, all or any of which may appear at the same time. The animal is listless and incessant motion so characteristic in health is absent. The skin appear greyish in colour, hangs loosely and is dry and sometimes scaly. The trunk presents a shrivelled appearance. The eyes become dull and red with an abnormal discharge of water. The muzzle becomes hot and dry. The lower flap of the ear is often cold to the touch and the colour of the mucous membrane of the mouth and tongue changes to a muddy colour. The animal on the whole is out of condition and feverish; the appetite small and even wanting, proper rest is not taken and he lies down and gets up several times. The urine will be highly coloured and small in quantity. The dung will be hard and coated with mucous, or Diarrhoea may be present.

To a trained eye the most obvious symptom is general dullness. Mahouts are the first people to notice the symptoms but as they are ignorant and careless, it is better that a responsible officer trains himself to notice the symptoms and examine the animal carefully.

If Elephants are to be kept in sound health, much care should be taken as regards their food, bathing, grooming, work and exercise. The attendants should be watched and when the Elephants are out of health careful nursing should be given.

To maintain good health it is essential that above all things, he should be given a plentiful supply of good food, without which any amount of careful supervision will be of no avail. When work is finished the mahouts are supposed to take them to a part of the jungle where good fodder is procurable. The forelegs are simply hobbled and the elephants are simply set free in the jungle. In order that they may be readily found when required, bells are hung up from their necks. While leaving them out at night we must take care that no field crops occur in the vicinity. Mr. A. J. W. Milroy, Deputy Conservator of Forests, says that "some animals are inclined to wander a long way at night and manage to get up and down surprisingly difficult places. The most effective precaution to take in the case of such is to bind the hind legs together with rope in addition to hobbling the forelegs, but one must be absolutely certain that an elephant is not in calf and that there are no dangerous logs or quicksands into which he can fall. A safer method is to attach a long, plain, heavy chain to the hobbles."

Wild Elephants wander a good deal according to the season of the year. Generally speaking they spend the greater part of the day in dense shady jungles, where they rest and browse on the leaves twigs and branches. They traverse the bamboo tracts and eat the young shoots as they are sprouting at the beginning of the rains and they are very fond of succulent grass. If wild elephants are watched when grazing, it will be observed that, after tearing off a bunch of grass close to the roots, they remove the dirt adhering to the stems by beating it against their sides or legs after which they simply bite the lower portions which is fresh, sweet and succulent. Elephants in captivity will naturally do the same if allowed sufficient fodder to permit such waste. Allowance should of course be made for the trampling and soiling of a certain amount of their ration. If only the bare ration be given, the animal may gradually lose flesh owing to his being half-starved. Being a huge animal, 300 to 400 pounds of grass should be a necessary portion of their daily fodder. The other varieties, of food are leaves, barks of trees, palms, creepers fruits etc. The readily procurable trees are the peepul, Bamani and other varieties of the Ficus. Jack trees, young shoots and feathering tips of bamboos, palms, paddy, millet, and maize straws, all kinds of grain, sugarcane, plantain leaves and stems and cocoanuts form good food. In Assam and other places the chief food consists of Tara grass (*Alpinia*), otherwise called the wild cardamum and dol, a sort of wild rice.

It is usual for elephants in captivity to be underfed and this is specially the case with Government Elephants. Because there seems to be want of supervision. When required for touring, the animal is brought and kept waiting until the officer starts which takes about an hour and sometimes even more. Secondly the mahout takes his food in a very leisurely manner and then starts with the animals to the work spot. Lastly the night food is not enough. As the animal in his natural condition requires the whole day and greater part of the night to feed and thereby restores his energy, in a domesticated state when a greater consumption of energy is required and as a much reduced time is prescribed for the repair of the loss, the food supplied must be in more concentrated form; that is the nutritive value of the food should be increased. This condition can be satisfied only by rice and it should be given at 20 to 30 pounds per diem. Wheat flour can also be given but should be given in cakes called Chappaties. The mahouts should be strictly instructed to graze Elephants at all times except when they are at work. The most appropriated times for giving fodder are before and after work. The usual prescribed quantities of food per day for Elephants in Mount Stuart and Kargudi Ranges are as noted below.

		Dry	Green		
	Grains	fodder	fodder	Salt	oil
Elephants large	15 lbs	200 lbs	480 lbs	2oz.	1oz.
do medium	15 „	175 „	400 „	2 „	1 „
do small	15 „	150 „	320 „	2 „	1 „

The Elephants of the Assam Forest Department get 5 seers of paddy on the days when they do no work and 10 seers on the working days. Except during the rains the salt ration is the same. To prevent the Elephants from being cheated by the Mahouts, it is best to arrange to give the rations at a certain fixed hour daily in the presence of a responsible officer.

Bathing is an important function for the Elephant. Mr. Milroy's opinion is very interesting and instructive "The necessity of bathing may not at once be obvious seeing that an elephant seeks the first opportunity after its bath to cover itself with sand and mud." Wild elephants do this to keep their skins in condition and the domesticated also follow their old practice but not effectively. "So it is a fact that a domesticated elephant needs a thorough bath every day, if he is to keep fit and well.

It may be noticed that elephants belonging to small menageries in Europe and denied sufficient facilities for bathing, usually possess, dry, cracked scaly skins, while the skins of animals in the bigger zoological gardens, where there is a certain amount of access to bathing tanks appear to be much healthier and less dried up, though they would not pass muster out here. The domesticated beasts should be well scrubbed all over with a piece of burnt brick. This will remove all the old sand and dirt from the interstices of the skin, and if properly applied to the cracks on the heels and feet will be of great assistance in warding off Sajhun and Kari (diseases of the feet).

Eczema is a sign that the animal is not groomed properly. Individual Elephants may object to lying down in water when it is extra cold, but this is exceptional." The Elephant should be bathed both morning and evening but the late evening bath after the day's work is over and before the evening ration is given, does much good and very much refreshes the elephant. If the water is good, the animal will usually drink and the quantity required on these occasions is 13 to 18 gallons at a time. If the bathing place is stagnant, he should be given drinking water from a better place before hand and should be washed away from the pool or spring. Well water is the best for drinking and washing. Domesticated animals should be washed and given water at least thrice daily morning midday and evening when travelling with elephants during hot weather marches should be regulated in accordance with the prospect of good water supply.

Elephants sleep very little, generally between 11 P. M. to 3 A. M. Full grown elephants lie down for 2 or 2½ hours between 1 to 2 A. M. Mr. Milroy says that young animals need more than this but they are shy of lying down until late at night. Wild solitary males nearly always seem to be down about midday in some secluded spot to have a snooze, except in the very cold weather and many sportsmen take advantage of this habit when tracking up a proclaimed rogue."

It is difficult to lay down hard and fast rules as to the amount of work to be extracted and it depends on the general constitution of the animal, the nature of the work and the nature of the place. During the hot weather that is, from about the 15th of February to the breaking of the monsoon rains no elephant should be worked after 10 A. M. and never before 3 P. M. Moreover they should never be worked for more than 3 hours at a stretch. They should be given at least an hour's interval or rest in shade, during which period the gear should be loosened and its body examined for galls. A little water and a few bundles of fodder should also be given. When there is no work for elephants, it is essential to give them some daily exercise without which they frequently fall out of condition. In hot seasons complete rest should be given between 10 A. M. to 3 P. M. and during this period the Mahout should be instructed to take the animals to good shady places in the forest and allow them to graze. A healthy elephant with good treatment and with liberal allowance of fodder can work regularly from 6 to 7 hours a day without injury. The work should be adjusted according to the load he is to drag or carry, the configuration of the ground over which the road or dragging path lies, the nature of the road surface, the time of the day, the number of days' rest the animal enjoyed before starting work and the quantity and quality of fodder and water available. Usually loads can be given from 1000 to 1200 pounds according to the size of the animal. The capacity of dragging is from 35 to 60 cft of timber.

Care should be taken to expose the animal to the direct rays of the sun as little as possible. While marching the animal should not be taken for more than 10 miles a day and the march should be done in the cool hours. On no account should the elephant be kept standing in the hot sun. Sometimes we cannot help exposing the animal to the direct rays of the sun for a certain period while loading unloading or dragging in depots as at Topslip but immediately after the work is over they should be taken to shade. A heated animal should be allowed to cool off a little before being taken to water. Before and after work it is necessary to inspect the body for gall & the trunk and feet should be examined for cuts and bruises and foreign bodies.

The duties of an attendant are the continuous care of the Elephant both when on and off duty. When working, the mahout rides on the neck of the elephant, guides him on the march, and directs him in dragging, pushing of timber etc, and it is, at all times, his duty to be on the alert to save the animal needless exertion and exposure; when off work, it should be his first care to see that it is taken into shade and given drinking water and a sufficient clean fodder. He must wash and examine every part of the animal daily, notice any departure from his normal state as regards appetite, evacuations, external temperature of the body and report the same without delay. If the animal is to be kept loose the attendant must after careful inspection of the body, take him where grazing is good

and see that the drinking water is good and clean and near at hand. He must also take care to fether the elephant carefully and securely to prevent, straying, fighting etc. He is responsible for the proper adjustment of the harness and arrangements of load. He should also see that no long continued undue pressure is allowed on any part. He must be on the look out and report the first symptoms of fatigue, whether arising from exposure, overwork and overloading or from failing health. He should administer all medicines directed to be given but should not on any pretence whatever be permitted to prescribe or give any drug unless specially authorised to do so. An instance of the mahout's action would not be out of place here. The animal was suffering from cataract in the eyes and the attendant, in this case the owner himself, applied a mixture of powdered glass in Brandy, the result of which ended in blindness of the eye.

