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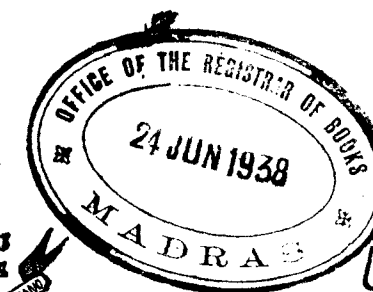
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MARCH 1938.

No. 3

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(Twenty Second year of Publication.)



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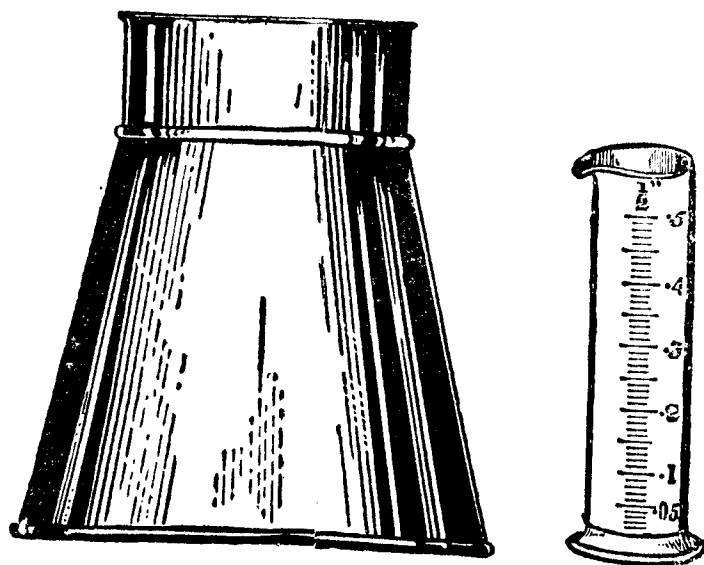
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THE
Madras forest College Magazine.

(PUBLISHED QUARTERLY).

Vol. XXII. MARCH 1938. No. 3.

*The Managing Committee do not hold themselves
responsible for opinions expressed
by contributors.*

**A Plea for Concentrated Regeneration of Sandal,
in North Coimbatore Hills.**

*By, K. Venkataramana Rao, M.R.H., Range Officer,
Satyamangalam.*

Some years back, the unreserves in the enclosures within reserved forests of North Coimbatore Division were first class Sandal bearing areas. As population increased, demand for more areas for cultivation arose, all available areas were taken up and the Sandal trees quickly vanished. Therefore in view of the rapid disappearance of Sandal from unreserves, it became desirable that concentrated regeneration should be carried out in localities free from spike disease, and suitable for Sandal.

About 1928, however, the demand for land for cultivation came to an end and many of the cultivated lands have been abandoned. I inspected these abandoned cultivations (cultivation stopped about 1928) in Hassanur - Ongalavadi settlement, Geddesal, Elikinatham, Guttialathur, and Uginium (a portion). In Hassanur settlement, there is a mass of Sandal seedlings and saplings coming up through the *Lantana* bushes and the crop looks like a small plantation. In Geddesal there is no *Lantana*



and Sandal seedlings are suppressed by other growth. Several plants were liberated. In all abandoned cultivations there is plenty of natural regeneration of Sandal. Wherever there is a clearing and a bush, there Sandal is seen. Examples of this are seen in Hassanur and Geddesal and Yekkattur plateau. It is feared in some quarters that *Lantana* is a sure sign of future spike.* The shade cast on the ground by the crowns of Sandal trees will never kill out the *Lantana* but perhaps some fast growing hosts can be grown which will naturally kill the *Lantana* such as *Cassia siamea*.

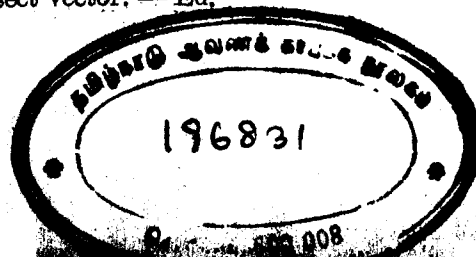
Sandal comes up spontaneously round villages and clearings, becoming more and more scarce as one goes farther away from the village limits. In abandoned cultivation on the plateau, one sees dotted all over the place small bushes through which Sandal seedlings come up and flourish. The bushes are usually low vegetation such as *Lantana camara*, *Flueggea leucopyrus*, *Flacourtia*, *Toddalia aculeata*, *Webera corymbosa*, *Carissa*, *Scutia indica* and similar undergrowth.

The spread of Sandal in the fuel felling series of Bennari, Kothamangalam and Kanavoikombai is to be traced to the bushy types of vegetation created while working the areas under the simple coppice system reserving Sandal and Tamarind.

In Geddesal, some 30 years ago, there was very little Sandal. It has now spread far and wide in these forests (only in the scrub jungle type and not in high sholas and steep slopes with grass in plenty). This is chiefly due to opening the areas by grazing.

Provided other conditions are favourable, Sandal has spread itself in areas resorted to by cattle for grazing and well protected from fires. Steep slopes of hills visited almost annually by fires and forests impenetrable to cattle are conspicuous for the absence

* It is now known that "spike" is transmitted by an insect vector. — Ed.



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of Sandal in them. Grazing opens up the country; birds visit these areas; these factors seem to be mainly responsible for the spread of Sandal.

I am of opinion that it is not very difficult to raise Sandal by imitating nature. One who knows something of Sandal parasitism will not attempt to grow a pure crop of this species. The chief factors that should guide us are :—

1. Selection of locality.
2. Nature of fellings.
3. Method of operations.

A scrub jungle with *Scutia* and other undergrowth described above is to be preferred to any other. The locality should be free from spike. In Geddesal forests, there are about 1000 acres of this type where concentrated regenerations can be undertaken. Similar areas can be found in other places.

Leaving alone all valuable tree growth (*Dalbergia latifolia*, *Pterocarpus marsupium*, etc., and any existing Sandal), the forest will be clearfelled by ponamdars, except for a hedge 12 ft. wide all round the plot, and strips 6 to 8 ft. wide one chain apart over the whole plot.

The cut stuff will be billeted and spread uniformly, over the whole area by the ponamdars without encroaching too near the unfelled strips, and burning will be done by them by the middle of April. Reburning will be done as necessary. The hedge and the narrow strips will not, of course, be burnt. The ponamdars will then sow seed of Ragi, Dhall, Horse-gram or any other dry crop in between the strips.

Before the 15th June, sandal seed with the outer pulpy covering removed will be sown under bushes in the middle of the unfelled strips (roughly at an espacement of 6' X 6') at 25 to 30 seeds to the stake.

Wherever sowings have failed, sandal transplants (from a nursery which should have been opened not later than the end of April), will be put out at the break of the North-east monsoon.

The ponam will be allowed for 2 years and it is expected that under the conditions created, sandal will come up naturally; the artificial aids prescribed are as a safeguard.

If the ponamdars do not require the area in the second year, there is nothing to feel sorry about as we will be allowing time for nature to form the typical bushes and for Sandal to appear naturally. To avoid chances of disappointment, dibbling of Sandal seed or putting out transplants with small hosts may be done. Otherwise, nature will do the work splendidly.

The jungles to be treated in the aforesaid manner do not contain valuable growth, generally. Nothing is lost by trying to raise Sandal in those places but surely we stand to gain much.

With very little expense to Government, forests of immense future value can be created in this way. 10 or 15 acres may be taken up annually for concentrated regeneration in this way in each of the Sandal working Circles of the Division.

[That Sandal plantations can successfully be created artificially is known, e.g. at Teppakadu, Nilgiri, Wynaad, but whether it is advantageous to do so is open to question. Our contributor says that Sandal has spread naturally "far and wide" and spike disease is present —Ed.]

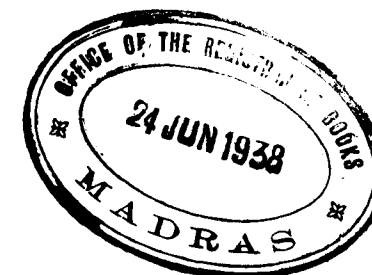
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[Sri. S. Ramachandran, M. R. Hons., Senior Instructor Forest Guards Training School, 1937 session, Bellary Circle, gave three lectures on forest matters, under instructions from the Collector of Cuddapah, to the President, and members and staff of the Forest Panchayats of Cuddapah district.

We publish a resume' of the first two lectures in this issue, and the other will follow in our next issue. No doubt the lectures were in Telugu:—]

Lecture I.

Forest Policy.



Forests are national assets. The whole country may suffer for want of forests. Fodder grass, and tanning materials for leather were supplied on a vast scale in the Great War of 1914-18 from the Deccan Forests and even last year, the fodder famine in Anantapur and Bellary Districts was relieved by the fodder obtained from the forests. Very few of us realise to what extent we depend on forests for our necessities of life. The possibilities of manufacture from the raw materials, yielded from the forests are unlimited. The paper, the pencil and slates, we use, the buildings we live in, the fuel, bamboos, oils, perfumes, gramophone records, match sticks, sporting materials and various other articles of daily use for mankind come from the forests. Forests provide employment and give scope to start many industries.

There is another great advantage of having forests in a country, especially in a hot one, like ours. How glad one feels to go under a tree from the scorching sun! The mere existence of forest growth, modifies temperature and rainfall. Rain water on bare hills rushes down to streams eroding the surface, carrying sand, stones etc., which are deposited on the agricultural land below. The streams rush down without any benefit to mankind; and the streams become dry, the moment the rain stops. The reverse is the case in forest clad areas. The rain water is broken by the leaves and branches of trees, the water trickles down to the ground where the flow of water is retarded by the fallen leaves and humus. The water sinks down through roots of trees and form under-ground reservoirs and cause perennial streams, rivers and wells, benefitting the lands below. Shifting sand is fixed by growing forest trees and hot winds are

broken by forest growth and the agricultural land on leeward side is protected. The forest moulds the character of the people and increases the beauty of the country. The benefits derived from forests can hardly be over-estimated.

In the good old days the villager had his forests almost at his door. He was simple and his requirements were few. His house was built only of bamboos, creepers, and thatch grass. Population increased and civilization set in. Thatched huts had to give place to terraced ones and more land had to be found for occupation and cultivation. The forest got pushed farther away from the village, and the people were not able to get all their requirement easily as before. The in-roads on the forest were great and the Government had to step in to stop them. Reservation of forests and legislation to protect the same, came in.

The Government hold the forests as trust, for, the forests are the property of the people for all future time. There must be continuity of policy for the conservation and improvement of the forests for the benefit of the people and to secure the maximum outturn and benefit without infringing on the capital value of the forests. The results of a piece of work in a forest cannot fructify in a short time unlike in agriculture. The system of management should be such as would secure the country, the greatest possible advantage whether it is represented by high money returns or by other considerations. The forest is a living thing, and under careful treatment, it increases in value, but if it is uncared for and maltreated, it deteriorates and is eventually wiped out. Every year a forest puts forth new growth or increment, and we can take the quantity represented by its new growth without harming the forests or reducing the capital value. Private enterprise cannot have a continued policy necessary for the well being of the forests, whereas the state can afford it subordinating even the financial interest if necessary, to the ultimate welfare of the nation.

Based on this broad policy the Government took up the management of the forest for the welfare of the people.

In day-to-day administration, the villagers felt curbed in their usual freedom of use by Forest legislation enacted to protect the forests. Among the many lands under the forest department were poor stoney hills with grass supplying the daily needs of the adjacent villages and requiring little skill in management from a technically trained Forester.

In 1924, such 'Ryots Forests' which solely meet the demand of the local population were separated and placed under the management of 'Panchayats', constituted from the villagers. They are to administer the forests as agents of the Government in the best interest of the community without any personal gain.

It is hoped that this discourse will awaken the forest sense in you and make you co-operate with the Government in carrying out its aim to benefit the people.

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Lecture II.

Protection of Forests.

The management of a forest is incomplete and inadequate if it is not properly protected.

