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V9, no. 1. September 1924

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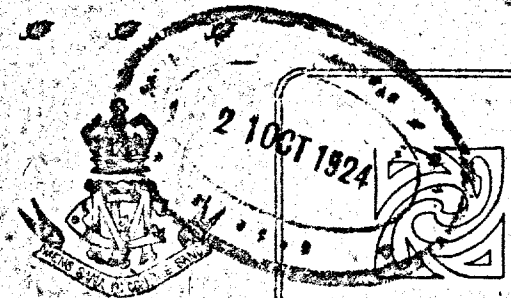
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Vol. IX.

SEPTEMBER 1924.

No. 1.

THE MADRAS Forest College Magazine.



EDITED AT COIMBATORE.

MADRAS PRESIDENCY.

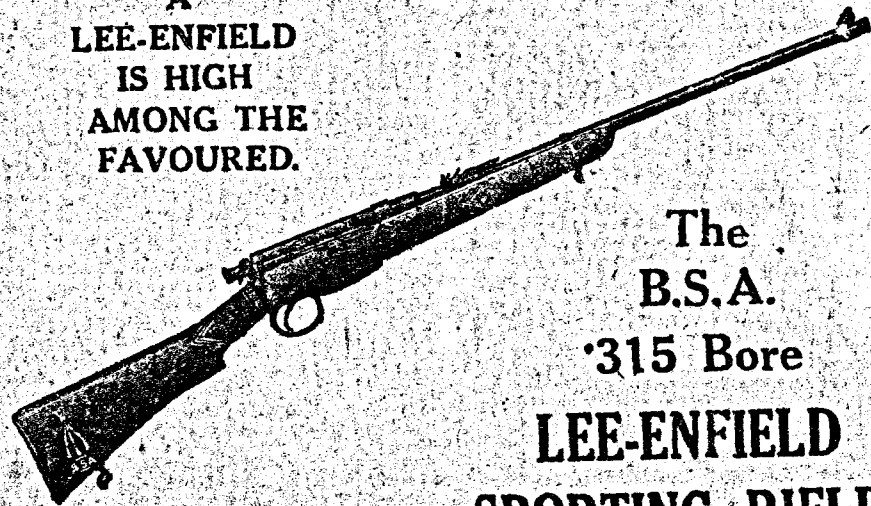
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Published by the Principal,
MADRAS FOREST COLLEGE.

PRINTED BY S. VINCENT AT THE ELECTRIC PRINTING WORKS,
COIMBATORE.

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MADRAS.

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THE

Madras Forest College Magazine.

Vol. IX.

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Notice.

It is brought to the notice of subscribers that in a meeting held on 11-9-'24, consisting of the Managing Committee and Members of the House Committee, it was decided:—

1. To publish the Madras Forest College Magazine half-yearly, as from September 1924, instead of quarterly, as no outside contributions for the Magazine are being received in spite of the annual prize offered for the best original article by a contributor of the Ranger class and printed in the Magazine in the course of a year, and the notice published in the issue of March 1924.

In addition to the half-yearly issues, two supplements will be published in between, containing only Gazette Notifications.

2. The subscription of Rs. 2 per annum to remain the same: annas twelve for each of the half-yearly issues and annas four for each of the Supplemental issues.

3. To request the Secretary of the Madras Forest Rangers' Association to nominate one Ranger in each Circle to obtain and submit articles for the Magazine. The six Range Officers nominated to be appointed on the Committee of Management.

4. To hold another Meeting at the end of a year in order to decide whether it is worth while continuing the publication of the Magazine, if there is no improvement in the contribution of articles from outside.

BUSINESS SUPERINTENDENT.

* * * * *

It is published for information that Mr. Dooma Shetty gets the largest number of votes for his essay "My favourite tree—the Bamboo" published in the December 1923 number of the Magazine. He, therefore, wins the prize of Rs. 15 allotted for the year 1923-24.

COMMITTEE OF MANAGEMENT.

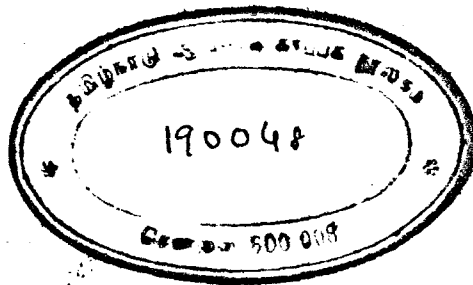
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President:— C. R. F. WILLIAMS, M. C., I. F. S.