Regarding the elephant harness, it consists of a dragging numna made of gunny bags which is put on the back of the Elephant and tied. Two blocks of nicely squared wood with a groove on their upper sides are put on the numna one on each side of the Elephant's back upon which the back chain rests. These logs are used so that the chain may not wound the elephants back and this back chain is also kept in position by the breast band made of leather straps with a hemp rope inside. Dragging chains are attached to the back chain and the ends of these dragging chains are attached to the log to be drawn. The trail

or leg chain which is left loose while the elephant goes out for grazing is also attached to the back chain.

As regards the elephant stables, they are of two kinds temporary and permanent. Permanent stables are to be erected in places where elephants are to be kept throughout the year and are to be kept tied every night. In such a case the floor should be good, paved with bricks or metalled and it should be raised above the surrounding level. Good drains should be dug up so that water might run away to a considerable distance without stagnation. The roof should be of grass or tiles and should be built in such a way so as not to allow the direct rays of the sun falling inside either in the morning or in the evening; no walls should be erected on the sides. They should be built up in the places sheltered from chill winds at nights. Every morning the floor should be cleaned early so that by the time the elephant returns in the evening the ground will be fairly dry. No elephant should be tied on the remains of the previous dung, grass etc. The neglect of this precaution results in the production of flies injurious to the health of elephants. One mahout should be made responsible for the cleanliness of the stables.

S. RANGASAMI.
M. F. C. 1922-24 Dn.

Komattiyeri and Back.

[We have pleasure in publishing the following skit on the Senior Division Camp, from the pen of the College humourist. It is only regretted that he could not finish up with a solo on his flute, with which he often out did his dog and pony friends in the stilly night at Komattiyeri.]

The 13th of September was indeed a busy day for us. We got from our beds with greater alacrity than we went to them, having had to sleep among our miscellaneous things thrown helter skelter all over our rooms; we had to leave Head Quarters for Komattiyeri.

The relentless College clock struck 7-30 all too soon, the usual bugle found us in the college very happily seated ready to hear the lectures through one ear and coolly pass it off through the other. We had no books with us, having sent them four days previously together with our heavy kit to await us at Komattiyeri, things in our rooms were unsettled. Our bodies were seated on the hard stools in the college but our minds were else-where far away from the Lecture Hall. This was nothing unusual, we had merely switched off from the contemplation of the sublime, our usual occupation while the lecturer spoke of plant nutrition and such like mandane matters, into contemplation of something more allied to the subject in hand, namely from the nutrition of plants by other agencies, to the nutrition of ourselves by plant agency. In other words we were thinking of our break-fast instead of day dream-

ing as usual. Some-how after what seemed a lengthening of the usually interminable last period the "Break off" sounded and we were happy to find ourselves ten minutes or so later actually enjoying our break-fasts.

Dusk came on and we assembled on the Railway Station awaiting the mail to Tiruppur. A "second class for me please" was every one's request to Booking Clerk, while every one else joined his friend in commenting on the Railway authorities in general and the Coimbatore station staff in particular. Berths were reserved for us and we were strolling along the plat-form to be picked up into the second class by the expected mail. Our cycles were also booked. After all the mail arrived and we were disappointed to see that the second class compartments did not pick us all up. Worse, our cycles, the Station-Master maintained, required rest and could not be taken in by that train. Only their turn was left behind and we quickly settled ourselves in our compartments. All too soon we arrived at Tiruppur where we sleepily picked our many belongings from the compartments and sleepily made our way to the waiting rooms where we lay down with the set purpose of obtaining some rest in the intervals of scratching ourselves which was unfortunately very necessary, the waiting rooms being very populous.

We could not proceed on our journey without taking our jaded bicycles, as, if we went away, they might be unable to find their way to

us. However by 11 o'clock we took up our poor bicycles not without sundry remonstrances on their part which were however allayed by pumping up their fallen spirits and began our 33 miles race to Komuttiyeri. The 19 miles up to Alangayam went off merrily enough and there having refreshed the inner man through the courtesy of R. O., we began the 14 miles pilgrimage to Komattiyoor. The road laid by the Forest Engineer was in a very cool mood and absolutely resented the idea of our riding quickly. In some places it hugged our bicycles to its bosom in a clayey embrace and would not let us go on until we exasperated, got off and positively raised our bikes out of the "Slough of Despond." It was dusk by now and our pleasure was increased by a heavy drizzle of rain and whenever the road was more tenacious than usual or we bumped into large rocks with which the road abounds in places we poured blessings on the good men that laid this road at so small a cost and upon the hard-hearted Instructor who made us travel so far in so short a time, and who gaily passed us by in his car.

Some how by 8. p. m. we reached our camp, which was a glorious sight in the pale moon light. Our sheds were comfortable our beds were spread and we gratefully accepted their invitation to stretch ourselves on them, although they seemed to have had a rain bath this very morning when they were being carefully brought up.

I think it was 5. A. M. when I was awakened by a local four footed friend whom hunger had made particularly desirous of ascertaining if our rice bag was carefully fastened or not. I turned round to wish him

"Good Morning," but he seemed dreadfully shy, and left hastily. Perhaps he realised that I meant to accelerate his departure with my hockey stick. I had hardly time to contemplate the numerous leaks in the roof when I heard some one pulling at the rear "Thatties" of my room and when I went to see who he was, he neighed me a good morning and galloped off. So both my dog and pony visitors kept me from my bed, and I began getting my room tidy. In the after-noon we laid out our Hockey field, marked off and enjoyed a game. So much for the first day. Every day took us out on inspections. Every day brought us new horses and dogs who persistantly visited us. Hockey of course was the main item of the programme in evenings. The rigorous life we were leading made us very hardy. Milk and Curds were kept from us systematically by the R. O., who in his anxiety for our health and welfare spared no pains in keeping these two injurious things from us. However as he himself modestly stated, the cows of the locality definitely refused to supply these injurious food stuffs for fear of our health, we have more to thank their cows for solicitude than the R. O. who merely communicated their wishes to us.

We played out our part of the Hockey Six-a-side tournament here. The various games were marked by great vigour and enthusiasm on the part of the players. So much so that on the aggregate, four balls five Hockey sticks, one leg and several knees, figured among the casualties.

The play however was of the ding-dong type, not many goals being scored, as the balls showed an uncanny propensity for stopping themselves against the Goal keeper's legs and bodies. As a result of this unfortunate predilection on the part of the balls one of our players (Jeyasundra) was to all purposes deprived of the use of his pedal extremities for the rest of the tour. Moreover the resulting brain shock caused him to sleep with his Hockey stick and shin guards by his side for over a week! I wonder if he had an idea of returning the compliment.

The tour was over all too soon and the misty morning of the 5th found us on our way to Tiruppattur. The weather which had kept fine all through, had changed during the night and a small shower had resulted. The road was again calling us to its muddy embrace—with the connivance of our bicycles the road forced several of us to kiss her more than once, and we brought a large portion of the road surface gravel as keepsakes.

We spent the night in the Tiruppattur choultry and spent a fairly comfortable night and the next morning found us in the Tiruppattur depot at the top of the Sandalwood stacks each selecting sandalwood for himself. The athletes of the class manifested their agility in climbing up the slippery piles and clinging to the precarious supports. This pleasant pastime however was peremptorily interrupted by the instructor who reduced chaos to order. Soon afterwards we repaired

to the Choultry to eat a hasty meal previous to again boarding the train back to Coimbatore.

T. R. BUSHANAM,

M. F. C. 1922-24 Dn.

25—10—23.

Examination Humour.

We publish a few of the 'howless' perpetrated in the recent examination at the College:—

The following definitions of '*Species*' are certainly original. We wonder whether the first gentleman had cheese for supper, the night before:

"*Species is the animal of the vegetable Kingdom*"

"*Species is a word given to differentiate species from each other*"

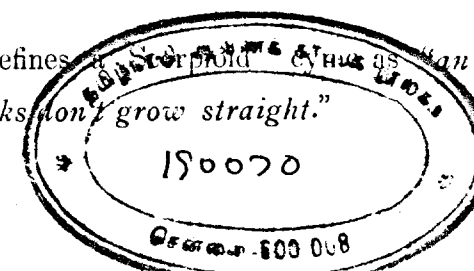
Another budding botanist defines '*nucleus*' as "*the genera of Acacia fistula.*" We recommend him to study the protoplasmin *Cassia arabica*.

The following definition was rather puzzling until by adding a 't' to 'Linne' and an 'i' after the 'v' in 'avary,' we were able to follow the obvious reasoning:

"*The artificial system of classification by Mr. Linne is founded on the avary.*"

Another very literal student defines "*inflorescence in which the flower stalks don't grow straight.*"

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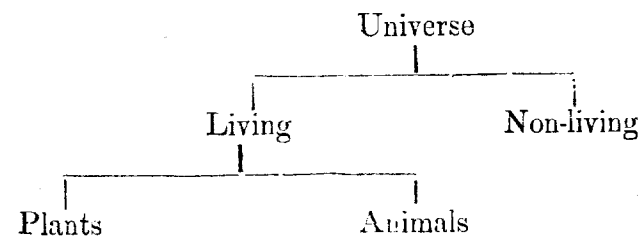


The question, "why are trees not allowed to grow as old as they can before felling?" elicited a hitherto unrecorded fact, which ran "*one reason for this is that if allowed to grow too old, the seeds would become over ripe.*" We hope that in fixing the "exploitable age in future, working plans officers will bear this in mind.

We think that no one will question the accuracy of the following definition of a working Circle: *A working circle is a large area of forest, and worked under a Conservator.*

A physics expert weighed the evaporation in one of his experiments and found it to be exactly 4 ounces.

Another student who obviously had carefully read the last issue of the magazine and felt the noble thoughts which come to Forest officers in the execution of their duty, stirring within him, began his plant classification.