There are many enemies of the forest — viz.- fire, man, animals, climbers, parasites, insects, atmospheric influences such as drought and cyclonic winds.

Very few among the public realise the enormous damage caused by forest fires. Fire burns the trees, kills small plants, and tree seeds, destroys the humus, exposing the soil to desiccation and dries up the springs, lowering the water level of the locality. A timber thief cuts one or two trees but a fire does damage to thousands of trees and does incalculable harm to forest growth especially in dry localities,

The cause of fire is almost always man, rarely is it accidental. The sheep-owners or cattle graziers or grass cutters to get an immediate benefit of fresh grass with the first heavy shower of rains, start with a match stick in some corner a fire which devastates the whole forest Reserve.

If wind is blowing the fire is worse. A careless wayfarer may throw a live 'beedi' or a mischievous urchin may gloat over his act of burning a large portion of the forests on any festival day. Fire once started is difficult to extinguish. The cause of fire has to be removed and the villagers must be educated to realise the enormous harm done by their unwary or selfish or mischievous acts.

The offences by man, are for his selfish needs in preference to the community. So long as the forest seemed to be boundless, and so long as the needs of the villagers were small, no harm was felt in man having freedom to take whatever he liked from the adjacent forests unchecked. But in these days of civilisation and of increased population, the requirements of man have increased manifold, and the forest capital has to be preserved without deterioration, supplying the needs to the extent that is only possible in an organized manner, as unregulated fellings cause enormous waste and damage to the forest crop. So the needs of the villagers in the way of fuel and small timber have to be studied and provision has to be made to supply their requirements from localised fellings i. e., opening coups, where it will be possible to have control and check. Removal of dry fuel is considered by some people as a minor item, but please remember that dry fuel is easily manufactured by interested parties previously, by cutting or half-cutting the branches. It will be an improvement in cases, where the public have a right to remove dead fuel not to allow them into the Reserved Forest with bill hooks or any other cutting implements. They may carry at most a stout stick to help them in beating the dead branches down and bundling them up.

One another chief need in some places is manure leaf. The best solution is to grow manure leaf in the field as any cutting of leaves in the forest retards the growth of the trees. Where this is not possible, a part of the Reserved Forest may be divided into 2 or 3 blocks for supply of manure leaves and each block may be worked over in one year allowing rest to the other blocks. It is better to prevent the cutting of leaves of timber yielding tree species, in such cases.

That damage is caused by cattle grazing is not easily understood by many. Cattle trample the ground and harden it. Seeds are not received into the soil and so there is no natural regeneration from seed. The forests deteriorate in course of time. Over-grazing is a real menace. The cattle browse tender shoots for want of sufficient grass on the ground. The forests dwindle and disappear. Goats are the greatest enemy of tree growth as they browse only leaves and tender shoots even though there may be plenty of grass. It is not meant that grazing is to be excluded from the Reserved Forest altogether. Here again organized grazing within the possibility is beneficial, whereas unregulated and excessive grazing is injurious. Not less than two acres of good grazable area is necessary for one cow unit. In poorer forests the area must be more. It has been found by experience that the best grazing is obtained by grazing in one block for a month or so and then allowing it to rest by closure. Go to another block and after a month in it, go to a third one and then come back to the first one, instead of grazing over the entire area throughout the period. There is yet another method in Nellore district where the grazing area is closed effectively for a certain period to allow the young shoots of grass to grow up. So, by judicious and organized method, the best results can be derived from the forest consistent with the locality, whereas unregulated and unlimited grazing causes permanent destruction of forest and loss to the community.

Climbers and *Loranthus* (a parasite) on trees restrict their growth and cause their destruction eventually. Wherever they are found on good trees, the beat watcher must be made to cut them at once and mention the fact in his beat book.

Damage from insects and from atmospheric influences need not be mentioned here as they have not much bearing on panchayat forests of Cuddapah district.

For the successful and efficient protection of the forests, the willing co-operation of the villagers is a great asset and every effort is to be made to secure it in a reasonable way by educating the public and appealing to their good sense. The gravity of each offence is small, but the cumulative effect is great. It must not be forgotten that prevention is better than cure, and section 53 of the Forest Act enjoins prevention of Forest offences by Forest Officers. Unlawful acts are of course to be punished and the arm of the Forest Law is handy to enforce it.

Forest boundaries must be maintained, lines cleared, and cairns kept in good repair. The villagers will have a moral fear when they approach a reserved forest and cross the boundary line if the line is well kept. Plantations and important regeneration centres should be fenced well and the areas closed to grazing must be indicated on the ground by natural features or lines and closure boards.

Young men of active habits, apt for out-door work and possessing a good character should be selected for the protective staff as beat watchers. They should have a thorough knowledge of their beats. Forest offences are seasonal. When the fields are cultivated, there is no area for grazing. Goats enter the Reserved Forest. During the continuous drizzle when the low lying lands are muddy, the goats seek the hard ground in the reserved forest for browsing. When tanks are full after rains, then thefts of manure and leaf are committed. After the rains the demand for agricultural implements arise. The fruits of Gothi (*Zizyphus xylopyrus*) and Sundra (*Acacia sundra*) attract

goats and sheep in the months of January and February. The locality containing shrubs near the village attracts goats whereas distant valleys in the hills containing fine trees invite the timber thieves. Some villages own a lot of goats while others contain a very poor class of people who are prone to steal from the forests. Men who are appointed to patrol and protect the Reserved Forest should have a thorough knowledge both of the forests and of the villages. They must patrol the localities often, and with intelligence, to prevent offences. The watchers are to be controlled properly. They have to tender a true account of what is happening in the Forests. They are prone to exaggerate facts, to put up false cases against their enemies or to hush up offences detected by them. As a check over their work, they should be provided with a note book with pages serially numbered and issued with a certificate of the number of pages in the book. The watcher must write in this book in the field whatever he sees, illicit fellings, goat droppings and other offences. He should also mention any special works which he has done such as fencing topes, clearing boundary lines etc. When he is not able to book the offenders he should investigate to find out the persons who committed the offence, and by doing this, he creates a moral fear in the villagers. He may be able to locate the probable offenders and prevent further crimes. The watcher must be made to send an abstract from his note book weekly to the President of the Panchayat, who should take immediate steps to set right any defects in the protection of the forests. The President should periodically inspect the forests, check the watchers in the field, initial their beat books and correct the watchers or take them to task when they go wrong. So also should the Panchayat members.

Given personal interest and moral force, the forests are capable of being protected efficiently for the benefit of the community at large.

COLLEGE NOTES.

1. Association football.

Forest College Versus Coimbatore Students' Club.
March 10th, 1938. Result 0—0 Drawn.

This match, played on our ground, was the first we had since June 1937, though the Senior Division in camp played a match at Nilambur (lost 0-2) and one at Hosur-Cattle-Farm (won 2-0). The visitors played two short throughout, yet we could not score. Our fullback and mid-field work was quite good and at times we were dangerous in front of goal, but the finishing touch was always lacking. P. Indersen at centre forward played well, but the other forwards failed to combine. He got one very easy chance of scoring a goal but instead of placing the ball to the corner of the goal, he kicked it straight at the goal-keeper, who saved well. A. Olimuthu at fullback was very energetic, and S. H. Bagot did well too. I. A. Fernandez and Nilakantan Nair proved to be very useful halfbacks.

Our opponents had good ball control, and twice they passed our full backs, and shot at goal, but L. H. Rodrigues saved both times. Their Captain H. M. Siddickullah was outstanding.

The game was interesting. In the last ten minutes A. Olimuthu went up forward and made two dashing efforts to score goal, but at the end there was still no score.

A. A. Memon, the College captain did not play, on medical advice.

Forest College.

L. H. Rodrigues (Goal), S. H. Bagot, A. Olimuthu (backs), S. R. Naidu, I. A. Fernandez, Nilakantan Nair (half backs), K. Narayanamurthi, G. M. Ali Kuraishy, P. Indersen, V. S. Holkar, J. P. D'Cunha (forwards).

2. Hockey.

Forest College (1936-38 Division) Versus Victoria College, Palghat. Result, 0—1, Lost.

The Senior Division while camping at Walayar fielded a team against the Victoria College at Palghat on the 18th November 1937. We were rather tired as the students had been out travelling and inspecting since early morn. The ground moreover is a bad one, unfit for hockey.

The game started with the Forest College attacking, and but for the lack of dash and good shooting in the ring, at least 3 goals should have been scored in the first half. After 20 minutes of play, most of the game was transferred to our own half. Our goal was attacked in quick succession, the backs relieving the situation by hard hitting. When half time was called there was no score.

In the second half, Victoria College kept up the attack. In 15 minutes they scored through their centre forward. The Forest College tried desperately to equalise, forcing their opponents to a defensive game, but scored no goals owing to poor marksmanship in the ring.

Team. M. F. C. Senior Division :- P. Indersen (Goal), S. H. Bagot, S. D. Misra, I. A. Fernandez, S. S. Rao-Naidu (halves). A. Olimuthu, G. M. A. Kuraishi, L. H. Rodrigues, V. S. Holkar, B. C. Pal, (forwards).

Forest College Hockey Sixes Tournament, March 1938.

We made up 6 teams. Play was half an hour (15 minutes each way) in each match which is long enough for such a strenuous form of hockey, if the players are to keep up top speed all through a game. Nearly all the games were well contested, the less skilled players rising well to the occasion but be it whispered two of the "B" teams were allowed to field an extra man and played as "Sevens". Thus, 38 players took part. The best

game was in the first round between Bombay "A" and Indian States "A", won by the latter by 3 goals to 2 after an excellent game.

Madras "A" and the Indian States "A" team met in the final and the result was a goalless draw. The match was a ding-dong affair, being marked by over keenness on both sides with the result that the Hockey was not of a high standard and the rules were often forgotten. For Madras, Olimuthu worked hard and Fernandez worked hard and dangerously, while for the Indian States, S. H. Bagot and V. S. Holkar were outstanding.

The game was replayed on 4th April 1938, and again resulted in a goalless draw. In the replay Narayanamoorthy in the Madras goal played an inspired game, and saved Madras who were hard pressed most of the time. The States were the better team, and deserved to win. Madras are to be congratulated in that they forced a draw for the second time. Both divisions left for camp the next day and the game will not be replayed again. The finalists rank as joint winners.

1. Indian States "B"	Bye		
2. Madras "A"	on 14-3-38	on 17-3-38	
3. Madras "B"	Madras "A" 3-1	Mrdras "A" 4-0	
4. States "A"	on 15-3-38	on 18-3-38	Final on 25-3-38
5. Bombay "A"	States "A" 3-2	States "A" 1-0	Drawn 0-0
6. Bombay "B"	Bye		
Replay on 4-4-38 also a draw 0-0.			

Teams.

Madras "A"	Madras "B"	Bombay "A"
1. I. A. Fernandez	1. R. Neelakantan Nair	1. L.H. Rodrigues
2. S. Seshagiri Rao Naidu	2. S. Ramakrishnan Nair.	2. J.P. D'Cunha.
3. G.M.A. Khuraishy	3. C. Varadarajulu	3. F.B. Nazareth

4. A. Olimuthu	4. K.N. Raghavachary	4. S. M. Wagle.
5. K.V. Bhanuchandra Pal.	5. E. Jacob.	5. A.A. Golandaz.
6. K. Narayana-moorthy.	6. K. Andiappan.	6. S. R. Umbarje.