Business Superintendent:— ROLAND MITCHELL, E. A. C.

Editor and Treasurer:— G. VISVANATHAM, B. A.

Assistant Editor:— S. NARAYANASAMI.



SL

SL, 11/11/24

N 24

Indian Forester Prize 1925.

(PAST STUDENTS)

A prize allotted from the "Indian Forester" Fund will be awarded to the past student of the Madras Forest College who submits the best essay on the following subject:—

Early Burning, versus

Complete Fire Protection.

Which do you consider to be the best for forest areas and why?"

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

Essays should be clearly written or typed on one side of the paper only, and should not exceed 2,000 words; they must reach the Principal, not later than the 10th, nor earlier than the 1st, May 1925.

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

C. R. F. WILLIAMS,
Principal,

Madras Forest College, Coimbatore.

THE Madras Forest College Magazine.

PUBLISHED QUARTERLY.

Vol. IX.]

SEPTEMBER, 1924.

[No. 1.

The Regulation of Grazing in Forests.

(Winning essay, for the "Indian Forester Prize" for 1924, for 'present' Students of the Madras Forest College,—by, K. P. Rajalingam.)

Perhaps the most vital problem confronting the Forest Department to-day is the question of grazing, and how best to make provision for it. The situation has gradually grown more acute until at present it is felt on all sides that a satisfactory solution is imperative.

That the admission of browsing animals into a forest is detrimental to its welfare is self evident. The browsing down of young growth, the trampling of seedlings, the wounding of the roots, the exposure and consequent erosion of the soil are the direct results of grazing; nor is the damage confined to the forest.

The gradual destruction of the forests deprives the streams of their water-supply, and with the disappearance of the streams comes

famine and its attendant evils, resulting in the destruction of the rural populace, who are thus deprived of the main source of their prosperity.

That this is no mere idle statement, the conclusion drawn from a biased theoretical stand-point, is proved by the poignant example offered by the island of St. Helena to-day. When first discovered it was authentically reported to be covered with luxuriant vegetation. Some years later, some sheep, and those unsavoury enemies of plant-life, goats, were introduced into the island, and their browsing has resulted in the island assuming the aspect of a mass of scrub-covered rock, which the authorities are trying to reclothe with a semblance of their original forest wealth by a belated attempt at re-afforestation.

One often sees it pointed out in text books that grazing has the advantage of keeping down a rank growth of grass and weeds, but wherein lies the use in keeping down a rank growth of grass and weeds if the principal seedling growth is also effectively kept down at the same time? True enough the argument may hold good if the principal seedling growth is unpalatable to browsing animals, but how often is this the case? One often sees half-starved cattle in an earnest endeavour to keep body and soul together try to eat the dry palm leaves off garden fences, and it is difficult to believe that any such animal will forego a meal off luscious green growth, unless it knows it to be perfectly poisonous.

In fact it may be taken as an infallible axiom that "where there are forests there can be no grazing, and where there is grazing there can be no forests."

But can we follow the advice of this excellent maxim and close down our forests? Most unfortunately we cannot. It is natural in a man, and conducive to the welfare of the state, that he should wish to ameliorate his own condition and the surest way to the aggrandisement of a people is by agriculture, and agriculture as we know demands cattle at least under the every day conditions obtaining in India.

The people for whom, and for whose progeny we are conserving our timber supply cannot be made to starve, while we close down our forests, and allow their cattle to eke out a precarious existence on a patch of village common, by striving to digest the stubbly grass already grazed down to the root-stock, and mixed with a fair proportion of gritty sand!

It is, therefore, necessary to strike a compromise between grazing and forestry and this we have been striving to do for some time past, but alas, with what success?

In despair we have opened our forests to unlimited grazing, year in, year out, mostly on a pernicious system of grazing permits, providing rather a convenient means to the unscrupulous subordinate, of lining his pockets, than one to counteract the depletion of our forests.

It is only fair to state here, that of late, eyes have been opened and several modifications of the old system, like the village panchayat system, the lump-sum grazing revenue system, the Neilore Kancha system etc. have been introduced, but it is easy to perceive that such half measures will never suffice.

The attitude we possess towards felling in our forests, we must possess towards grazing also. Years ago when we found that the ryot was ruining our forests by unregulated fellings and wastage of timber, we stepped in, made stringent laws, prohibited felling without permission and did not fail to provide for the ryot's timber needs. Incidentally we made some revenue while at the same time effectively conserving the timber supply, preventing the ryot from wastage of material by making him pay for it.