We felt really disappointed that he was rather pressed for time.

But we award the laurel wreath to the following: "How should Form 8 be posted?"

"Form 8 should be posted mentally"

C. R. F. W.

Cricket.

The cricket season has been singularly successful for us this year, and the team is to be congratulated on having won every match which it has played. There only being four teams entered for the Y.M.C.A. shield, it was decided that each team should meet twice, and the shield awarded on points.

We met the Gymkhana Club first, while we were only 16 runs ahead on the first innings, we easily won on the second by 61 runs and 8 wickets.

Coimbatore United were played on the 24th august and beaten easily by 85 runs and ten wickets.

On the 25th August, the Agricultural College were beaten by an innings and 9 runs.

On the 3rd September, Coimbatore united were beaten by an innings and 157 runs.

As the Gymkhana were unable to raise a team for their return match, our last match was with the Agricultural College, and this was the only one which provided any excitement. The Agriculturalists were in first, and made 101 and we replied with 89. On their second innings, our opponents made 81 leaving us 99, and only just an hour to make them in. This was a pretty stiff job, and when Bhandari was

l. b. w. for 12, and Mr. Ward who went in to take his block half way down the pitch, and hit one was bowled for one, things looked fairly rosy for the Agricultural College. Our expert umpire Divulwewa not being at all satisfied with the decisions of our acting umpire dashed out and replaced him. Then the look changed. Khan Mahamud and Jayasundara began to hit one, and by the time Khan was caught with 41 to his credit, we wanted 30 with half an hour to make them in. Excitement ran very high but Periera hit out nobly with the result that 15 minutes from time we wanted 2 runs to win. Periera then took a fresh centre, examined the field carefully, removed a few small stones from the matting, walked round the cricket in his best professional style and—hit a boundary!

Divulwewa our truly impartial umpire signalled the boundary in the intervals of cheering and leaping off the ground with joy, and when the batsmen retired at the end of the over, Jayasundra the Captain was carried off the field by enthusiastic supporters. This left us winners of the shield by having won all matches. The shield was presented by Mrs Tireman on the occasion of the sports.

On the 28th October we challenged a complete team made up of the others, and they were in and made 74. With our 3 best wickets down for 39, things were not too bright especially as we had a particularly poor "tail." However the tail wagged, and we won before the 6th wicket fell.

Batting and bowling averages are given hereunder:—

Batting:—

Name.	No. of innings played.	No. of Times not out	Total runs.	High- est score.	Ave- rage.
Mr. H. P. Ward	10	2	313	129	39.1
„ A. E. Pereira	10	3	249	58	35.6
„ K. A. Bhandary	9	2	200	73	28.6
„ Khan Mohammed	10	1	219	63	24.3
„ A Jayasundara	7	1	136	50	22.7

Bowling:—

Name.	Runs.	Wic- kets.	Overs.	Mai- dens.	Ave- rage.
Mr. A. Jayasundara	154	28	74	15	5.5
„ A. E. Pereira	165	27	58	6	6.1
„ Khan Mohammed	148	16	65	15	9.2
„ Rajalingam	131	14	50	7	9.3
„ Bhandary	154	16	67	14	9.6

C. R. F. W.

Hockey.

The College has not been very successful this year in the Coimbatore Hockey competition. We met the Stanes High School in the first round and were beaten 3-0. At half time there was no score on either side, however immediately after play began again, it seemed as if our team had got going, but the spasm was all too brief and ended without result. Then our opponents scored, and we are sorry to say that it soon became obvious that the College team had lost heart. When the score rose to 3-0 it became apparent that there was absolutely no hope of our winning; in fact it is only owing to several really good saves by the goal keeper Kureshe that the score was not higher.

Our opponents were speedy, and combined well, although the forwards were inclined to get offside, in fact it seemed to the spectators that the first goal was decidedly offside. Our men on the other hand never seemed to get going, and the forwards never played a worse game either in combination, or shooting. At least three goals should have been easily scored but were missed by bad shooting.

We are of course now knocked out of the competition. It is hoped, however, that in future we may play a losing game with more spirit, and not give the game up when the advantage is with the opponents. This lack of sportsmanship was also very evident when the Senior and Junior Sixes played the Final. The Juniors led by Khan Mahummad easily won, and it was very dispiriting indeed to see the Senior Students give up all effort about half way through the second half. We must learn that the game is not over until the whistle blows full time.

C. R. F. W.

The Madras Forest College Athletic Sports 1923.

—x—

We were very fortunate in having a fine day on the 6th November, when the annual athletic sports were held on the College playing field. Moreover, the day before having been fine too, the ground was in excellent condition.

Misfortune had robbed us of several of our expected prize winners. T. R. Bushanam, who tied with P. Madhavan Nair last year for the Richmond Cup, and who was the favourite again this year had the bad luck to break his leg 3 days before the sports while jumping the hurdles, and had to be taken to hospital. D. J. Tanpure who was expected to do well in the longer flat races was prevented by fever, and S. S. Harisinghani had to return home a few days before, because of his father's death. The worry consequent upon the recent death of his mother was probably responsible for Shiv Ram's not very good time in the mile & half mile.

M. M. Rahim, and Khan Mahammud were rivals for the Richmond Cup, and after the high jump each had scored 13 points, and so gained their athletic colours. However by winning the Long jump, and the $\frac{1}{4}$ mile, Rahim carried off the Cup easily. Rahim is to be congratulated on a very sporting show, and the way he not only entered for most of the events, but went into them with all his power. He created a new record for long jump by jumping 17 ft. 9 in.

B. John just missed winning the high jump. The time before he failed he cleared the bar by a good $2\frac{1}{2}$ inches which if he could have repeated he would have won easily.

R. D. Phillips came to the fore as a half mile and mile Runner. Next year if Tanpure is able to run we should have records in these races. Phillips was not pressed the preliminary rounds of the mile being dreadfully slow. It is to be hoped that he will avoid the theatrical performance at the end of races in future.

The obstacle race which was over a pretty stiff course provided an excellent race between Shukul and Ramji Doss. Shukul got away first, and retained his lead until the short straight run to the winning post where Ramji Doss just got home ahead. It was unfortunate that Shukul took rather a hasty toss over the string enclosing the track early in the race, as this probably lost him the race.

The day passed very smoothly, events were well up to time, and the refreshments were excellent. After a short speech by the vice-president, Mrs. Tireman who had very kindly consented to give away the prizes, brought a very enjoyable event to a close.

The following is a list of the events, with the winners:—

- I. 100 yards flat race :**
1st Khan Mahamad.
2nd M. M. Rahim.

II. Half mile flat race.

- 1st H. B. Divulwewa.
2nd R. D. Phillips.

III. 120 yards Servants' handicap race.

- 1st Muhamud.

IV. 120 yards hurdle race.

- 1st M. M. Rahim.
2nd Ramasamy naidu.

V. High jump.

- 1st Khan Mahamud.
2nd B. M. John.

VI. Invitation half mile race

- 1st Srinivasulu (L. M. H.) School.
2nd Ponnusamy (Coimbatore Government College).

VII. Quarter mile Flat race.

- 1st M. M. Rahim.
2nd H. B. Divulwewa.

VIII. Long jump.

- 1st M. M. Rahim.
2nd Ramasamy Naidu.

IX. 100 yards flat race for past students.

1st K. A. Bhandary.

2nd K. C. Joseph.

3rd S. Chidambara Ayyar.

X. One mile flat race.

1st R. D. Phillips.

2nd H. B. Divulwewa.

XI. Obstacle race.

1st Ramji Doss.

2nd D. R. Shukal.

XIII. Relay race.

Winning team; Central Provinces Govt. Students.

XIV. Sack Scrimmage.

Winning team { (1) A. E. Pereira.
 (2) Dooma Shetty.
 (3) Narayanasami.
 (4) Subramaniam.
 (5) S. R. Bali.

—C. R. F. W.

Contributions to the Gass Forest Museum.

Serial No.	Contribution.	Contributor.
1. Seedlings of	(a) <i>Bischoffia javanica</i> . (b) <i>Hemicyclea elata</i> .	M. R. Ry. C. M. Narayanan, Range Officer, Kanoth.
Twigs of	(a) <i>Artocarpus hirsuta</i> . (b) <i>Eugenia Gardnerii</i> .	
Fruits of	<i>Artocarpus hirsuta</i> .	
2. Portion of a wind-fallen Teak-tree showing development of an adventitious root system (abnormally).		R. H. Mitchell Esq. D. F. O Upper Godaveri.
3. Spotted deer head with mask ... 1 Sambur head " ... 1		H. R. M. Law Esq. I.F.S., District Forest Officer, Chittoor.
4. Long panel of	(a) <i>Pterospermum rubiginosum</i> (b) <i>Filicium decipiens</i> . (c) <i>Acrocarpus fraxinifolius</i> .	M.R.Ry. S. M. Krishnasamy Iyer, Range Officer, Kodamady.
Section of	(a) <i>Hopea glabra</i> (b) <i>Terminalia Travancorensis</i> .	

Additions to the Madras Forest College Library.