Bombay "B"	Indian States "A"	Indian States "B"
1. H.I. Shaikh	1. V.S. Holkar	1. Md.F. Hussaini.
2. G.N. Mansukhani	2. S.H. Bagot.	2. P.W. Rutnam.
3. S.V. Halbhavi	3. P. Indersen.	3. Md. Ibrahim Ali.
4. S.H. Korihalli	4. K.K. Somayya	4. P. Perera.
5. V.B. Koppikar	5. N.G. Dacha	5. Bhagat Singh.
6. V.D. Mahendale	6. S.D. Misra	6. Satgursaran Lal

3. Annual Tennis Tournament. 1938.

This was played off from March 12th to 24th. The College courts were in splendid condition as usual. Nobody knows of better tennis courts and few if any, as good, which is a fine testimonial to our groundsman Ramasami Goundan. He has been on the job here as groundsman from 1918, or earlier, in the days when Mr. Cowley Brown was Principal. V. S. Holkar (Indore) a left hander won the Fischer Cup for singles, dropping only one set and winning 47 games against 22. He was in the stronger half of the draw. His win over the Tennis Captain S. Seshagiri Rao Naidu in the second round was not expected. That provided the best match of the tournament and some pretty tennis to watch. Naidu led 1-0 and 2-1. Holkar made it 3 all and went on to lead at 4-3 and (by great efforts) 5-4. Then 5 all was called, and Naidu ran out at 7-5 having made Holkar do most of the running about. This set took 25 minutes. In the second set Naidu led 1-0, and 2-1 but he won only one more game to make the score 3-4 and Holkar then ran out at 6-3 in 20 minutes play. One set all. In the third and deciding set Holkar led 3-0 and 4-1 and took the set in 10 minutes at 6-2. Both players served hard and were good at the return of service. Holkar was very steady from the back line. He tried no clever

placements but kept a good length and was content to wait for his opponent's mistakes. He will become a good player if he can strengthen his backhand and also acquire some attacking strokes. Holkar won the final easily against P. H. Uttamsingh, a hard hitter 6-1, 6-2, 6-1, using the same tactics. The doubles tournament was won by P. H. Uttamsingh and A. Olimuthu against Holkar and D'Cunha 6-1, 0-6, 6-3, 6-3. Olimuthu was superior to D'Cunha and often intervened with effect. Scores :-

Fischer Cup (Tennis Singles):—

1. S. S. Rao Naidu	} on 12-3-38	} S. S. Naidu	} on 19-3-38	} V. S. Holkar	} 5-7, 6-3, 6-2	} Final on 24-3-38 won by Holkar, 6-1, 6-2, 6-1.				
2. S. D. Misra										
3. V. S. Holkar	} on 14-3-38	} V.S.Holkar	} 6-2, 6-4.							
4. S. H. Bagot										
5. A. Olimuthu	} on 15-3-38	} A.Olimuthu	} on 19-3-38	} P.H. Uttam.	} singh					
6. S. H. Korlhalli										
7. P. H. Uttamsingh	} on 16-3-38	} P.H. Uttam-singh								
8. L. H. Rodrigues										

Tennis Doubles

1. P. W. Ratnam & S. M. Wagle. S. D. Misra & H. I. Shaikh	on 14-3-33	} Ratnam & Wagle.	} Holkar & D'Cunha	} 6-2, 8-6.	} Final on 23-3-38. Uttam Singh & Olimuthu 6-1, 0-6, 6-3, 6-3.
2. V. S. Holkar & J. P. D'Cunha. G. M. Mansukhani & S. V. Korlhalli.	on 12-3-38				
3. S. S. Rao Naidu & L. H. Rodrigues. G. M. A. Khuraishy & S. V. Halbavi.	on 16-3-38	} Naidu & Rodrigues.	} Singh & Olimuthu.	} 6-1, 6-1.	
4. P. H. Uttamsingh & A. Olimuthu S. H. Bagot & F. B. Nazareth.	on 13-3-38				

4. Cricket.

Forest College V. Stanes High School.

February 26th. 1938: Won by 40 runs:—

Playing on our ground, the Principal and Mr. Khan stood down from our XI and Stanes fielded an unfamiliar team, all their big boys having left at Christmas. We batted first, and it looked serious when 5 men were out for 16, Wagle, Bagot, Rodrigues and Holkar having all failed. Koppikar (29) found a partner in Nazareth (17) and the score was raised to 56. Both were out at 56 and 8 men were out for 69, but Indersen (28) and Umbarje (45 not out) put a different complexion on the game; the latter batting particularly well and compiled his highest score for the College. It was mainly due to him that our score reached 140. Mr. Fowler took 5 wickets for 57, B. Roze took 3 for 20 and A Coyne took 2 for 33.

Stanes also began badly losing a wicket to the second or third ball of their innings in Shaikh's opening over. R. Johnson (15) and Mr. Fowler (50) put on 36 for the third wicket but no one else made much resistance. 3 batsmen left at 50 (making it 50 for 6). They had 8 men out for 79 and the innings closed for 91. We batted again & Holkar declared our innings closed at 97 for 6 wickets, thus setting Stanes to make 146, an impossible task in the time available. However we failed to get them out again and had to rest content with a comfortable win on the first innings, thanks to Umbarje's effort.

Forest College.

S.M. Wagle	b. Fowler	1	not out	28
V.B. Koppikar	c. Johnson b. Roze.	29	run out	2
S.H. Bagot	b. Fowler	0	b. Fowler	5
L.H. Rodrigues	c. Hornby b. Coyne	1	did not bat	
V.S. Holkar	b. Coyne.	6	St.....b. Roze	6
F.B. Nazereth	l.b.w. b. Roze	17	l.b.w. b. Coyne	11
P. Indersen	b. Fowler	28	c. Johnson	
			b. Fowler	21
A.A. Golandaz	b. Roze	8	} did not bat	
H.I. Shaikh	c. Joseph b. Fowler	2		
S.R. Umbarje	not out	45		
M. Ibrahim Ali	c. Roze b. Fowler	1	l.b.w. Fowler	20
Extras	...	2	...	4
Total.		140	(6 wickets dec)	97

Stanes School.

A. Coyne	c. Rodrigues	C. Indersen		
	b. Shaikh	0	b. Holkar	21
H. Hornby	b. Holkar	0		
R. Johnson	run out	15	not out	56
Mr. Fowler	b. Nazareth	50	l.b.w. b. Nazareth	14
J. Griffiths	b. Shaikh	2		
N. Nipps	b. Shaikh	0		
Mr. Pharoah	b. Shaikh	0		
B. Roze	run out	8	c. Indersen	
			b. Koppikar	8
R. Hodgson	c. Shaikh			
	b. Nazareth	6		
D. Joseph	c. Ali b. Nazareth	7		
H. Joseph	not out	1		
Extras ...	...	2	...	2
Total.		91	(3 wickets)	101

Bowling	1st innings.			2nd innings.		
	Overs.	Runs	Wickets.	Overs	Runs	Wickets
Shaikh	9	22	4	6	17	—
Holkar	2	13	1	5	28	1
Rodrigues	6	32	—	6	23	—
Koppikar	3	8	—	3	15	1
Nazareth	4	14	3	5	16	1

Forest College versus St. Joseph's College Club.
Lost by 38 runs.

This game was played at Wellington on Sunday April 24th, 1938. St. Josephs who included 3 or 4 boys in their team batted first and put on useful stands for the 3rd and 6th wicket

(49 runs and 56 runs respectively). Their total was 151. Mr. Burke, a Nilgiri planter, hit hard and was the best batsman in the side. He was bowled off his pads. Our bowling was very moderate. It had no sting, all the bowlers being out of practice. As usual S. H. Bagot kept wicket very well.

Wagle and Koppikar opened for the Forest College. The former left at once but Koppikar stayed with the Principal until the score was 49. Bagot failed (52 for 3). Then the Principal and Rodrigues slowly raised the score, and when it stood at 84 with only 3 men out, the Forest College seemed to be getting a good grip on the game. But at that figure the Principal (39) was bowled off his pads and without any addition to the score Rodrigues (19), Nazareth and Indersen were dismissed, making it 84 for 7. Golandaz and Shaikh put on 14 runs for the last wicket, both making good hits but the innings closed for 113 leaving St. Josephs winners. Mr. S. Anderson, though far from deadly, had the good analysis of 7 for 47. Mr. Burke took 3 for 23.

Each side then had 30 minutes batting to see which could make the most in that time. Naturally the scoring was rapid, the ground being small but St. Joseph's did badly against some improved Forest College bowling and lost 8 wickets for 69 (one run out). The Forest College replied with 84 for 6 (two run out). Bagot returned to form and Rodrigues also batted well. A feature of the day's play was that 4 men were bowled off their pads and another feature was the kind hospitality of the home side, at lunch and tea which contributed to a very enjoyable day and we hope to see them on our ground next month for a return match.

St. Joseph's College Club.

	1st innings.		2nd innings.	
Bro. Bergin	c. Longrigg			
	b. Shaikh	6	b. Holkar	5
O. McCreedy	run out	1	run out	7
S. Anderson	c. Umbarji			
	b. Koppikar	27	not out	8
B. Burke	b. Koppikar	28	not out	7
J. Anderson	c. Nazareth		c. Holkar	
	b. Koppikar	0	b. Nazareth	12
H. Brown	b. Nazareth	36	did not bat	
Bro. Kennedy	1.b.w.b. Nazareth	26	b. Holkar	4
R. Irani	c. Longrigg		c. Indersen	
	b. Nazareth	0	b. Holkar	4
A. Netto	b. Holkar	9	c. Bagot	
			b. Holkar	12
N. Navin	not out	10	c. Golandaz	
			b. Holkar	10
Bro. Fleming	c. Nazareth			
	b. Holkar	1	c. and b. Holkar	0
Extras	...	7	...	0
		—		—
	Total	151	(8 wickets)	69
		—		—

Bowling. Name.	1st innings.		2nd innings.	
	Runs.	Wickets.	Runs.	Wickets.
V. B. Koppikar	28	3	did not	bowl.
F. B. Nazareth	29	3	23	1
V. S. Holkar	31	2	28	6
H. I. Shaikh	33	1	18	—
L. H. Rodrigues	23	—	did not	bowl.

Forest College.

S. M. Wagle	c. McCreedy		} did not bat.
	b. Burke	3	
V. B. Koppikar	c. J. Anderson		
	b. S. Anderson	5	
J. H. Longrigg	b. Burke	39	

S. H. Bagot	b. Burke	2	not out	35
L. H. Rodrigues	c. Netto			
	b. S. Anderson	19	run out	23
V. S. Holkar	c. McCreedy		c. Kennedy	
	b. S. Anderson	12	b. McCreedy	6
F. B. Nazareth	c. Brown		St. Bergin	
	b. S. Anderson	0	b. Anderson	12
P. Indersen	b. S. Anderson	0	run out	0
S. R. Umbarji	c. Netto			
	b. S. Anderson	2	1 b. w. b. Irani	0
A. A. Golandaz	b. S. Anderson	8	1 b.w.b. McCreedy	0
H. I. Shaikh	not out	6	did not bat	
Extras	...	17	...	8
		—		—
	Totals	113	(6 wickets)	84
		—		—

5. M. F. C. Athletic Club.**Colours award ; 1937-38 Season.***Colours are awarded as follows :—*

<i>Cricket</i>	...	...	1. V. S. Holkar (Capt.)	} Old Colours.
			2. V. B. Koppikar	
			3. S. H. Bagot	
			4. L. H. Rodrigues (given on 14-8-37)	
			5. H. I. Shaikh.	
			6. S. M. Wagle.	
			7. S. R. Umbarje.	
			8. P. Indersen.	
<i>Hockey</i>	...	...	1. S. H. Bagot (Capt.)	} Old Colours.
			2. V. S. Holkar	
			3. P. Indersen	
			4. S. D. Misra	
			5. N. G. Datcha	
			6. L. H. Rodrigues	
			7. F. B. Nazereth	
			8. J. P. D' Cunha	
<i>Athletics</i>	...	...	1. A. Olimuthu (Champion)	
			2. J. P. D' Cunha (runner up)	
			3. S. H. Bagot	
			4. I. A. Fernandez	
			5. A. A. Memon	

Football	...	...	1. S. H. Bagot.
			2. I. A. Fernandez
			3. A. Olimuthu
			4. R. Nilakantan Nair
			5. P. Indersen
			6. V. S. Holkar

Tennis	...	...	1. S. Seshagiri Rao Naidu (Capt.) Old colour
			2. V. S. Holkar (Winner, Singles '38)
			3. P. H. Uttamsingh

6. M. F. C. Students' Club Day.

The Club Day this year was on Saturday, March 26th. Mr. H. G. Hicks, I. F. S., presided. It had been decided that as we were going to spend a good deal of money, and we expected a lot of guests there would not be space enough in the verandahs of the Club building to serve refreshments there to all in coolness and comfort. So we pitched two big tents east of the gymnasium as the weather has been hot, and we wanted plenty of shade out of doors. The result was just what we hoped for. By 5-45 p. m., when the guests began to assemble, there was plenty of shade and all was cool and pleasant. We had music by radio gramophone. The caterers Messrs. J. M & Son of Avanashi Road served tea at long tables. Among the outside guests we had a contingent from the Agricultural College including Messrs. R. C. Broadfoot, M. C. Cherian (and Miss Cherian), Cherian Jacob (also Mrs. and Miss), C. N. Babu and some of the students. Other guests were Mr. and Mrs. J. H. Clay (Stanes' School), Messrs. Palлека, M. Sambandam Mudaliar, P. Kumarasami, Mr. and Mrs. Odayar, Miss Rajalakshmi, Messrs. Krishnasami (doctor) and M. H. Krishnasami (Forest working Plans). Students K. Mohamed Hussaini and L. C. Baktani were taking photographs (some turned out well) and we were very agreeably entertained by some of our club members in fancy dress. There were five of them, independent, and each was well got up for his part as follows.

M. Ibrahim Ali	...	Afghan gypsy girl, (First Prize).
S. R. Umbarje	...	Sadhu (Second Prize).
A. A. Menon	...	Indian juggler, with monkey.
N. A. N. Khan	...	Pathan.
H. I. Shaikh	...	Attarwala or Indian scent seller.

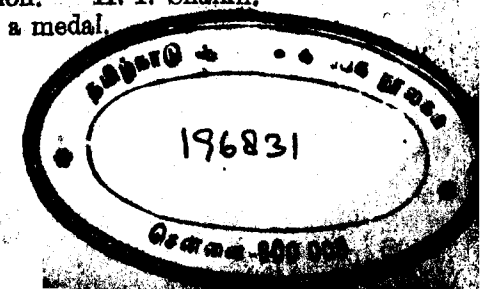
This occupied us until it was time to go into the club for the stage performance of 13 variety items:—

1. Marathi Song	...	S. R. Umbarje.
2. Telugu Song	...	C. Varadarajulu.
3. Dance	...	K. Anantakrishnan, (a boy from R. S. Puram Elementary School).
4. English song	...	F. B. Nazereth.
5. Scene from the play "Unexpected"		
6. Dance	...	as No. 3.
7. "Rogues in the disguise of Gentlemen".	...	A. A. Memon and party.
8. Kanarese song.	...	S. V. Halbhavi.
9. Urdu speech	...	H. I. Shaikh.
10. "Mishap in love" in Urdu.	...	A. A. Memon.
11. English song	...	F. B. Nazereth.
12. Two little lasses from Tibet entertain Sind folk.	...	S. H. Bagot and party.
13. Conjuring	...	H. I. Shaikh.

Student A. A. Golandaz, Honorary Secretary of the Club then read his report and Mrs. Longrigg gave away the prizes which had been won during the season, as follows:—

Name of Event.	Winner.	Second Prize.
Auction Bridge Tournament	G.M.A. Kurai-shi	M. Ibrahim Ali
	S. R. Umbarje.	S. D. Misra.
Ping Pong do.	L.H. Rodrigues	S. M. Wagla.
Carrom Singles.	S.S. Rao Naidu	F. B. Nazereth
	L.H. Rodrigues	P. Indersen.
" Doubles.	N. Dacha.	V. S. Holkar.
Fancy Dress	M. Ibrahim Ali.	S. R. Umbarje.
Best performance on the stage.	A. A. Memon.	H. I. Shaikh.
Boy dancer	...	awarded a medal.

JB, 14 m 21, N 16
N 2 8.22-3



Mr. H. G. Hicks then delivered his Presidential speech in a humorous vein. He referred to his difficulties as a judge of stage performers and fancy dressers, and it is believed that until this day he never knew that the club was the scene of games of Bridge, Carrom and Ping Pong. Perhaps he may have thought that the members spend all their spare time in close study of lecture notes and text books. After this the Hon. Secretary closed the proceedings with a short speech of thanks to Mr. Hicks, Mrs. Longrigg and the other guests for their attendance. The "Day" was very enjoyable this year by the members and by their guests, and the Senior students said that they would all return for next year's function if the Club will put up the necessary railway fares.

7. Debating Society.

That a town life is to be preferred to a life in the country was the motion brought before the house on April 3rd. There was a good attendance of members when P. Perera, proposer, started to speak. The opener and the opposer were allowed 10 minutes each and subsequent speakers 6 minutes. In all we had 9 speakers.

P. Perera made many good points in favour of the town: a little unfair to take Bangalore as type of a town and Walayar and Sadivayal for villages. Indubitably he viewed the delights and the facilities available in a town as a rich man might view them. The matter in his speech was good. 8 minutes.

H. I. Shaikh (Opposer) is a very good speaker. He made a good point in the contentment of the countryman as against the restless life of towns and the uselessness of many of its attractions. Matter and manner alike were excellent: sincere. 10 minutes.

L. C. Baktani did not seem to have very much to say. He was fluent but not very effective. He favoured country-life,



S. D. Misra spoke for the town: he deplored the insanitary and unventilated houses in the villages and their ignorance of hygiene. He made some telling points.

A. A. Golandaz likes the country and feeds better there. He dislikes patent foods. He amused the house.

S. H. Bagot was earnest and sincere but rather dull.

S. Ramakrishna Nair is a practiced speaker. He spoke of Taxila and Ajanta and of crime in modern towns. The old timers were better men, he said. I liked his speech.

P. H. Uttam Singh was pleasant to listen to, but what he was saying was not very clear.

S. R. Umbarje contrasted the position now and the position fifty years ago. Towns are grand now, he thinks. He spoke well. His matter was good and besides that, he made us laugh. Very good and very well delivered. No one else rose. So a committee of 3 judges then compared their notes and decided that the prizes ought to be awarded as follows:—

H. I. Shaikh	}	Equal; First Prize.
S. R. Umbarje		
S. Ramakrishna Nair:		Third Prize.

8. Examiners, Final Examination 1938.

The forest officers named below have been selected to examine the Forest College Students in the subjects noted against each in the final examinations to be held in June 1938.

Name.		Subject.
P. W. Davis	Esq.	Forest management.
J. A. Wilson	"	Silviculture.
A. R. Brand	"	Survey & drawing.
V. G. Darrington	"	Range administration.
E. V. Padmanaba Pillai	Esq.	Botany.
H. P. Ward	Esq.	Utilization.
E. S. Dawson	"	Engineering.
A. L. Griffith	"	Physical science.

9. Cricket: (Continued)

*Forest College v. Coimbatore Cricket Club.**August 8th 1937 : lost by 18 runs.*

(It is regretted that by oversight, this, the first match of the 1937 - 38 season, was not reported at the proper time.)

Played on our ground within a week of re-opening for the new year the College, included 9 Seniors and 2 Juniors. Neither of these Juniors found a place in the team later on, when other talent in that Division, i.e., H. I. Shaikh and F. B. Nazareth became available. C. C. C. were short of their captain, and they played one short throughout. We have 3 wicket keepers in the College, Bagot, Umbarje and Memon. The last named 'kept' on this occasion. Bagot (40) was top scorer for the College, who compiled 107 against some good bowling by C. R. Potts.

When Coimbatore Cricket Club went in to bat they lost Thangavelu at 25 but then Suri (47) and Krishnamurthi took the score to 73 before the latter was bowled. 3 wickets then fell cheaply and with the score at 88 for 5 the game was quite alive. However, the 6th wicket did not fall until 111, so the visitors, who batted only 10 men, got home fairly easily. As already reported we reversed this result in the Tournament game a week later on August 14th.

Forest College.

S. M. Wagle.	l. b. w. b. Potts	7
V. B. Koppikar.	c. Suri b. Krishnamurthi	3
S. H. Bagot.	c.....b. Potts.	40
L. H. Rodrigues.	c. Suri b. Potts	13
V. S. Holkar (Capt.)	c. Thangavelu b. Potts	4
S. R. Umbarje.	b. Potts	2
A. A. Menon.	l. b. w. b. Suri	14
P. Indersen.	l. b. w. b. Potts	15
M. Ibrahim Ali.	l. b. w. b. Muthuswami	2
A. A. Golandaz.	c.....b. Potts	0
J. P. D'Cunha	not out	0
Extras	...	7
Total		107

Bowling.	Overs.	Runs.	Wickets.
B. S. Krishnamurthi	14	27	1
C. R. Potts	15	47	7
S. R. Thangavelu	4	20	—
Hayward	1	5	—
A. Suri Sastri	1	1	1
Muthusawmi	$\frac{1}{2}$	—	1

Coimbatore Cricket Club.

A. Suri Sastri.	b. Rodrigues	47
S. R. Thangavelu.	b. Koppikar	13
B. S. Krishnamurthi.	b. Rodrigues	13
C. R. Natarajan.	b. Rodrigues	6
Muthuswami.	c. Umbarje b. Holkar	7
C. R. Potts.	c. Holkar b. Wagle	1
Hayward	c. Rodrigues b. Holkar.	18
C. B. Chokkalingam.	st. Memon b. Holkar	8
Raghavan.	c. D'Cunha b. Holkar	0
Rangarajan.	not out	1
Extras	...	11
Total.		125

Bowling.	Overs.	Runs.	Wickets.
V. B. Koppikar	11	26	1
S. H. Bagot	2	19	—
V. S. Holkar	9	36	4
L. H. Rodrigues	8	22	3
S. M. Wagle	3	6	1
A. A. Golandaz	2	6	—

*Forest College v Stanes High School.**March 19th 1938. Won by 193 runs.*

This was played on Stanes ground, and resulted in the easiest of wins for the Forest College. Batting first we put on 14 for the first wicket, but 4 men were out for 18, Mr. Fowler, the School games master, doing the damage.

Rodrigues made 16 before being run out, and Golandaz (13) and Ibrahim Ali (15 not out) took the score to 74, a poor display of batting on the whole.

In reply Stanes lost 5 batsmen for 20 runs and strange to relate *no other run was made* and the innings closed for 20.

In our second innings every one got some runs and enjoyed himself. Holkar got most. He hit a six; so also did Fernandez (19). The hard work was done by Mr. Fowler who bowled 17 overs and B. Roze who bowled 12.

The School were set the impossible task of making 219 runs in the last innings to win but they failed again lamentably and were all out for 25, soon after 5 o'clock. Our bowlers took advantage of their chance in this match. Ordinarily one would call Shaikh's figures of 5 wickets for 23 runs decidedly good but what is to be said, of Rodrigues's 9 for 20 and of Holkar's 5 wickets for no runs in a total of 15 balls (slow left hand) which he bowled in the match? Did he only dream it? A cricketer's dream perhaps? No! for, it happens to be true.

Forest College.

S. M. Wagle	c. Coyne b. Hodgson	7	l. b. w. b. Roze	8
V. B. Koppikar	c. Hornby b. Fowler	7	c. and b. Roze	8
F. B. Nazereth	c. Johnson b. Fowler	2	l. b. w. b. Roze	19
V. S. Holkar	c. Griffiths b. Fowler	0	not out	61
S. H. Bagot.	c. Coyne b. Fowler	4	b. Coyne	16
L. H. Rodrigues	run out	16	c. and b. Roze	5
S. R. Umbarje	c. Hornby b. Roze	6	c. Nipps b. Coyne	5
A. A. Golandaz	c. Johnson b. Fowler	13	c. H. Joseph	
			b. Fowler	5
H. I. Shaikh	st.....b. Fowler	1	b. Coyne	5
M. Ibrahim Ali	not out	15	c. Sub. b. Fowler	12
I. A. Fernandez	c. Hodgson b. Roze	2	st.....b. Roze	19
Extras		1		1
Total		74	Total 164	

Bowling	1st innings.			2nd innings.		
	Overs	Runs.	Wickets.	Overs.	Runs.	Wickets.
A. Coyne	4	9	—	5	25	3
H. Fowler	11	23	6	17	71	2
R. Hodgson	2	4	1	1	15	—
N. Nipps	1	11	—	—	—	—
B. Roze	5	26	2	12	52	5

Stanes School.