I. Presented by C. E. C. Fischer Esq. I.F.S.—

1. Suggestions on the improvement of silk reeling in Bengal
—By, N. G. Mukerjee.

2. The wild silks of India, principally Tussar
—By, *Thomas Wardle* F. C. S.,
3. A monograph of the silk fabrics of Bengal By, *N. G. Mukerjee*.
4. Tanning and working in leather in the province of Bengal
—By, *Rowland Chandra*, M. A.,
5. A monograph on wood carving in Bengal By *G.C. Dutt*, B.A.,
6. Proceedings of Forest Conference held at Nagpur, 1908.
7. Proceedings of Forest Conference held at Simla, 1875.
8. Report on the progress and condition of the government Botanical gardens, Saharanpur and Mussourie 31-3-04.
9. Notes on fodder grass—By *R. S. Hole*.
10. Proceedings of the First Burma Forest Conference held at Mymyo, 1910.
11. Proceedings of the 7th Conference of conservators of Forests in Burma held at Maymyo, 1917.
12. Report on the course of instruction at the Forest School, Dehra Dun in 1888—89—By *E. E. Fernandez*.
13. Memorandum on the establishment of a Central Forest School.—By, *D. Brandis*, 1877.
14. Report on the govt. Agri-horti-cultural gardens at Lahore for the years 1915-16 and '1918-'1919.
15. Report on the govt. Botanical gardens, Saharanpur for 1912-13 and 1915-16.
16. Report on the navigability of the River Godavari and some of its affluents—By *Lieut. T. L. Haig* 1856.

17. List of Forest officers in the Madras Presidency (with coorg) 1910-1914.
 18. Lists of Forest officers in the Bengal, Bombay, and Madras Presidencies 1893-1907.
 19. Classified list of officers of the Madras Forest Dept. for 1888-1889 and 1890.
 20. Classified list of subordinate Establishments of the Forest Dept Madras Presidency 1st. April 1889 and 1890.
 21. Classified list of Forest officers of the Imperial and Provincial Services in the Bengal, Madras and Bombay Presidencies. 1910-1920.
 22. Note on Rinder Pest. (Bulletin No. 28)—By *E. W. Oliver*
 23. Bulletin No. 27.—Note on *Surra*.—By *E. W. Oliver*.
 24. Bulletin No. 24.—Note on the Foot and mouth disease of cattle in U. P.—By *E. W. Oliver*.
 25. Calendar, Imperial Forest School, Dehra Dun. 1892 to 1905.
 26. Calendar, Imperial Forest College, Dehra Dun. 1907, 1910 and 1916.
 27. Imperial Forest College Rules, Dehra Dun.
 28. Descriptive list and collection of sections of Indian woods By *Prof. Nordlinger*.
 29. Report on the Proceedings of the Forest conference 1873—1874—By *Baden Powell*.
 30. Teak Timber.—Information obtained from British Ship-builders.
- II. The Indian Forest Records. Vol. X. Part I.
The constituents of some Indian Essential oils.
Part XI. --The Essential oil from *Cupressus torulosa*.
—By *J. L. Simonson*.

- III. Burma Forest Bulletin No. 10. Rough volume table for Teak; Pyingado, in Tankkyan, Burma.—Sylvicultural Series. No. 9.
- IV. Burma Forest Bulletin No. 9.—Sylvicultural Series No. 8 dated July 1923.
"Thinnings in Teak Plantations."—By, H. R. Blanford.
- V. Annual return of Statistics relating to Forest Administration in British India for the year 1921-22.
- VI. *Presented by the Chief Conservator of Forests, Madras:—*
Calcutta University Commission 1917-19. Vols. I to XIII.
- VII. The Journal of the Madras Agricultural Students' Union. Vol. X. Nos. 1 to 12. (January to Dec. 1922.)
- VIII. The Planters' chronicle. Vol. XVII. (1922.)
- IX. The Journal of Indian Botany. Vol. II.
- X. The Agricultural journal of India Vol. XVI. 1922.
- XI. Nature. Vols. { CVIII.
CX.
- XII. American Forestry Vol. 28. 1922.
- XIII. The Gardener's Chronicle. LXIX 1921.
- XIV. Scientific American for 1922.
- XV. The Forests of India—By E. P. Stebbing Vols. I & II.
- XVI. Report of the Forest Dept. Western Australia, for the year ending 30-6-1923.—By, S. L. Kassell.
- XVII. Forest Bulletin No. 53 of 1923. Summary of results of treated and untreated experimental sleepers laid in the Various Railway systems of India, brought up to date.
—By R. S. Pearson C.I.E. I.F.S.
- XVIII. Flora of the Presidency of Madras.—By J. S. Gamble. Part V.

Gazette Notifications.

4—9—1923.

1. Mr. Wimbush, Acting Conservator of Forests IV Circle, leave on average pay for eight months from 10th November 1923 or date of relief, and leave on half average pay for 3 months in continuation.
2. Mr. W. G. Dyson, Instructor, Madras Forest College, to Act as Principal, Forest College Coimbatore, *vice*, Mr. C. C. Wilson, granted leave.

10—9—1923.

Government Order No. 1310, Development, dated 10th September 1913:—

The Government accept the recommendations of the Chief Conservator of Forests in regard to the grade of Rangers to which candidates should be appointed on leaving the Forest College and, in modification of the orders passed in paragraph 6 of G. O. No. 1634, Revenue, dated 4th September 1919, are pleased to direct

- (a) that students with honours certificates may be appointed as Rangers on Rs. 80/-- provided vacancies exist in that grade;
- (b) that students with Higher Standard and Lower Standard Certificates should be appointed as Rangers on Rs. 60/-- but that the later should lose promotion for one year; the result of this will be that those who obtain a Lower Standard Certificate will be placed on the graded list immediately below the Higher Standard Students of the following year. No subsequent distinction will be made between the two classes in the matter of promotion upto the highest grade in the Rangers Cadre.

2. These orders will take effect from 1st June 1925.

(By order of the Governor in Council)

(Sd.) F. NOYCE,

Acting Secretary to Government.

11—9—23.

1. Sayid Riayuddin Sahib Bahadur, E. A. C., of Forests, Cuddapah District, is posted as an attached officer to the D. F. O., Guntur. He should join Guntur forthwith.
2. Mr. D. L. Sathe, D. F. O., West Vellore is granted leave on average pay for one month from or 24th September 23.
3. M. R. Ry. A. V. Sundaram, E. A. C., of Forest Chittoor will take charge of the West Vellore Dn., during the absence of Mr. D. L. Sathe, on leave.
4. Mr. J. C. Wrench, Assist. Conservator of Forests and D. F. O., Anathapur will on relief by Mr. L. S. James, be posted to the Kurnool South Dt., as an attached officer.

18—9—23.

1. M. R. Ry George Venugopal avergal, an extension of leave on average pay for one month in continuation of the leave already granted to him.
2. Syed Abdul Qadir Sahib Bahadur, E. A. C., of Forests an extension of privilege leave for one month in continuation of the leave already granted to him.
3. Mr. T. A. Whitehead, Acting conservator II circle to be in charge of III circle in addition to his own duties, *Vice* Mr C. E. C. Fischer, granted leave.
4. Mr. D. T. Barry, Deputy Conservator of Forests on return from leave to act as conservator of Forests II circle.
5. Mr. T. A. Whitehead on relief by Mr. D. T. Barry to act as conservator III circle.
6. Mr. H. A. Latham, on return from leave to be conservator IV circle.

25—9—23.

1. Sayid Abdul Qadir Sahib Bahadur, E. A. C., of Forests on return from leave to be District Forest Officer Chittoor.
2. Mr. H. R. M. Law, D. F. O., Chittoor, on relief, to be D. F. O., Madura.
3. M. R. Ry. K. A. Chengappa D. F. O., Madura on relief to be D. F. O. Nellore.
4. M. R. Ry. V. N. Seshagiri Rao avergal on return from leave to be D. F. O., Lower Godaveri.

The Officers mentioned below have been declared by the Board to have passed in the subject or subjects specified against their names:—

[F. L.—Forest Law; F. R.—Forest Revenue; O. P. A. Office Procedure and Accounts.]

1. Mr. J. C. Wrench, Asst. Conservator of Forests Kurnool, in F. L.
2. „ P. W. Davis, „ „ Chittoor in F. L. and F. R.
3. „ J. A. Wilson, „ „ in F. L. & F. R.
4. „ B. T. Seetharamier, Ranger V grade North Cuddapah, in F. L.
5. „ G. Devanayakalu Nayudu, Ranger V grade, South Cuddapah in F. R. and O. P. A.
6. „ B. V. Vaideswara Iyer, Ranger V Grade, West Cuddapah in F. L.
7. „ R. S. Browne, Asst. Conservator of Forests Salem, F. R. & O. P. A.
8. „ H. A. H. G. Hicks Asst. Conservator of Forests Salem, in F. R. and O. P. A.
9. „ B. A. Cariappa, Probationary Extra Assistant Conservator of Forests Tinnevely, in F. L.
10. „ J. E. M. Mitchell, Assistant Conservator of Forests, the Nilgiris in F. L., F. R. & O. P. A.

iv.

11. „ B. Coates, Ranger VI Grade Mangalore in F. R.
12. „ C. M. Belliappa, Extra Assistant Conservator of Forests Coorg, in F. L. F. R. & O. P. A.

2—10—1923.

1. Mr. J. D. Connolly, D. F. O., Palghat leave on average salary for one month from 19th October 1923.
2. Mr. J. W. K. Wernham, Deputy Conservator of Forests to be District Forest Officer, Palghat. vice Mr. J. D. Connolly granted leave.
3. Mr. C. Mahony, Extra Assistant Conservator of Forests on return from leave to be D. F. O. East Kurnool.

Notification.

[Under Section 2 of the Madras Forest Act of 1882, His Excellency the Governor in Council hereby appoints all independent Deputy Tahsildars as Forest Officers for the purpose of accepting under Section 55 of the said Act, compensation for Forest offences and under Section 59 of the said Act invests them with the Power to accept compensation for Forest offences in all cases arising in connection with unreserved lands and in connection with lands handed over to Forest Panchayats for management when such compensation does not exceed Rs. 10.]