A. Coyne	st. Bagot b. Rodrigues	1	not out	
B. Roze	c. Rodrigues b. Shaikh	2	c. Nazareth b. Shaikh	2
R. Johnson	c. Koppikar		c. Nazareth	
	b. Rodrigues	10	b. Shaikh	2
Mr. H. Fowler	st. Bagot		c. Nazareth	
	b. Rodrigues	4	b. Rodrigues	2
H. Hornby	b. Rodrigues	2	hit wicket b. Rodrigues	0
T. Griffiths	c. Rodrigues b. Holkar	0	b. Shaikh	2
Mr. Pharoah	retired hurt	0	st. Bagot b. Holkar	*4
N. Nipps	b. Rodrigues	0	c. Fernandez b. Holkar	0
H. Joseph	l. b. w. b. Rodrigues	0	c. Koppikar b. Holkar	0
D. Joseph	not out	0	c. Umbarje b. Shaikh	2
R. Hodgson	st. Bagot b. Holkar	0	c. Bagot	
			b. Rodrigues	10
Extras	...	1	...	1
Total		20	Total 25	

* A substitute Mr. Howgood was allowed to bat.

Bowling	1st innings.			2nd innings.		
	Overs	Runs.	Wickets.	Overs.	Runs.	Wickets.
H. I. Shaikh	4	8	1	7	15	4
L.H. Rodrigues	5	11	6	6	9	3
V. S. Holkar	1½	—	2	1	—	3

*Forest College v. Ooty C. C.**Saturday April 16th 1938. Match abandoned after 40 minutes;*

Captain Flanagan, President of the Club and Swaminathan opened the batting for Ooty, but the former collapsed after making one run. He was carried into the Pavilion, and thence to hospital. Play was resumed and we had the satisfaction of getting the Test player C. Ramasawmi caught near the boundary at forward square leg by Holkar off Rodrigues. But that was the end. A telephone message came through to the effect that Captain Flanagan was dead from heart failure. The game was given up, and later in the day the Forest College XI attended the funeral of this well known local sportsman and games player.

Ooty C. C.

Capt. E. B. Flanagan	Retired ill	1
Swaminathan	Not out	12
Sambandan	c. Koppikar b. Rodrigues	12
C. Ramasawmi	c. Holkar b. Rodrigues	3
Extras		2
(2 wickets).		30

did not bat :— Dr. Jeevaratnam, Ramakrishnan, Marimuthu, Hegde, C. Smith, K. Sheriff, Rozario.

Forest College.

V. S. Holkar (Capt). Mr. A. A. Khan, V. B. Koppikar, S. H. Bagot, S. M. Wagle, H. I. Shaikh, F. B. Nazareth, L. H. Rodrigues, P. Indersen, A. A. Golandaz and I. A. Fernandez.

Bowler.	Overs.	Runs.	Wickets.
H. I. Shaikh.	3	8	—
L. H. Rodrigues.	4	15	2
F. B. Nazareth.	1	5	—

*Forest College v. Nizam's College, Hyderabad.**Sunday May 8th, 1938 : lost by 38 runs.*

Played on the matting pitch of the Ooty C. C. in front of the Race Club's pavilion, this was probably the first time the two Colleges had met and it provided a game full of interest. Holkar won the toss and chose to bat. Our opening pair did not seem to be in any particular difficulty and had made 11 when in Chand's fourth over Wagle was given out (by "our umpire"!) for a catch at the wicket off a ball which he never got near to. The next five batsmen made nothing and we have in the score sheet the unusual sight of 5 cyphers in a row. However, the last of these, F.B. Nazareth appeared to be, like Wagle, the victim of a bad decision. The square leg umpire ("their umpire" this time!) was completely unsighted by the wicket keeper's back standing square, when the latter broke the wicket. The score then stood at 16 for 6 wickets and matters looked desperate. Iqbal Chand, the only Hindu in the side, said to be an inter-State cricketer, was undoubtedly bowling very well. However Koppikar was still there and aided by Indersen and Golandaz in turn the score reached 43 before he was out. The last 2 men made nothing (7 blobs in one innings!) and the innings closed for 44.

We heard that Dastagir is an inter-State player and he took first ball when the Nizam's College went into bat. Sensational cricket followed. He neatly turned Shaikh's first ball of the innings and Holkar took a good catch at fine leg. O for 1. Dinshah filled the vacancy and Shaikh clean bowled him in the same opening over. O for 2. Two maiden overs followed and then Rodrigues had a wicket. O for 3 wickets. The next over was a maiden from Shaikh who was bowling beautifully. Thus after 5 overs there was still no score and 3 men were out. Ali Abbas is not a pretty batsman, but he seemed not unduly concerned at these disasters. He lost his next partner at 14 (14 for 4 wickets) and was then joined by Iqbal Chand and these two went on to win the game, not being parted until the score became 49 for 5. In the end the score reached 82. Shaikh

(12 overs) and Rodrigues (13 overs) both bowled extremely well and it was surprising how the former kept his pace and accuracy, bowling quite fast for long spells at an elevation of 7000 feet above sea level.

Forest College.

S. M. Wagle	c. Dinshah, b. Iqbal Chand	10		
V. B. Koppikar	b. Iqbalchand	12		
J. H. Longrigg	b. Iqbalchand	0	not out	3
S. H. Bagot	b. Dastagir	0	b. Dastagir	4
V. S. Holkar.	b. Iqbalchand	0	b. Iqbalchand	0
L. H. Rodrigues	c. Minocher, b. Iqbalchand	0		
F. B. Nazareth	run out	0	c. and b. Iqbalchand	3
P. Indersen	b. Khurshid	6		
A. A. Golandaz	not out	8		
H. I. Shaikh	c. Abbas b. Iqbalchand	0		
I. A. Fernandez	b. Ali Abbas	0		
Extras	...	8	...	2
		Total 44	(3 wickets)	12

Bowler.	1st innings.			2nd innings.		
	Overs.	runs.	wic-kets.	Overs.	runs.	wic-kets.
Iqbalchand	9	7	6	2.4	3	2
Dastagir	5	7	1	3	7	1
Ghulam Ahmed	3	9	—	} Did not bowl		
Khurshid	3	3	1			
Abid Bilgrami	3	7	—			
Ali Abbas	1.4	3	1			

Nizam's College.

Dastagir	c. Holkar b. Shaikh	0
Minocher	c. Nazareth b. Rodrigues	0
Dinshah	b. Shaikh	0
Ali Abbas	c. Shaikh b. Rodrigues	26
Abid Bilgrami	c. Wagle b. Rodrigues	1
Iqbalchand	c. Koppikar b. Shaikh	23
S. M. Abbas	c. Shaikh b. Holkar	14
Khurshid	b. Rodrigues	0
Farid	b. Shaikh	6
Ghulam Ahmed	c. Holkar b. Shaikh	5
Askari	not out	0
Extras	...	7
		Total. 82

Bowler.	Overs.	runs.	wickets.
H. I. Shaikh	12.2	27	5
L. H. Rodrigues	13	23	4
V. B. Koppikar	3	3	—
F. B. Nazareth	1	6	—
V. S. Holkar	7	16	1

Forest College v. Ooty Cricket Club.

May 16th 1938 : lost by 13 runs.

A. Kerr, the old Stanes' boy and Swaminathan opened the batting for Ooty at 10-40 a.m. on the Hobart Park ground, in front of the Race Club's pavilion. As matters turned out this pair won the match for their side by putting on 49 for the first wicket. They could do nothing with Shaikh's bowling and at no time were they masters of the bowling. They were very lucky. Mishits fell safe, besides catches which went to hand but were dropped and one of them was stumped by Bagot. Just before and just after Swaminathan left there was an epidemic of dropped catches including several by fielders who are

normally safe catchers of the ball. So we tried to blame the light although there appeared to be nothing wrong with the light. Strange to say these mistakes were not costly. Then suddenly we began to hold every catch. Darashah, a Parsi, Assistant Commissioner in the Mysore Civil Service, is stylish. He played for Mysore State against Lord Tenneyson's XI on February 1 and 2 this year: a good bat and good bowler but his timing was faulty (the light!) and after scoring 7 he hit one straight into point's hands. No one else resisted and the innings closed for 76. The umpiring at one end was rather wild, a clear case of stumping was negated and (as if to make up for it) a fantastic appeal for l. b. w. was given "out" against one of the batsmen soon after. Probably if our Captain had been in a position to see he would have called the batsman back. This umpire soon afterwards returned to the pavilion and C. Ramaswami the Test cricketer stood in his place. The Forest College had half an hour's batting before lunch and lost 2 wickets for 6 runs against very ordinary bowling by Kerr and Ramakrishnan (Darashah was off the field). On resuming Darashah (fast medium) bowled 11 overs and never got loose. Holkar joined Bagot with the score at 27 and while playing carefully both were hitting the ball very hard at every opportunity.

With 50 up it did look as if they would win the match. But at 51 Holkar (9) was out and the innings came to an end at 3-30 p.m. for 63 of which only 51 came from the bat and the Principal and Bagot made more than half of them. A disappointing display by the College against a weak team.

Ooty C. C.

A. Kerr	run out	33
Swaminathan	c. Koppikar b. Holkar	16
Ramakrishnan	b. Koppikar	2
Marimuthu	b. Koppikar	3
Nathan	l. b. w. b. Koppikar	3
Darashah	c. Longrigg b. Koppikar	7
T. Grant	c. Khan b. Koppikar	2
Venkatasawmi	not out	2
Augustine	c. Wagle b. Holkar	0
Sunjiva	c. Umbarje b. Koppikar	1
Vedanthan	st. Bagot b. Holkar	2
Extras	...	5
Total ...		76

Bowlers	Overs.	Runs.	Wickets.
H. I. Shaikh	11	18	—
F. B. Nazareth	2	8	—
V. S. Holkar	10	28	6
V. B. Koppikar	11	17	3

Forest College.

S. M. Wagle	c. Nathan b. Ramakrishnan	1
V. B. Koppikar	c. Swaminathan b. Kerr	0
J. H. Longrigg	b. Darashah	10
A. A. Khan	c. Swaminathan b. Kerr	2
S. H. Bagot	c. Swaminathan b. Darashah	17
V. S. Holkar (Capt)	c. and b. Darashah	9
F. B. Nazareth	not out	6
P. Indersen	hit wicket b. Darashah	0
S. R. Umbarje	b. Kerr	6
A. A. Golandaz.	b. Kerr	0
H. I. Shaikh	b. Kerr	0
Extras	...	12
Total ...		63

Bowlers.	Overs.	Runs.	Wickets.
Kerr	6	9	5
Ramakrishnan	6	9	1
Darashah	11	16	4
Swaminathan	3	17	—

to forestry. By the study of plant succession we can come to know in what order each of the successive stages is reached, and knowing this we can find methods of arresting further development at the desired stage, and arrive at a compromise with nature. For, isn't the whole science of economic forestry a compromise between economics and silviculture — man and nature? We can also accelerate the progress of nature, from one stage to another more desirable stage by a thorough knowledge of plant succession.

In the study of plant succession, we can either study the whole series of successions, from the first stage to the climax, or the development through a single stage. The former is rarely possible for us, as to go through all the successive stages nature may have taken thousands of years, or at the least hundreds. The latter, however, viz. the study of plant succession through a certain stage of development, or the development of one stage to another can often be satisfactorily studied. And it is to this type of study that my remarks will apply.

Local.