4. Under rule 81 of the Fundamental Rules M. R. Ry. A. R. Narsimha Iyengar Extra Assistant Conservator of Forests is granted further extension of leave on half average pay for 3 months in continuation of the leave already granted to him.
5. M. R. Ry. B. S. Kesava Vittal Extra Assist. Conservator of Forests and Acting D. F. O., North Vellore will on relief by Mohamed Abdul Karim Sahib Bahadur be posted to South Mangalore Dt., as an attached officer.

v.

9—10—23.

1. M. R. Ry. B. S. Kesava Vittal E. A. C., of Forests and D. F. O., North Vellore is granted leave on average pay for 14 days with effect from the date of relief by Md. Abul Karim Sahib Bahadur.
2. Under rule 81 of the Fundamental rules Mr. B. K. Roy, Deputy Conservator of Forests and D. F. O., South Cuddappa is granted leave on average pay for six weeks with effect from 10th October 1923 with permission to prefix the holiday on the 9th October.
3. M. R. Ry. T. V. Venkateswara Iyer, E. A. C., of Forests E. Kurnool District, is posted to act as D. F. O. South Cuddappa vice Mr. B. K. Roy.

16—10—23.

1. M. R. Ry. C. M. Belliappa avergal is confirmed as Extra Assistant Conservator of Forests with effect from 9th May 1921.

23—10—23.

- Mr. H. C. Bennett, Acting Conservator of Forests I circle, to be Conservator of Forests, with effect from 5th October 1923, vice Mr. A. B. Jackson, retired.
2. Gaddada Venkappa, Forest Guard, Narasapatam Range, Vizagapatam Dt., is dismissed from the service of Government and is debarred from re-employment in it.
3. Under rule 81 of the Fundamental rules, Mr. A. R. Brand, Extra Assistant Conservator of Forests and Instructor, Madras Forest College is granted leave on average pay for 6 weeks from 2nd January 1924, with permission to prefix the Christmas holidays provided the conditions in the Subsidiary Rules under Rule 68 of the Fundamental Rules are fulfilled.

4. Under rule 81 of the Fundamental Rules, M. R. Ry. T. V. Venkatesa Ayyar Avargal E. A. C., of Forests and acting D. F. O., South Cuddapah, is granted leave on average pay for 2 months from 3rd January 1924, with permission to prefix the Christmas holidays, provided the conditions laid down in the Subsidiary Rules under Fundamental Rules 68 are fulfilled.
5. Mr. D. L. Sathe, Deputy Conservator of Forests is granted extension of leave on average pay for one month and one day in continuation of the leave already granted to him with permission to affix thereto Sunday the 25th November.
6. M. R. Ry. A. V. Sundaram, E. A. C. of Forests and D. F. O., West Vellore, will continue to be in charge of the division during the absence of Mr. D. L. Sathe on leave

6-11-1923.

1. Mr. D. F. Stileman, D. F. O. North Coimbatore, leave on average pay for seven months and 20 days and leave on half average pay for 10 days with effect from or after 15th February 1924.
2. M. R. Ry. E. K. Krishnan Avergal., E. A. C. of Forests, an extension of leave on average pay on medical certificate for three months and 23 days in continuation of the leave already granted to him.
3. Mr. D. T. Barry Deputy Conservator of Forests has been permitted by the High Commissioner for India to return to duty.

Notifications relating to Rangers.

Office of the Chief Conservator of Forests,
Chepauk, dated 5-11-1923.

Procs. No. 845 Rt.

H. TIREMAN Esq.,
Ag. Chief Conservator of Forests.

Proceedings.

The following promotions in the class of Rangers are ordered:—

I

With effect from 22-6-1923 *vice* M. R. Ry. S. Ramasawmi Ayyar. Ranger I Grade confirmed as Extra Assistant Conservator of Forests.

Permanent.

To I Grade. M. R. Ry. C. Rajagopala Nayudu, Ranger. II Grade permanent and I Grade S. P. T.

To II Grade M. R. Ry. A. Swamikutti, Ranger III Grade permanent and II Grade S. P. T.

To III Grade M. R. Ry. K. M. Gopala Acharya, Ranger IV Grade permanent and III Grade S. P. T.

To IV Grade M. R. Ry. K. S. Ramayya, Ranger V Grade permanent and IV Grade S. P. T.

To V Grade M. R. Ry. S. Srinivasagan Pillai, Ranger VI Grade permanent and V Grade S. P. T.

(This supersedes the order in Chief Conservator's Procs. No. 630 Routine dated 20-8-1923)

viii.

To VI Grade M. R. Ry. S. V. Nagalingam Pillai Ranger VI Grade S. P. T.

II

With effect from 1st July 1923 *vice* M. R. Ry. I. John, Ranger VII Grade dismissed of service :—

To VII Grade permanent. M. R. Ry. R. Thangavelu Pillai, Ranger VII Grade S. P. T.

To VII Grade S. P. T. M. R. Ry. P. V. Krishna Rao Nayudu, Supernumerary Ranger (M. R. L. 1920.)

III.

With effect from 13th July 1923, *vice* M. R. Ry. T. Srinivasa Acharya, Ranger V Grade deceased.

To V Grade permanent. M. R. Ry. S. Sankaran, Supernumerary Ranger, (M. R. with Hons. 23).

IV.

With effect from 23—7—1923 *vice* M. R. Ry. A. G. Jesudason Pillai, Ranger V Grade, retired from service

To V Grade permanent. M. R. Ry. K. Shankaranarayana Rao, Supernumerary Ranger (M. R. with Hons. 1923).

V.

With effect from 27.7.1923 *vice* M. R. Ry. K. L. Govinda Krishna Ayyar, Ranger, VI Grade, retired from service

To VI Grade permanent. M. R. Ry. A. Ramamurtha Pingale, Ranger, VII Grade permanent and VI Grade S. P. T.

To VII Grade permanent. M. R. Ry. T. Sriramalu Nayudu, Ranger, VII Grade S. P. T. To VI Grade S. P. T. *vice* A. Ramamurtha Pingale.

M. R. Ry. D. Krishnasawmi Ayyar, Supernumerary Ranger (M. R. H. 1921.)

ix.

VI.

With effect from 1-8-23 *vice* M. R. Ry. C. N. Narasimacharya, Ranger, VI Grade dismissed from service.

To VI Grade permanent. M. R. Ry. Duraiswamy, Ranger, VII Grade permanent and VI Grade S. P. T.

To VII Grade permanent. M. R. Ry. P. V. Krishnarao Nayudu, Ranger, VII Grade S. P. T.

To VI Grade S. P. T. *vice* M. R. Ry. S. V. Duraiswami, M. R. Ry. V. N. Subramania Ayyar, Supernumerary Ranger (M. R. H. 1921.)

2. The following *reversions* in the class of rangers are ordered with effect from 16-8-23 consequent on the reversion of Mr. R. E. Lemos Temporary Extra Assistant Conservator of Forests as Ranger II Grade.

To III Grade M. R. Ry. C. P. Garudachala Mudaliar, Ranger II Grade S. P. T.

To IV Grade. M. R. Ry. M. Krishna Rao, Ranger III Grade, S. P. T.

To V Grade. M. R. Ry. P. Dhananjaya Rao, Ranger, IV Grade S. P. T.

To VI Grade. Saiyid Vaziuddin Sibgat-ul-lah, Ranger, V Grade, S. P. T.

To the Grade of Supernumerary Ranger. M. R. Ry. V. N. Subramania Ayyar Ranger VI Grade, S. P. T.

3. The following promotions to the class of Rangers are also ordered:—

I.

With effect from 1-9-23 *vice* M. R. Ry. R. A'agiriswami Nayudu, Ranger, IV Grade reduced to V Grade.

To IV Grade. M. R. Ry. M. N. Raman Pillai, Ranger, V Grade, permanent and IV Grade, S. P. T.

To IV Grade S. P. T. vice M. R. Ry. N. M. Raman Pillai.

M. R. Ry. P. Dhannanjaya Rao, Ranger V Grade permanent.

II

With effect from 20—9—23 vice Mr. R. B. Salisbury Ranger, II Grade deceased.

Permanent.

To II Grade. Mr. L. J. Taylor, Ranger III Grade permanent and II Grade, S. P. T.

To III Grade. M. R. Ry. C. C. Ganapathi, Ranger, IV Grade, permanent and III Grade S. P. T.

To IV Grade. M. R. Ry. C. S. Ramanathan, Ranger V Grade, permanent and IV Grade S. P. T.

To V Grade. M. R. Ry. C. Thiruvengadam Pillai, Supernumerary Ranger, (M. R. with Honours 1923).

Sub-protom.

To II Grade M. R. Ry. C. F. Garudachala Mudaliar, Ranger III Grade vice Mr. L. J. Taylor.

To III Grade M. R. Ry. M. Krishna Rao, Ranger IV Grade vice M. R. Ry. C. C. Ganapathi.

To IV Grade Mir Abdul Hussain Kirmani Sahib, Ranger V Grade vice M. R. Ry. C. S. Ramanathan.

IV

With effect from 10-10-1923 vice M. R. Ry. C. M. Belliappa, Ranger I Grade confirmed as Extra Assistant Conservator of Forests:—

To I Grade M. R. Ry. P. Velayudhan Nair, Ranger, II Grade permanent and I Grade S. P. T.

To II Grade M. R. Ry. C. P. Garudachala Mudaliar, Ranger III Grade permanent and II Grade S. P. T.

To III Grade M. R. Ry. M. Ambu, Ranger, IV Grade permanent and III Grade S. P. T.

To IV Grade M. R. Ry. P. Dhannanjaya Rao, Ranger V Grade permanent and IV Grade S. P. T.

To V Grade M. R. Ry. S. C. Venkataramanan, Ranger VI Grade permanent and V Grade S. P. T.

To VI Grade M. R. Ry. T. P. Palanikumar, Ranger, VI Grade S. P. T.

* * * * *

Proceedings No. 630:—M. R. Ry. S. M. Srinivasagam Pillai, VI Grade is promoted to Ranger V Grade S. P. T. with effect from 1-8-1923 vice M. R. Ry. M. N. Raman Pillai, acting as Ranger IV Grade S. P. T. His name will be placed in the V Grade *Sub-pro-tem* above M. R. Ry. S. G. Venkataramanan.

2. Mr. A. B. Fenu, Ranger V Grade S. P. T. is reverted as Ranger VI Grade with effect from 1-8-1923.

First Circle.

19—8—1923.

1. M. R. Ry. T. S. Ratnavelu Mudaliar, Ranger VI grade, Upper Godavari, is transferred to Lower Godavari for the charge of the Rajahmundry Range.
2. On relief by No. 1 M. R. Ry. G. Appa Rao Naidu, Ranger V grade, is transferred to Upper Godavari for the charge of the Bhadrachellam Range.

12—9—1923.

3. On expiry of the leave granted to him M. R. Ry. C. G. Krishna, Ranger IV grade, is posted to the Ganjam District. He should report himself before the District Forest Officer at Chatrapur.

6—10—1923.

4. Under Rule 81 of the Fundamental Rules M. R. Ry. V. Sundaresan, Supernumerary Ranger on Rs. 65 per mensem is granted leave on average salary for six months and two days with effect from 25th June 1923 on medical grounds.

23—10—1923.

5. Hr. J. D. David, Ranger 2nd Grade Ganjam is granted leave on average salary for five months and 14th days with effect from or after 1st December 1923.
6. Mr. K. P. Benjamin Ranger 2nd Grade Ganjam is granted leave on average salary for four months with effect from or after 1st December 1923.

Second Circle.

15—8—1923.

7. M. R. Ry. N. Sundaresa Iyer, Ranger Grade, Adoni, Bellary district is granted leave on average pay on medical certificate from 1-7-1923 to 12-7-1923.

16—8—1923.

8. (1) M. R. Ry. O. Venkataramana Iyer, Ranger I grade, Bukkapatnam Range is granted an extension of leave for two months (1 month and 11 days without medical certificate and the rest with medical certificate) on average pay from the date of expiry of the leave granted to him in S. O. 50/22-6-23.

- (2) M. R. Ry. B. V. Jogeswara Rao, Ranger V Grade on return from leave (26-8-23) is posted to Bukkapatnam Range, Anantapur district subject to the production of medical certificate.

To relieve the Range Officer, Kadiri who is now in additional charge of Bukkapatnam Range.

19—8—1923.

9. M. R. Ry. B. Krishna Rao, Supernumerary Ranger on special duty in Kurnool West division is granted leave on average pay on medical certificate for 3 months from 9-8-1923 (forenoon.)

22—8—1923.

10. Mr. A. Joseph, Range Officer, Gooty is granted leave on average pay for 3 days from 10th to 12th August 1923.

23—8—1923.

11. S. O. 61/ 7—8—23 posting Mr. M. Hussain Khan, Ranger II Grade as Assistant to Chenchu Officer and Mr. V. T. Staggs to Giddalore Range is cancelled.

1. Mr. M. Hussain Khan Ranger II Grade is posted to Kurnool Range; to relieve No. (2) at once.

2. M. R. Ry. R. Jagannadam Naidu, Ranger VII Grade, Kurnool Range is transferred to Giddalore Range, Kurnool South Division, vice Mr. S. Chinnadurai Pillai granted leave. To join expeditiously after relief at Kurnool.

24—8—1923.

12. Consequent to the abolition of the Adoni Range, Bellary District, the following transfer and posting of Rangers are ordered to take effect at once.

1. M. R. Ry. N. Sunderesa Iyer, Range Officer, Adoni Range, to charge of Bellary Range.

xiv.

2. M. R. Ry. T. M. Kristnamachari, Range Officer, Bellary Range on relief by No. 1 to be on special duty under the District Forest Officer, Bellary.

25—8—1923.

13. M. R. Ry. G. N. Subba Rao, Ranger VI Grade is granted an extension of privilege leave for 6 days and furlough on half average pay for one month and 3 days in continuation of privilege leave for one month already granted by the District Forest Officer West Vellore from 10-5-23.

3—9—1923.

14. M. R. Ry. V. N. Subramania Iyer Supernumerary Ranger on return from leave is posted to work under the orders of District Forest Officer, Kurnool East—on special duty.

7—9—1923.

15. Leave on average pay for 15 days from 27-8-1923 (forenoon) is granted to M. R. Ry. K. Thathachary, Ranger IV Grade in charge of Chelama Range.

M. R. Ry. C. S. Ganapathy, Supernumerary in charge of Gundlakamma Range will relieve Mr. Thathachary on the forenoon of 27-8-1923 and will be in additional charge of Chelama Range until the expiry of the leave granted to Mr. Thathachary.

8—9—1923.

16. Mr. J. B. Rodrigues, Supernumerary Ranger on special duty in Kurnool West is granted an extension of leave on average pay on Medical Certificate for 2 months in continuation of 3 weeks leave already granted by the District Forest Officer in his S. O. No. 140/23 dated 1-8-1923.

xv.

10—9—1923.

17. S. O. 69/16-8-23 posting M. R. Ry. B. V. Jogeswara Rao, Ranger V Grade to Bukkapatnam Range is cancelled.

2. M. R. Ry. B. V. Jogeswara Rao is posted to Gooty Range, to relieve Mr. A. Joseph Range Officer, Gooty.

3. Mr. A. Joseph Ranger Gooty, on relief by No. 1 is transferred to Bukkapatnam Range.

12—9—1923.

18. In modification of this Office S. O. No. 63/1923 dated 9-8-23 M. R. Ry. C. G. Ganapathy, Ranger III Grade, *Sub-protem* is granted leave on medical certificate for one year from 30—7—1923.

The period of 8 months from the date of his relief (13—4—23) should be treated as leave on *average pay* and the remaining period as leave on *half average pay*.

16—9—1923.

19. (1) M. R. Ry. Y. Venkataswamy Naidu, Ranger VII Grade Sivapuram Range is granted an extension of leave for 3 months on average pay in continuation of 10 days' leave granted by the District Forest Officer, Kurnool West in his office S. O. No. 138/23 dated 30—7—1923.

(2) M. R. Ry. V. N. Subramanya Iyer, Supernumerary Ranger on special duty in Kurnool East Division is transferred to Sivapuram Range of Kurnool West Division. To join immediately on relief in Kurnool East Division.

28—9—1923.

20. M. R. Ry. O. Vencatramana Iyer, Ranger I Grade on return from leave is posted to Kurnool West Division on special duty subject to the production of a medical certificate under rule 71 of the Fundamental rules.

27—9—1923.

21. M. R. Ry. M. Subbarayalu Naidu, Ranger III Grade is granted an extension of leave on loss of pay for 3 months on Medical Certificate in continuation of the leave already granted to him

This period of leave which is *not due* will be converted into leave on half average pay only after his return from leave and when he has earned it.

1—10—1923.

22. M. R. Ry. P. Gopalan Supernumerary Ranger on special duty in Kurnool South Division to be in charge of Giddalore Range. To relieve No. 2 forthwith.

2. M. R. Ry. R. Jaganadham Naidu, Ranger VII Grade Giddalore Range is transferred to Gundlakamma Range.

3. C. S. Ganapathi Forester III Grade in charge of Gundlakamma Range on relief by No. 2 will report himself for duty in the Kurnool West Division.

13—10—1923.

23. M. R. Ry. B. V. Jogeswara Rao, Ranger, V Grade is granted an extension of leave on Medical Certificate on $\frac{1}{4}$ pay from 26—8—23 to 29—8—23 inclusive.

15—10—1923.

24. Supernumerary Ranger B. Krishna Rao has been awarded 4 Blackmarks since 19—12—22 on the following dates:—

- (1) 19—12—1922.
- (2) 2— 3—1923.
- (3) 10— 7—1923.
- (4) 8— 9—1923.

“The black-mark awarded on 19-12-22 expired on 2-6-23, *i. e.* 3 months after the award of the second black mark. But even without this cancelled black mark he still has three black marks outstanding him against him now. The black marks were awarded for:—

- (2) On 2-3-23 for disobedience of orders in regard to the submission of an important estimate.
- (3) On 10-7-23 for negligent delay in the submission of a Completion Report.
- (4) On 8-9-23 for furnishing a false Cash Balance certificate.

“None of these orders have been appealed against. His case has now come up for the award of a substantial punishment. He is a Supernumerary Ranger and a permanent III Grade Forester. He will Revert to his permanent appointment of III Grade Forester and will be placed at the bottom of the list of III Grade Forester.”

20—10—1923.

25. 1. Mr. J. B. Rodrigues, Supernumerary Ranger on leave is posted to Guntur District to the charge of Vinukonda Range. To join on the expiry of his leave.

2. Mr. N. C. Mahadevam Pillai, Range Officer, Vinukonda Range on relief by No. 1 is posted to Kurnool South for special duty.

26-10-1923.

26. "Forester, B. Krishna Rao due from leave on 9-11-23 is posted to Guntur District.

Note. The District Forest Officer, Guntur will transfer one Forester from Guntur to Kurnool South in his place."

9-11-1923.

27. 1. M. R. Ry. B. Punniiah, Range Officer, Bairluty Range, Kurnool West is granted leave on average pay for one month from date of relief.

2. M. R. Ry. V. N. Subramanya Iyer, Range Officer, Sivapuram will hold additional charge of Bairluty Range. To relieve No. 1 at once.

3. M. R. Ry. Y. Venkataswami, Ranger on leave will take over charge of Sivapuram Range on expiry of his leave.

4. On relief of Sivapuram Range, M. R. Ry. V. N. Subramanya Iyer will continue to be in charge of Bairluty Range till B. Punnayya rejoins duty or until further orders.