My observations (made only over a short period, and necessarily sketchy and of an elementary character) were made in **the forests of Vada Taluka of Thana District in Bombay.** The country here is hilly, and in places precipitous, being situated on the spurs and ridges extending from the Western ghats to the sea coast. The soil is mostly of the sandy loam type, rocky or bouldery, and never very deep. The average rainfall of the locality is 80 to 100 inches. Only the South-west monsoon from June to October is effective. The temperature varies from 40° F.(min.) in the cold months (November to February), to over 110°F.(max.) in April and May. October and November are often hot and steamy, and a hot dry period extends from the end of February to the end of May. All streams, except a few of the larger ones, run dry by the end of December or January.

The forests in this locality are of a deciduous type, having medium size growth. The chief species met with are Teak, *Terminalia tomentosa*, *Dalbergia latifolia*, *Pterocarpus marsupium*, *Ougeinia dalbergioides*, *Adina cordifolia*, *Ancgeissus latifolia*, *Lagerstroemia parviflora*, *Bombax malabaricum*, *Bauhinia* spp., *Butea frondosa*, *Diospyros melanoxylon*, *Grewia* spp., *Garuga pinnata*, *Odina wodier*, *Erythrina* spp., and other associated species. Species of *Ficus* are common, and among evergreens, *Eugenia jambolana* and *Mangifera indica* are common. Both *Bambusa arundinacea* and *Dendrocalamus strictus* are found, the latter being commoner.

My observations were chiefly made on **abandoned forest settlement village sites and on hill sides and ridges where vegetation was trying to gain a foothold.**

The first invaders in such places are the coarse grasses, and a few herbs, or hardy shrubs, or hardy pioneer tree species. In most cases the light wind-borne seeds of grasses germinate and establish themselves by the end of August, or September. These with their surface root systems find it easy to get the requisite moisture for their growth and development from the surface soil. On old deserted village sites in forests, in addition to these grasses, some herbs or shrubs also find their way in, as usually there is some surrounding forest growth around such sites. The commonest of herbs is *Hemidesmus indicus*, which comes up at many spots early in the rains. There are also some other herbs and shrubs which however I have not been able to identify. At some spots I have found *Carissa carandas*, and *Calycopteris floribunda* in great profusion, but these may be later entrants.

On the bare hill sides, the soil is very shallow and besides grasses, the only shrub that seems to come up is *Strobilanthes callosus*, and in places the wild plantain.

The grasses suppress and kill many shrubs and seedlings which germinate and try to grow in their shade, but some of the hardy shrubs or individually lucky ones survive, and in their

Hockey.

The following is a list of matches played by the College XI in the 1937-38 season upto 1st June 1938 : —

Date.	Against.	Result	Goals.	Ground.
2-11-1937	Government College, Coimbatore.	Draw	2 — 2	Home.
28-2-1938	Stanes' School.	Draw	1 — 1	Home.
4-3-1938	Stanes' School.	Lost	1 — 4	Away.
24-3-1938	Railway Institute, Podanur.	Lost	0 — 1	Away.
18-4-1938	St. Joseph's College, Wellington.	Lost	1 — 4	Away.

* * *

Visitors to the College :

H. E. the Governor of Madras paid a visit to the College on the morning of October 13th, 1937. The Junior Division was working in the chemical laboratory, and the Seniors were upstairs in the engineering hall at the time.

On October 30th, the Minister for Agriculture and Rural Development, (the Honourable Mr. V. 1. Munisami Pillai) visited the College, and on May 11th 1938 he saw the seniors camp at Arambyshola, Ooty, when the 7 day final examination in Survey and Drawing was nearing its end.

* * *

Cuddapah Leads : [*The hottest District, climatically, in the Madras Province — c. f. the lectures published elsewhere in this number.*]

Tree Planting days in Cuddapah.

—Cuddapah, May 27. Mr. V. S. Hejmadi, District Collector, has issued a circular to village officers that this year two days will be set apart for tree planting, one in the first week of August, and the other in the first week of November.

The Collector states that "every village officer should see that as many trees are planted on the tree planting day as there are residents in the village."

The estimate of Rs. 600 for an avenue on the Nellore district frontier road, Proddatur range, has been sanctioned by the Cuddapah District Board.

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Plant succession in the forests of India.

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[*'Indian Forester' Prize essay, 1938, for past students. By N. P. Choksi, M. R. H., 1935-37 Dn., Range Forest Officer, Working Plans, Nasik.*]

General :

Plant succession, besides being a very interesting subject, is highly profitable to the forester. Now, what is plant succession? It is the constant change and development in the vegetation of a locality going on in undisturbed nature, till a stability is reached, consistent with the factors of the locality, known as the 'climax'. The study of plant succession is the study of these steps and stages by which, in nature, vegetation of a locality changes from one unstable type to another till it finally reaches the stable or climax stage.

Each of these successive stages has its own type of vegetation consisting of different sets or associations of species. Herein lies the importance of the study of plant succession in relation

turn suppress the grass in the next season. With all this, however, the occupation of the soil by grasses is beneficial to the soil. The structure of hard settled soil is very slowly and gradually changed, as the vegetation develops on the soil, and the grasses give the first start towards these changes. As some vegetable matter is added to the soil its fertility increases, and the soil becomes suitable for shrubs and hardy tree species.

Perhaps this slow change in soil, and the struggle between the grasses and the shrubs goes on for several seasons, before some of the hardy pioneer plants come in. On some spots, at this stage, *Calotropis gigantea* and *Butea frondosa* come up successfully and suppress the grasses. *Erythrina indica* is quick to come in at some spots, followed by *Wrightia tinctoria*. On low-lying areas I have seen *Acacia arabica*, *Acacia catechu* and *Terminalia tomentosa* coming in successfully.

On some of the hill-sides, *Sterculia urens* and *Erythrina* and sometimes *Bombax malabaricum* gain a foot-hold in the poor little pockets of soil and in the crevices of rocks. On other hill-sides, however, grasses and *Strobilanthes callosus* seem to be the edaphic (soil) climax, and it seems that no other vegetation will come in, except by some minor upheaval in the normal events of nature. On some of the hill tops *Dendrocalamus strictus* has formed an association with the grasses and with *Strobilanthes callosus*.

Of the later stages in the plant succession on these areas I do not claim any knowledge. My conclusions based on the elementary observations recorded above are as follows:—

1. Grasses pave the way for other vegetation.
2. Herbs and shrubs add fertility to the soil at an early and very important stage.
3. With change in vegetation there is a corresponding change in the soil, and this leads to further change and progression of vegetation, stage by stage, till the climax is reached.

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EXTRACTS.

1. Administration Report of Forest Department, Madras, 1936-37 — Government Review :—

There was a net decrease of 636 square miles in the area of forests in class I during the year mainly due to the transfer of the Ganjam Forest division to the Orissa Province and to the exclusion from the total area of the forests in the Rampa Agency. For the same reasons, the area of reserved lands declined from 750 square miles to 152 square miles.

The Government are glad to note that there has been a decrease in all forms of forest offences, but observe that the proportion of cases investigated by District Forest Officers was still inadequate in thirteen divisions out of twenty-nine. There was a decrease in the output of timber, fuel and bamboos. Only 69,440 tons of timber were extracted against 75,700 tons in the previous year. The extraction was, however, greater than the average for the last five years. There is a slight decrease in the quantity of timber collected departmentally and remaining undisposed of at the end of the year. Eight hundred and ninety-six tons of sandalwood were sold against 716 tons last year. The price realized was, however, only Rs. 615-8-0 per ton against Rs. 687 during 1935-36. The decrease is attributed to the accumulation of unsold stock in the Bombay market.

There was a slight increase in the number of animals permitted to graze in the reserved forests. The grazing revenue also slightly rose due to better collections. In the panchayat forests also, there was an increase in the number of animals licensed to graze. The average incidence of grazing was 6.07 acres as against 5.80 acres in the previous year. Experiments of rotational grazing are being continued and will be extended. The kanchas in Nellore district are now managed by the Forest department instead of being sold to contractors. There has been a general demand for reduction of grazing fees and the question is under the consideration of the Government.

There was an increase in the value of minor forest products extracted during the year. Removal of fuel at a nominal price of six pies per head-load has been permitted experimentally in a few areas. Lac cultivation was continued, but the quantity

produced was less than in the previous year owing to poor yield. Since the close of the year, the Government have issued orders directing the Superintendent of Stationery to buy all his requirements under superior wax from the Forest department. The Chief Conservator of Forests has also been asked to explore the commercial possibilities of lac and its bye-products. The cultivation of wattle in areas suitable for it and the utilization of treated wooden poles for electricity transmission lines are also under the active consideration of the Chief Conservator of Forests.

The financial results of the working of the department show a surplus revenue of Rs. 5.87 lakhs as against Rs. 2.16 lakhs in the previous year.

The relationship between the department and the general public and between the department and the hill and jungle tribes is reported to have been generally satisfactory.

2. Soaking delicate botanical specimens in alcohol and boiling water improves their drying and keeping qualities.

By
Demetrio R. Mendoza.

How to prevent the deterioration of botanical specimens from the time they are collected to the time they are stored in the herbaria are vexing problems to many botanical collectors and curators of herbaria. A great number of valuable botanical collections are continuously being lost through deterioration of some form or another. Ordinary methods of drying and keeping specimens do not always give good results especially with delicate botanical materials.

Early Attempts to Use Alcohol and Boiling Water.

As early as 1912 Merrill mentioned dipping succulent and slow drying botanical specimens, such as orchids, in boiling water previous to drying them in order to kill the living tissues of the plant. He did not however state whether this treatment is also applicable to all kinds of woody plants. Willis in 1925 explained how to go about preserving obtained collections

with the use of alcohol, formalin, picric acid, chromic acid, glycerin, etc., in order to kill, fix, and preserve materials for morphological studies. In 1929, Dr. McClung discussed the known properties of alcohol and many other kinds of fixatives which are applied to botanical materials. Dr. Chamberlain further elaborated this in 1932. Alcohol, they said, serve as a fixative a solvent, and a dehydrating agent. They were agreed that 70% alcohol has an excellent preserving effect, whereas 30% or lower has a macerative effect on botanical materials if applied too long.

The Present Study.

To determine the possibility of using alcohol and boiling water in improving the keeping qualities of botanical specimens the present experiment was conducted at the Division of Forest Studies and Research, Makiling National Park, Agricultural College, Laguna, from June to September, 1936.

The botanical materials used consisted of fresh specimens of *Albizia lebbek*, *Bryophyllum pinnatum*, *Moringa oleifera*, *Parartocarpus woodii*, these particular species having been selected as they are considered rather delicate and hard to preserve. It will be seen that both the succulent and laticiferous leaves were represented.

Method of Investigation.

In this experiment the specimens of each species were considered a set. Each set was divided into three groups with 10 to 20 specimens to a group. Group I, in each set was assigned for control, that is, they were pressed without any treatment, Group II for the boiling water treatment and Group III for the alcohol treatment.

The specimens in each group were pressed in the following manner: a bamboo press was laid flat on the table. A cardboard drier was placed on top of the frame followed by 8 pages of newspaper having the same size as the cardboard. Next was put a folder containing one specimen. This was followed with 6 sheets of newspaper driers and then another folder containing the next specimen, and so on until all the specimens in a group were accommodated. The last folder was followed by 8 sheets of the same driers, then the cardboard. The press was tied tightly at the corners with heavy twine. In placing the specimens in the folder, the leaves were carefully arranged

avoiding overlapping as much as possible. The pressers were then hanged side by side one and one half centimeters from the wall of a boiler where temperature varied from 35°C to 45°C.

Group I specimens were not given any special treatment. Group II specimens before they were pressed, were dipped one by one or in bunches in boiling water. The time of dipping ranged from 2 seconds to 3 minutes depending upon the species. A slight change in colour of the leaves as a result of scalding was considered as the sign to take out the specimens.

Group III specimens were soaked in 47% alcohol solution for 20 to 24 hours, the solution being of equal volumes of 94% alcohol and warm tap water. The same solution which was used in the first treatment was used for succeeding sets of specimens with the exception of the second set of *Moringa* where a 31% solution was used. The alcohol can was covered with a piece of board fitted to it in order to avoid its rapid evaporation.