Third Circle.

28-10-1923.

28. M. R. Ry. S. Ramachandra Ayyar, Ranger III Grade on special duty in Mamandur Range, Chittoor District is granted privilege leave for 21 days from or after 1st September 1923.

28-10-1923.

29. In modification of paras 2 to 5 of this Office Service Order No. 56/23 dated 2nd August 1923 the following postings and transfers are ordered:—

1. M. R. Ry. K. Raghuraman Sub-protem Ranger VI Grade in charge of Balapalle Range, South Cuddapah District on relief by Ranger Mr. T. T. Ansep on return from leave is posted to the charge of Rapur Range, Nellore District.

2. Mr. E. W. Fernandez Ranger V Grade in charge of Rapur Range Nellore District on relief by No. 1 is posted to special duty South Cuddapah District under the orders of the District Forest Officer.

3. M. R. Ry. A. Siddan Pillai Ranger IV Grade in charge of Nellore Range, Nellore District, on relief by Ranger M. R. Ry. P. S. Varadakrishnamachariar is posted to the charge of Kanigiri Range of the same District

4. M. R. Ry. T. E. Varadachari Ranger IV Grade in charge of Kanigiri Range Nellore District on relief by No. 3 is posted to the charge of Chamala Range Chittoor District.

5. M. R. Ry. V. P. Narayana Menon Ranger V Grade in charge of Chamala Range, Chittoor District on relief by No. 4 is posted to special duty in Chittoor District under the orders of the District Forest Officer.

6. The posting of M. R. Ry. T. Paramasivan Pillai, Ranger V Grade to Kanigiri Range Nellore District ordered in para 3 of service order No. 56/23 dated 2nd August 1923 is cancelled.

11-9-1923.

30. 1. M. R. Ry. R. Alagiriswami Nayudu, Ranger IV Grade on special duty Nellore District is posted to the charge of Rapur Range Nellore District.

2. Mr. E. W. Fernandez Ranger V Grade in charge of Rapur Range, Nellore District on relief by No. 1 is posted to special duty under the orders of the District Forest Officer, South Cuddapah District.

3. M. R. Ry. K. R. Viswanatha Ayyar, Ranger IV Grade in charge of Vempalle Range, West Cuddapah District on relief by M. R. Ry. T. Subroil Nayudu Ranger I Grade on return from leave is posted to the charge of Badvel Range North Cuddapah District.

4. M. R. Ry. N. Rajagopaul Chetty, Supernumerary Ranger in charge of Badvel Range North Cuddapah District on relief by No. 3 is posted to special duty under the orders of the District Forest Officer North Cuddapah District.

5. M. R. Ry. D. Krishnaswamiah Supernumerary Ranger in charge of Palmaner Range Chittoor District on relief by J. A. Wilson Esq., Assistant Conservator of Forests is posted to special duty under the orders of the District Forest Officer Chittoor District.

The posting of No. 1 cancels the posting of M. R. Ry. K. Raghuraman Acting Ranger VI Grade ordered in this Office Service Order No. 59 dated 28th August 1923.

12-9-1923.

31. M. R. Ry. G. Balayya Nayudu V Grade in charge of Kodur Range, South Cuddapah is granted leave on average pay on Medical Certificate for 6 months with effect from date of relief.

2. M. R. Ry. K. Raghuraman Acting Ranger VI Grade in charge of Balapalle Range, South Cuddapah District on relief by Ranger T. T. Ansep on return from leave is posted to the charge of Kodur Range South Cuddapah District.

14-9-1923.

32. Mr. E. W. Fernandez, Ranger V Grade on relief of Rapur Range charge, Nellore District is posted to special duty under the orders of the District Forest Officer, Nellore until further orders.

This cancels his posting to special duty South Cuddapah District ordered in para 2 of Service Order No. 62/23 dated 11-9-1923.

14-9-1923.

33. The services of M. R. Ry. C. N. Narasimbachari, Ranger VI Grade, Nellore District are dispensed with with effect from 22nd May 1923.

14-9-1923.

34. M. R. Ry. R. Alagiriswami Nayudu, Ranger IV Grade on special duty Nellore District is reduced to V Grade with effect from 1st September 1923 until such time as he shows himself fit for restoration.

18-9-1923.

35. M. R. Ry. V. P. Narayana Menon, Range Officer Chamala on relief by M. R. Ry. T. E. Varadachari is posted on special duty in connection with Forest Committee with Headquarters at Chandragiri. He will be under the direct orders of the Extra Assistant Conservator, Chittoor.

20-9-1923.

36. Supernumerary Ranger S. Sankaran is transferred from the West Cuddapah to the South Cuddapah Division for special duty under the orders of the District Forest Officer South Cuddapah.

24-9-1923.

37. M. R. Ry. C. S. Ramanathan Ranger IV Grade is transferred from the Sathiavedu Range Chingleput District to the charge of the Mamandur Range Chittoor District, to relieve Mr. J. A. Wilson Assistant Conservator not later than the 1st October.

2. M. R. Ry. S. Ramachandra Ayyar, Ranger III Grade on special duty Chittoor District to be Range Officer Chittoor Range in the same District and to relieve Mr. H. MacBride Ranger IV Grade at an early date.

3. On relief Mr. H. MacBride to take charge of the Chingleput Range in relief of M. R. Ry. T. N. Seshagiri Rao Ranger I Grade.

4. M. R. Ry. T. N. Seshagiri Rao, Ranger I Grade on relief at Chingleput to be Range Officer Sathiavedu in the same District.

6—10—1923.

38. The privilege leave for 3 weeks granted to M. R. Ry. S. Ramachandra Ayyar, Ranger III Grade in this Office S. O. No. 60/23 dated 29th August 1923 will take effect from 24th August 1923.

8—10—1923

39. M. R. Ry. B. T. Seetharama Ayyar, Ranger V Grade in charge of Porumamilla Range is granted 3 weeks leave on average pay from 5th October 1923 or date of relief.

2. M. R. Ry. N. Rajagopal Chetty Probationary Ranger, on special duty to the charge of Porumamilla Range during the absence of No. 1 on leave.

17—10—1923.

40. M. R. Ry. K. Raghurama Ayyar, Acting Ranger VI Grade South Cuddapah District will be considered to have been on special duty from 9th to 11th September 1923 both days inclusive.

28—10—1923.

41. M. R. Ry. S. Ramachandra Ayyar, Ranger III Grade is permitted to prefix the holiday on 24-8-1923 to the leave already granted to him in this Office Service Order No. 73/23 dated 6th October 1923.

4—11—1923.

42. 1. Mr. T. T. Ansep Rangr III Grade in charge of Balapalle Range South Cuddapah District is transferred to the charge of Chedleth Range Wynaad District to join the new Range by 20th November 1923.

2. M. R. Ry. S. Sankaran, Supernumerary Ranger on special duty South Cuddapah District to relieve No. 1 in time and be in charge of Balapalle Range until further orders.

8—11—1923

43. Mr. T. T. Ansep Ranger, III Grade in charge of Balapalle Range is granted leave on average pay from 17-10-1923 to 10-11-1923 both days inclusive.

M. R. Ry. S. Sankaran, Probationary Ranger attached to Balapalle Range will be in charge of the Range *vice* No. 1 on leave.

10—11—1923.

44. M. R. Ry. S. Ramachandra Ayyar, Ranger IV Grade on relief in the V Circle is posted to the charge of Balapalle Range, South Cuddapah District in relief of M. R. Ry. S. Sankaran Supernumerary Ranger temporarily posted to the charge of Balapalle Range.

Fourth Circle.

1—9—1923.

45. M. R. Ry., C. Rajagopal Naydu, Ranger I Grade. *sub-protem*, East Salem Division is granted further extension of leave on average salary on medical certificate, for 4 months in continuation of the leave granted to him in this office Service Order No. 63-23 dated 6-7-1923.

5—9—1923.

46. 1. Syed Munavar Sahib, Ranger V Grade, on return from leave on 19-9-1923, is posted to the charge of Vaiyampatti Range, South Salem Division.

7—9—1923.

2. S. Ramalingam Ayyar, Supernumerary Ranger in charge of Vaiyampatti Range on relief by No. 1, is posted for special duty in South Salem Division.

7—9—1923.

47. Under Rules 81 (c) and 87 of the Fundamental rules, M. R. Ry. R. Subramania Ayyar, Ranger III Grade, is granted further extension of leave on *half* average salary for 7 months in continuation of the leave granted to him in this office Service Order No. 48 of 1923, dated 10-4-1923.

20—10—1923.

48. 1. M. R. Ry., R. Thangavelu Pillai, Ranger VII, *sub-protem* in charge of Santhavasal Range, South Vellore Division, is transferred to Musiri Range, South Salem Division.
2. Saiyid Vaziuddin Sibgatullahi Sahib, Ranger V Grade *sub-protem* in charge of Musiri Range, is transferred to Santhavasal Range.
3. M. R. Ry., M. S. Krishnaswami Ayyar, Supernumerary Ranger on special duty in the South Vellore Division will relieve No. 1 at once and hold charge of Santhavasal Range until relieved by No. 2.

25—10—1923.

49. M. R. Ry. P. A. Krishnaswami Mudali, Ranger V Grade, Polur Range is granted leave on average pay for 19 days and leave on half average pay for 11 days in continuation thereof with

from the date of relief subject to the production of medical certificate.

2. M. R. Ry. M. S. Krishnaswami Ayyar, Supernumerary Ranger on special duty will be in charge of Polur Range and relieve No. immediately.

2—11—1923.