During the course of the experiment the conditions of the specimens as to their drying qualities, fixability, appearance, and susceptibility to fungi attacks were carefully observed and recorded every day for 3 days and every alternate day thereafter until the specimens were thoroughly dry for safekeeping. The specimens were considered successfully dried when on shaking them vigorously their component parts did not fall off from the twigs.

Also at each inspection of the specimens all driers and folders found wet or moist were changed with dry ones. The folders were rearranged from time to time within the press so that those at the center were transferred at the outer sides in order to receive similar condition of drying. Moreover, the pressers were reversed in their position every day for the same purpose.

Result of the Experiment.

The results show that alcohol solution improves the drying and keeping qualities of the specimens. Specimens soaked in it were all found in excellent condition, showing no sign of fungi attack nor deterioration. Their appearance is far better than that of either the control or those treated with boiling water. The treatment besides being 100% successful for all the species used also hastened the drying, taking only 5 days for *Albizia* where, ordinary drying method required 9 days, 8 days for *Bryophyllum* instead of 60 to 130 days and 9 days for *Parartocarpus* instead of 11 days.

In the case of the boiling water treatment, the success ranges from 60% to 100%. Specimens with thin, delicate leaves which were over-exposed to boiling water, were badly cohered and interlaced, a fact which disfigured the specimens. The rate of drying was hastened as in the alcohol treatment. Some of the specimens in this treatment were however found easily susceptible to fungi attack.

The control specimens were found to be mostly deteriorated, the success varying from 0% to 5%.

Conclusions.

From the foregoing the following conclusions are reached:

(1) That fresh delicate botanical specimens are better preserved if given a preliminary treatment, such as soaking them in 30% to 50% alcohol for not less than 12 nor more than 24 hours, or putting them in boiling water for a moment before they are placed in presses.

(2) That alcohol is very much superior to boiling water for treating botanical specimens before drying them. It not only kills, dehydrates, and fixes the materials, but it also protects them against fungi and insect attacks.

(3) That boiling water also fixes the material and hastens the rate of drying, giving much better results than those without treatment.

(4) That over-soaking the specimens in boiling water gives harmful effects. The specimens are distorted, cohered, interlaced, and become easy prey to fungi.

(5) That the duration of drying is shortened when the fresh specimens are first treated prior to drying, with either alcohol or boiling water.

— *Makiling Echo*. October 1937:

3. Salute to the trees.

Many a tree is found in the wood
And every tree for its use is good;
Some for the strength of the gnarled root,
Some for the sweetness of flower or fruit;
Some for shelter against the storm,
And some to keep the heart-stone warm;

Some for the roof, and some for the beam,
 And some for a boat to breast the stream;—
 In the wealth of the wood since the world began
 The trees have offered their gifts to man.
 But the glory of trees is more than their gifts :
 'Tis a beautiful wonder of life that lifts,
 From a wrinkled seed in an earth-bound clod,
 A column, an arch in the temple of god,
 A pillar of power, a dome of delight,
 A shrine of song, and a joy of sight,
 Their roots are the nurses of rivers in birth;
 Their leaves are alive with the breath of the earth;
 They shelter the dwellings of man; and they bend
 Over his grave with the look of a loving friend.

— Henry Van Dyke

4. Forest Utilisation Conference, March 17th to 20th 1937.

*Opening speech of Sir Gerald Trevor, C. I. E.,
 Inspector General of Forests.*

"Gentlemen,

"My first duty this morning is to give you a very hearty welcome both on my own behalf and on behalf of the officers of the Forest Research Institute. We are all very pleased to see you here and I can assure you that we will do our utmost to answer any questions and to supply any information which we may have at our disposal.

"The functions of the Forest Research Institute are to assist you, gentlemen, in improving your marketing facilities, in finding further outlets for forest produce and generally for increasing forest trade in India. In the past we have been able to do something in this way. You know perfectly well that the paper pulp industry was organised by Mr. W. Raitt, late of the Forest Research Institute, and at the present moment most of the printing and writing paper is manufactured out of bamboos. While we are only too willing to assist you gentlemen, in improving forest revenues, it is the duty of forest officers in provinces to do their utmost to make use of the work done at Dehra Dun and of the results of the researches which we have carried out. I do not propose to make a long speech but in opening this Conference I want to say a few words about the various activities of the Forest Research Institute in the way of timber and the utilisation of forest produce.

"For many years past Mr. W. Nagle of this Institute has been working on plywood, samples of which we have in this room. The possibilities of Indian plywood are very great. You have only to look round these walls to see what can be done with *Terminalia tomentosa* or Indian laurel a timber which has already secured a market in London. So far, inspite of all the work we have done nobody has come forward to undertake the manufacture of this line in India, but I am very glad to tell you this morning that our efforts have been rewarded and we have at last got a firm ready to manufacture high class panels in Calcutta. When this comes about you should be able to dispose of any ornamental timber which you gentlemen may have to sell.

"We hope to extend the use of timber in engineering construction but with that is bound up the question of the preservation of wood. It is no good advocating further use of wood in Indian engineering construction unless we provide a remedy against white ants, fungi and general decay. You have no doubt heard of Ascu which was worked out by Mr. Kamesam and of the controversy which has arisen over this preservative. I do not propose to enter into this controversy but I can say that Ascu has given very satisfactory results. If you will take the trouble of examining the specimens treated with Ascu on the table you will find that they are quite satisfactory. Another matter is that we now have designed a plant which costs a comparatively small sum of money in which this treating can be done. You know perfectly well that a creosote treating plant is a matter of great expenditure. The plant that we have designed for Ascu is simple and the whole cost of this plant is comparatively small and it can be carried anywhere in India. That itself is a great advantage.

"We have also endeavoured to push the use of timber at the Lucknow Exhibition. The house was constructed of timber treated with Ascu by Messrs. Callender's, who are the commercial agents of Ascu. When I come to wooden houses I would ask you to glance over the publications and the great efforts which are being made in other countries to extend the use of timber. We hope to do something in this nature in the Timber Development Branch.

"Another item on which we have done a certain amount of work is wooden electric transmission poles. You are all aware that at the present moment the price of steel poles is rising and the price has already risen by 20 per cent and it may be difficult to obtain them at economical prices. There is therefore much

advantage in pushing the sales of wooden poles at this moment. It is no good to say that wooden poles are not available. Sufficient supplies of the poles can be obtained by taking a little trouble. I have seen the most excellent sal poles which were carefully picked over for this purpose. Gentlemen, I should like to make it clear to you if this business is to be a success you must select a high quality of wooden pole for this purpose. The price is there, the pole is there but a little organisation is required. I would ask anybody interested in this pole market to meet Mr. Whitmore of Messrs. Callender's to discuss the matter. He will give a demonstration at Dehra Dun of the method of treating transmission poles, if a sufficient number of delegates would like to attend such a demonstration. One thing I am certain of and that is if this business of poles is to be carried through in a satisfactory manner it will be necessary for somebody to keep stocks of treated poles. Either Messrs. Callender's or some other firm or the Forest Department will have to keep suitable stocks of treated wooden poles. The Forest Department must have 6 months to 9 months notice before they can supply poles and the only way in which this trade will flourish is by some one keeping suitable stocks of well graded and well seasoned treated poles.

"Another matter on which we have worked here for some-time past is seasoning, and particularly the cost of seasoning. You will have an opportunity of seeing for yourselves our new smoke kiln which we have designed at a cost of Rs. 2,000 to 2,500 and which has given satisfactory results. We do not profess for one moment that it is perfect, we have not yet published much about it but we certainly think we have obtained a satisfactory means of seasoning timber at a cost of about 6 annas per c. ft.

"I have asked the Government of India to start a Timber Development Branch of this Institute dealing not so much with research but with the extended use of timber in engineering, in negotiating with the railways for the reduction of freight and putting treated timber before the public in India. I am not very fond of propaganda but it seems to be the order of the day. One of the matters I would like to discuss is how can we succeed in extending the use of timber against the competition of concrete and steel. There is another matter in which I think much good can be done and that is co-operation between various provinces in discussing the prices of timber and general sales policy. This chiefly affects those provinces whose market is

Calcutta. I think it would be a good thing if the Forest Utilisation Officers of these provinces were to meet annually to discuss the problem of sales policy and the problem of disposing of their forest produce. At present, you are competing one against the other.

"Finally there is the question of grading timber. Mr. Seaman after a great deal of work prepared rules for grading teak squares for the Indian market. Formerly the teak firms of Burma used to sell teak squares under their own private marks. What these marks meant nobody else knew. We have at the request of the Railway Board brought out these standard grading rules for teak squares. The great advantage of these rules is that you can supply your timber to the railway graded according to the rules and the grading can only be challenged by going to arbitration in which case the loser pays the costs. Undoubtedly timber in India has suffered from lack of grading. I think there is a possibility of extending the question of grading to various other classes of timber in India and we here at the Forest Research Institute will be glad of advice on this subject."

Proceedings of the Second Forest Utilization Conference, Dehra-Dun, 1937.

5 Sleeper Timbers

When its actual make-up and the comparison of its materials are considered, there must surely appear something anomalous about the expression "Iron Road". The steel rails of the vast majority of railways are laid on that oft-maligned material, wood; and it has been computed that there must be in existence to day at least 1,600 million timber sleepers carrying the trains of the world. * * *

The cost of permanent way renewal represents a very considerable part of the annual budget of a railway company, and the sleeper is one of the most costly items to be considered in track maintenance. The sleeper has two purposes — to act as a "tie" to keep the rails parallel and to gauge, and to distribute the weight of the moving load. The main points of importance to be considered in the choice of a sleeper timber are: (1) its life, in which must be considered both its mechanical life, ie, the extent of its existence before it becomes "spike-killed" or worn out by the chair or soleplate, or on the underside by the ballast; and also the physical life, ie, the extent of natural deterioration from decay, etc. With some fine timbers the physical is considerably longer than the mechanical life. (2) the question of its adaptability and

behaviour under varying conditions of climate, soil etc. Among these conditions are included intense dry heat, heavy rainfall, and the ravages of white ant. (3) the costs both initial and subsequent. It is obvious of course that a cheap & inferior sleeper is going to prove an uneconomic proposition when compared with one that costs, say, half as much again but lasts twice as long.

Timber as a material for sleepers, has its rivals, but their competition to date is inconsiderable. Steel, concrete and iron are all used in the track in various parts of the world. The intensive propaganda of the steel interests has been to a large extent responsible for the attention which has been directed in recent years to the use of steel for sleepers. Whether or not this material will ultimately show an advantage over the wood sleepers time alone can prove, but as yet the steel sleeper cannot be regarded as having advanced very far beyond the experimental stage.

In several continental countries — Germany for instance — where steel sleepers have been tried out extensively, they are now being removed from the main line tracks & once more replaced by timber. In America the chief engineers have not considered their alleged longer life to be sufficient justification for giving them any considerable trial, and the timber sleeper is almost universal in that country, as it is in Canada.

A fairly representative opinion of them in England may be expressed in that of one of the foremost experts on permanent way, who considers that until it has definitely been proved that the steel sleeper possesses a life of at least double that of a timber one, their adoption is not likely to constitute an economical proposition.

The main criticisms directed against steel sleepers are (1) Under adverse chemical conditions of air or soil and certain types of formation they do not last. (2) They are noisier, less elastic and less easily handled than timber sleepers (3) They generally require more expensive and laborious ballast packing (4) The inability to use track circuits with steel sleepers which being good conductors of electricity, necessitate the extra expense of some form of insulation between the rail and the sleeper.

At the 1937 International Railway Congress, it was reported that nearly all those administrations which have had great experience with metal sleepers state that wooden sleepers are preferable on high speed lines.

* * * * * — Wood, January 1938.

Notifications Relating to Rangers.

Waltair Circle.

- 26—4—38. Mr. P. Chengalreddi, on return from leave to Rajahmundry Range, Godavari Lower Division.
- 30—4—38. Mr. G. Apparao Naidu, River Range, Godavari Lower Division to Sriharikota Range, Nellore Division. 2. Mr. S. Ratnavelu Mudaliar, Sriharikota Range, Nellore Division to River Range.
- 5—5—38 Mr. K. Subbanna, Trained Forester third Grade, to charge of Palnad Range, Guntur Division. 2. On relief by No. 1, Mr. V. N. Leapingwell, leave for two months.
- 6—5—38 Mr. C. S. Sivagnanam. Trained Forester third grade, in charge of Peddapur Range to charge of Polavaram Range. 2. Mr. Abdul Razack, Polavaram Range on relief by No. 1 to Peddapur Range.

Bellary Circle.

- 24—3—38. Mr. A. Ranganayakulu Naidu, on return from leave (on 17—4—38) to Rajampet Range, Cuddupah South.
- 8—4—38. Mr. A. Ranganayakulu Naidu, extension of leave for 4 months from 17—4—38 preparatory to retirement in continuation of the leave already granted.
- 18—4—38. (1) Mr. T. G. Sitarama Mudaliyar to Badvel, (2) Mr. Y. Pedda Lakshmayya Naidu, to Sidhout. (3) Mr. C. R. Rajagopala Ayyangar, to Onipenta Range. No. 2 should relieve No. 3 first and be in additional charge of Badvel until relieved by No. (1).
- 6—5—38. Mr. B. H. Anandatheertha Rao, extension of leave for two months with effect from 1—5—38 in continuation of the leave already granted by the Collector of Kurnool.
- 11—5—38. Ranger S. Ramachandra Ayyar, Vontimitta Range is placed in additional charge of Vempalle Range.

Salem Circle.

- 22—3—38. Mr. T. K. Parthasarathy Ayyangar, Vellore East Division, extension of leave for four months from 24—3—1938, in continuation of the four months' leave granted. 2. Mr. T. R. Vijayaraghavan, Trained Forester fifth grade, in charge of Tiruvannamalai Range, will for the present continue to be in Range Charge with enhanced Fixed Travelling Allowance of Rs. 13—2—0 vice No. 1 on leave, or until further orders.

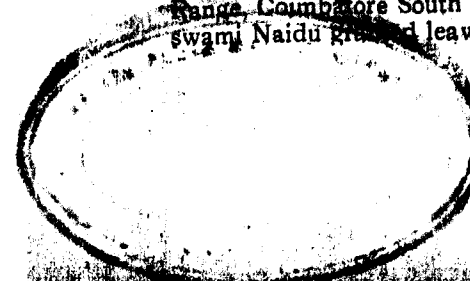
- 24—3—38. Mr. P Shanmugasundaram Pillai, to Velapady Range, Salem Central Division.
- 24—3—38. 1. Mr. S. V. Doraiswami Iyer, Selem South Division leave for 4 months from 17-3-38. 2. Mr. C. B. Ekambaram, Trained Forester and Acting Ranger, last grade, in charge of Rasipur Range, additional charge of Namakkal Range from 17-3-1938, until relieved by Mr. Syed Yahia Saheb, (No. 5 below). 3. Mr. A. P. Devanayagam, Forester second grade, Salem Central Division, to charge of Shevaroy's North Range, Salem Central Division, with enhanced Fixed Travelling Allowance of Rs. 13-2-0, for Range charge as a temporary measure vice No. 1 on leave or until further orders. 4. On relief by No. 3, Mr. J. S. Vedanayagam, to Shevroys South Range, Salem Central Division. 5. On relief by No. 4, Mr. Syed Yahia Saheb, to Namakkal Range, Salem South Division.
- 26—3—38. 1. Mr. Syed Munavar Saheb, extension of leave for four months from 20-3-1938, in continuation of the four months' leave already granted. 2. Mr. K. S. Muthanna, Trained Forester I grade and Acting Ranger last grade in charge of Thammampatti Range, Salem South Division, will continue to act as Acting Ranger last grade, vice No. 1 or until further orders.
- 14—4—38. Mr. T. R. Vijayaraghavan, Trained Forester V Grade, in charge of Tiruvannamalai Range, will be considered to have been acting as Ranger, last grade on Ranger's pay from 4-3-1938, vice Mr. T. K. Parthasarathy Iyengar, Ranger on leave, and he will continue to be so acting until further orders.
- 20—4—38. 1. Mr. T. N. Vedantaramanujam, extension of leave for two months from 17-4-1938, in continuation of the leave (for 4 months and 21 days) granted. 2. Mr. C. B. Ekambaram, in charge of Rasipur Range, Salem South division, will continue to act as Ranger, last grade, vice No. 1 on leave or until further orders.
- 22—4—38. Mr. T. P. Gownder, to Tirupattur, Range, Vellore West division, relieving Mr. H. E. Macbride, of additional charge.
- 5—5—38. Mr. S. Ramalinga Ayyar, Ranger seventh grade, Vellore West Division, to Shevaroy's North Range, Salem Central division, reverting Mr. A. P. Devanayagam to his permanent post as Forester second grade.
- 15—5—38. 1. Mr. T. P. Gounder, to Denkanikota West Range, Salem North Division. His posting to Tiruppathur range, Vellore West division, is cancelled. 2. On relief by No. 1, Mr. B. V. Vaideeswara Iyer to Krishnagiri Range, Vellore

West Division. 3. On relief by No. 2, Mr. H. E. MacBride, now in double charge of Krishnagiri and Tiruppathur Ranges, will continue to be in charge of Tirupattur Range, Vellore West Division. His transfer to Denkanikota West Range, is cancelled.

- 21—5—38. Mr. A. P. Devanayagam, Forester second grade of Salem Central division, temporarily placed in charge of Valapady range, with enhanced fixed travelling allowance of Rs. 13-2-0, relieving Mr. J. S. Vedanayagam, Ranger, from additional charge of the Range. 2. He will be in charge of the Range till Ranger P. Shanmugasundaram Pillai of Bellary Circle joins duty or until further orders.
- 22—5—38. B. V. Vaideeswara Ayyar, Ranger fourth grade, Denkanikota West range, Salem North division, leave for 1 month and 1 day preparatory to retirement from date of relief from Denkanikota West Range.

Coimbatore Circle.

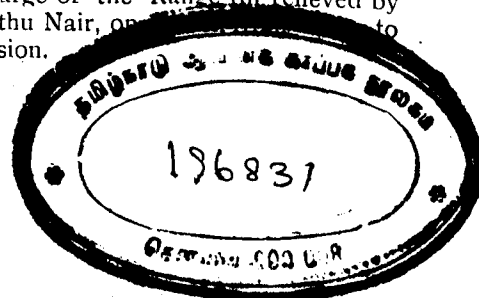
- 9—4—38. The following officiating promotions of trained Foresters to the last grade of Rangers are ordered:—
- (1) Mr. F. B. Kunders, Cumbum Range, from 1-4-1938 to 15-7-1938 vice Ranger C. K. Unni on leave for 4 months from 16-3-1938. (2) Mr. W. Vores, Bargur Range, Kollegal division, from 3-4-1938 to 21-4-1938 vice Ranger S. Venkataraman on leave. (3) Mr. P. Govinda Menon, Tunacadavu Range, from 6-3-1938 to 31-3-1938 vice Ranger P. A. Venkataraman on leave from 4-3-1938 to 15-3-1938 and Ranger Unni on leave from 16-3-38.
- 20—4—38. Mr. M. Gopalaswamy Naidu, Ulandi Range, leave for 2 months from 25-5-1938.
- 25—4—38. The following officiating promotions of trained Foresters to the last grade of Rangers are ordered:—
- (1) Mr. F. B. Kunders, Cumbum Range, from 1-4-1938 to 2-4-1938 vice Ranger C. K. Unni on leave; and from 3-4-1938 to 2-8-1938 vice Ranger R. Alagiriswami Naidu who has extended his leave on medical certificate by 4 months from 3-4-1938. (2) Mr. W. Vores, Bargur Range, Kollegal Division, from 3-4-1938 to 15-7-1938 vice Ranger C. K. Unni on leave for 4 months from 16-3-1938. (3) Mr. V. Govinda Menon, Tunacadavu Range, from 6-3-1938 to 15-3-1938 vice Ranger P. A. Venkataraman on leave from 4-3-1938 to 15-3-1938; from 16-3-1938 to 31-3-1938 vice Ranger C. K. Unni on leave; and from 1-4-1938 to 30-4-1938 vice Ranger S. Venkataraman on leave from 22-3-1938 to 30-4-1938.
- 25—4—38 Mr. S. Venkatrama Ayyar, on return from leave, Ulandi Range, Coimbatore South Division, to relieve Mr. M. Gopalaswamy Naidu and leave from 15-5-1938.



- 8—5—38. Mr. R. Alagiriswamy Naidu, extension of leave for 4 months in continuation of the leave for 2 months granted.
- 10—5—38. Mr. A. B. Fenn, Sholavandan Range, granted L. A. P. for one month from 14—5—1938. Range Officer Natham will relieve Mr. Fenn and hold additional charge of Sholavandan.
- 10—5—38. Mr. K. O. Anandan, Kollegal Range, to the sandalwood depot at Satyamangalam in Coimbatore North Division. 2. Mr. R. Rama Ayyar, to Kollegal Range.
- 16—5—38. (1) Mr. F. B. Kunders (M. R. H.) Acting Ranger last grade on Lac work will join Palni Range and for the present assist Mr. P. Ramaswamy Ayyar. After District Forest Officer Madura is satisfied that Mr. Kunders is familiar with the Range, on or about June 1st, Mr. F. B. Kunders to be Acting Range Officer Palni last grade. (2) Mr. P. Ramaswamy Ayyar, Palani Range, to be Range Officer Kollegal on relief by No. 1. (3) Mr. R. Rama Ayyar, Ranger sixth grade Kollegal will join Pollachi depot on relief by No. 2, and will assist Mr. P. Doraiswamy Ayyar until 1—7—1938 when he will relieve Mr. P. Doraiswamy Ayyar retiring.
- 17—5—38. 1. Mr. Nagalingam Pillai to be Range Officer Cumbum of Madura Division. 2. Mr. A. R. Manuals on relief by No. 1 to be Range Officer Udamalpet of Coimbatore South Division. 3. Mr. I. John on relief by No. 2 to be Range Officer Kuttalam of Tinnevely Division.

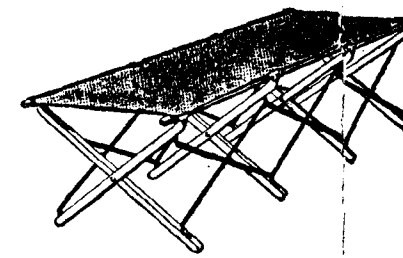
Ootacamund Circle.

- 9—4—38. Mr. K. P. Chathu Nair, leave for three months from 27th March 1938.
- 22—4—38. Mr. Marcel D'Souza, to Kannothe Range, Wynaad division. M. R. Ry. M. M. Mandanna, on relief to Begur Range, Wynaad division. Mr. A. Mahomed Akbar, to charge of Begur Range, *vice* Mr. K. P. Chathu Nair granted leave from 27th March 1938 until relieved by No. 2.
- 4—5—38. Mr. S. Narayana Naick, untrained Forester promoted as Acting Ranger, to be in charge of Shankaranarayana Range, Mangalore North Division, *vice* Mr. T. Perumal Gownder transferred to Salem Circle
- 12—5—38. Mr. M. M. Mandanna, Begur Range, Wynaad division to Mysore depot, in relief of Mr. Thomas Thachil, who has applied for leave. 2. Mr. A. Muhammad Akbar, Ranger seventh grade and Asst. Range Officer, Begur, to relieve No. (1) and be in charge of the Range till relieved by No. (3). 3. Mr. K. P. Chathu Nair, on relief to Begur Range, Wynaad division.



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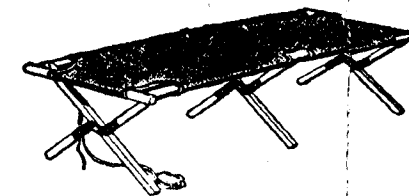
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