50. M. R. Ry. L. R. Narayana Ayyar, Ranger IV Grade, is restored to Ranger II Grade *sub-protem* with effect from 17-9-1922. The period he was under suspension *Viz.*, from 17-9-1922 to 1-12-1922 both days inclusive will be treated as on duty and he will be allowed *half pay* during this period.

7—11—1923.

51. Kesavalu Naidu Forester I Grade, South Vellore Division, will relieve Ranger R. Thangavelu Pillai and hold charge of Santhavasal Range temporarily pending relief by Ranger S. V. Sibgatullahi.

9—11—1923.

52. M. R. Ry., V. D. Ramalingam, Ranger VI on return from leave is posted to South Salem.

10—11—1923.

53. M. R. Ry., M. Muthuswami Ayyar, Ranger II Grade, on return from leave, is posted to South Vellore Division.

Fifth Circle.

21—8—1923.

54. M. R. Ry. N. S. Eswaran, Ranger VI Grade Kollegal is granted leave on average pay on medical certificate for two months from 29th June 1923.
2. On arrival of Ranger Mr. Eswaran in Kollegal, Ranger Mr. Palanikumaran will report himself for duty to the District Forest Officer North Coimbatore for special duty on sandalwood removals by contractors from private lands.

6-9-1923.

55. The leave on average pay for 2 months granted to M. R. Ry, K. Rangasami Naidu Ranger III, Madura, in this office S. O. 46 of 23, dated 12-6-1923 is extended by 24 days on medical certificate.

6-9-1923.

56. M. R. Ry. A. K. Anantharamaier Ranger VII Grade is granted leave on average pay on medical certificate for 1 month and 20 days from 11th August 1923.

7-9-1923.

57. On return from leave Ranger Ashe will report himself for duty to Mr. M. H. Krishnaswamy, E. A. C. Ambasamudram for duty on stock valuation work in the Ambasamudram hills.

27-9-1923.

58. M. R. Ry. M. Rama Rao Kini, Ranger V Grade, Kollegal District is suspended until further orders from date of relief.

2. M. R. Ry. A. P. Sreenivasa Ayyengar, Ranger IV Grade, Pollachi Range, South Coimbatore District, on relief by Mr. Browne, is transferred to Kollegal District to relieve Ranger Rama Rao Kini. To join at once.

28-9-1923.

59. The leave on average salary for 3½ months granted in this Office No. 895 of 23 dated 12th June 1923 to Mr. C. H. Ashe, Ranger III Grade Tinnevely District from 29th June last is extended up to the end of November 1923 by the grant of leave on average salary for 15 days more and leave on half average for the remaining period.

12-10-1923.

60. The 2 months leave on average pay granted to M. R. Ry. N. S. Eswaran Ranger VI Grade Kollegal from 29th June last is extended by 6 weeks leave on average pay.

12-10-1923.

61. M. R. Ry. C. R. Raguathan, Ranger VI Grade Tinnevely

District is granted leave on average pay from 25th June to 30th September 1923 both days inclusive.

13-10-23.

62. Ranger A. Oulas is transferred forthwith without joining time to work under Mr. M. N. Krishnaswamy, Extra Assistant Conservator at stock valuation in the Kodamadi Range Tinnevely District. He will proceed at once to Ambasamudram and report himself to Mr. Krishnaswamy.

14-10-1923.

63. The leave on average pay for 2 months and 24 days granted to M. R. Ry. K. Rangasayi Naidu Ranger III Grade Madura from 8th July last in this office S. O. No. 69/23, dated 6th September last is extended by 4 months leave on average pay on medical certificate.

17-10-1923.

64. M. R. Ry. K. S. Ramiah, Ranger IV Grade South Coimbatore Division is transferred to North Coimbatore to hold charge of Bhavani Range.

Leave on average pay for 2 months from 2nd January 1924 with leave to prefix the Christmas holidays is granted to M. R. Ry. T. G. Sankaran Nair, Ranger II Grade. On the expiry of his leave he is posted to Satyamangalam Range North Coimbatore Division.

M. R. Ry. K. Venkataramanan, Ranger V Grade in charge of Satyamangalam Range will take charge of the Tunacadavu Range at the commencement of the Christmas holidays 1923.

On conclusion of his work at the Vernacular Training School Mr. A. B. Fenn, Ranger VI Grade will be posted to do duty under the District Forest Officer North Coimbatore. He will hold charge of the Satyamangalam Range from the time Ranger Venkataramanan leaves it and until Ranger Sankaran Nair takes over charge. Orders will be issued later as to where he is to go after that.

Mr. R. E. Lemos, Ranger II Grade is posted to work on the Mount Stuart ghat road under the Forest Engineer. He should report himself to the Forest Engineer at Coimbatore on duty and receive instructions from him.

M. R. Ry. C. Thiruvengadam Pillai, Supernumerary Ranger Madura District is posted to Natham Range to relieve Ranger Lemos expeditiously.

M. R. Ry. P. Velayudhan Nair, Ranger I. S. P. T. at the conclusion of his work with the Vernacular Training School is posted to the Kodamady Range Tinnevely District. Headquarters Ambasamudram.

On relief by Ranger P. Velayudhan Nair, Ranger S. Krishnaswamy Iyer will work under the orders of the District Forest Officer, Tinnevely.

21—10—1923,

65. Ranger K. S. Ramiah's transfer to North Coimbatore ordered in this office S. O. No. 81 of 23; dated 17th October 1923 is cancelled.

Ranger N. S. Eswaran is posted to be Range Officer Bhavani Range North Coimbatore, to join forthwith.

30—10—1923.

66. The leave on average pay from 25th June 1923 to 30th September 1923 granted to M. R. Ry. C. R. Ragunathan, Ranger VI Grade, Tinnevely in this office S. O. 78 of 1923 is extended, by three months on medical certificate.

1—11—1923.

67. In supercession of this Office Service Order No. 81 of 1923 dated 17th October 1923, Ranger Sankaran Nair, should hand over charge of Tunacadavu Range to Ranger A. K. Kunjunni Nair who will hold charge of the Range until relieved by Ranger K. Venkataramanan. Ranger K. Venkataramanan may continue to hold charge of Satyamangalam Range until relieved by Ranger T. C. Sankaran Nair.

2. Ranger A. B. Fenn on being relieved of his duty with the Vernacular Training School will take charge of Natham Range, Madura District.

7—11—1923.

68. M. R. Ry. A. K. Anantharamier Ranger VII Grade is granted leave on average pay for 20 days from 27th October 1923.

We regret to record the death from cholecysteo, of Mr. R. B. Salisbury, Range Officer, Kodamady on 19th September 1923, at the General Hospital, Madras. The Conservator reports that he very much regrets to hear of this as the deceased was "one of his best and most promising Rangers"

Sixth Circle.

69. In continuation of this Office S. O. No. 47 of 23 dated 29th May 1923, Mr. J. S. Rowland, Ranger III Grade, is granted an extension of leave on half average pay from 13th November 1923 to 31st January 1924 inclusive.

14—10—1923.

The following transfers are ordered:—

70. 1. Ranger H. Myers from Mannarghat Range to special duty at Sappal.

2. Ranger B. Sambamurthi Iyer from Special duty at Sappal to Mannarghat Range.

No. 2 to relieve No. 1 on or before 22nd October 1923.

Ranger Sambamurthi Iyer will hand over charge to Ranger Lobo as a temporary measure.

29—10—1923.

71. M. R. Ry. N. Gopalan Nair, Ranger VII Grade, from the Forest Research Division to the Nilgiris for special duty in the Mudumalai Range.

2. M. R. Ry. K. K. Appiah, Ranger VI Grade, from the Nilgiris to the Forest Research Division.

No. 1 to relieve No. 2.

31—10—1923.

72. M. R. Ry. K. Karunakara Nambiar, Ranger III Grade, in charge of Chedleth Range, Wynad Division, to the charge of the Talamalai Range in the North Coimbatore Division of the V Circle. To join about 1st December 1923.

Advertisements.

The following is a list of specimens required for the Gass Forest Museum. The Principal will be grateful to officers who can procure such of them as are available in their division. The long panels should be approximately 5 feet long, 3 inches thick and as broad as available; the blocks 1 foot x 9 inches x 3 inches and the bark pieces about 6 inches square.

Species.	Long panel required	Short panel required	Block required	Bark pieces required
Aglaia Roxburghiana	1	1	1	1
Aquilaria Agallocha	1	1	1	1
Albizzia procera	1	0	0	1
Acacia dealbatta	1	1	1	1
Acrocarpus fraxinifolius	1	0	0	1
Dillenia indica	1	0	1	1
Diospyros tomentosa	1	1	1	1
Diospyros paniculata	1	1	1	1
Diospyros Ebenum	0	1	0	0
Dalbergia sissoo	1	1	1	1
Erythroxylon monogynum	1	1	1	1
Gmelina arborea	0	1	0	1
Grewia asiatica	0	1	1	1
Holoptelia integrifolia	0	0	0	1
Hydnocarpus Wightiana	1	0	0	1
Hereteria papilio	0	1	1	1
Litsaea zeylanica	1	1	1	1
Machilus macaranta	0	1	1	0
Premna tomentosa	1	1	0	1
Sterculia foetida	1	1	0	1
Sterculia villosa	1	0	0	1
Sterculia guttata	1	0	0	1
Stereospermum chelonoides	1	0	0	1

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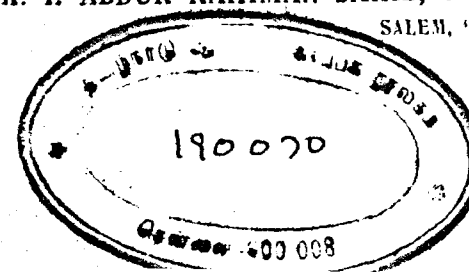
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