We further took the steps necessary to ensure a second yield of timber in place of the one thus taken out.

But in the case of grazing we know that there are millions more cattle grazed in the forests than the forest can support, that the damage perpetually done to the forest is incalculable, and that if present conditions continue, nothing but a low bushy growth will remain in place of what was once a luxuriant growth of trees and grass, yet we do nothing but look on, wring our hands, and groan.

Why this apathy, and apparent lack of interest in a problem of such magnitude, that shakes the economic foundations of the Forest

Department, and sets out to nullify the very object for which we strive?

Because, we fear that the ryot will not take kindly to any innovation; but are not all innovations treated with equal distrust? Did the ryot see eye to eye with the Forest Act itself; yet who doubts its wisdom? If a pill is hard to swallow, surely no amount of looking at it will convince one that it is easy to do so, the main thing is to swallow it, and get over it as soon as possible. Our path lies clear before us. The stern hand of duty directs us with unflinching finger to restrict grazing to that number of cattle, and to that amount of time which the forest can support with the minimum possible injury to itself.

Firstly, it is a well known fact that in our forests, the grazing incidence far exceeds the grazing possibility. This abnormal excess of cattle is due to several causes:

(i) The ryot persists in keeping as large a herd of cattle as possible, retaining in it out of greed or sentiment every new addition whether good or bad or indifferent.

(ii) Several ryots of little or no local standing graze, for a consideration, the cows of town-dwellers that have run dry.

(iii) Corruption in the subordinate ranks of the forest service.

(iv) Absence of proper legal support for the enforcement of any beneficial regulation.

If the first and second of these causes are removed the whole question automatically settles itself. In short it is willing co-operation, and far-sightedness that are required from the ryot to obviate the great evil.

The ryot must be made to see:

(i) that promiscuous grazing involves promiscuous breeding and consequent deterioration of the stock in quality,

(ii) that it pays more to have ten well fed healthy cattle rather than to have 200 half-starved bags of bones like the animated skeletons that are the ryot's apology for a herd at the present day,

(iii) that to keep two hundred cattle in a state of unvarying semi-starvation, with, so to speak more than three hooves in the grave, is wholly against all humanitarian principles, especially so in a country where cattle are objects of veneration, and is certainly much more brutal than selling them to be butchered,

(iv) that by excessive grazing he is endangering the timber and grass supply of the future,

(v) that the gradual disappearance of the forests consequent on grazing will bring famine into the land by depriving the great sources of water supply of their reservoirs.

These however cannot be achieved at a stroke. The ryot is very suspicious of any innovation, and the first false step might mean a bitter antagonism for several decades. Legislation will be sure to be looked upon with suspicion, unless the way is first paved for it by, I use it in default of a better word, careful propaganda much on the following lines.

(i) Cattle shows which will encourage the ryot to exhibit good cattle should be held and adequate encouragement given by Government to bona-fide attempts at breeding, purchase of imported stock etc.

(ii) The humanitarian side of the affair must be stressed, as the ryot, being a sentimental person will be usually more willing to listen to this argument than to any other.

(iii) The semi-starvation of cattle now rife in the villages can be discouraged by giving adequate encouragement for the formation of a body like the "Society for the prevention of Cruelty to animals" which will inquire into and obtain punishment for such cases of flagrant neglect to keep cattle in good condition. The ryot must be made to understand that it is his own interests that are being looked after by definitely setting aside, wherever convenient, some areas for grazing, and by allowing him, within limits, to manage his own grazing affairs, appointing his own panchayat, which body will be responsible to Government for seeing that the forest is not overgrazed, and also in

return for grazing for the carrying out of such operations as may be deemed necessary for the conservancy of the supply of pasture. This has also the effect of freeing the ryot from the extorsions of the unscrupulous forest subordinate who usually has no compunction in allowing excess grazing in the forest as a return for a small gratuity.

In such areas as may be set aside, and given over to the management of panchayats, and in others where pasture has to be provided, the following regulations may with advantage be enforced:—

(i) The area set aside for grazing, or allowed to be grazed over must be sufficient to allow for the comfortable grazing of all the necessary cattle in the village or group of villages.

(ii) All necessary cattle in the village must be taken a census of by a responsible officer, and branded with a special mark.

(iii) That grazing in such forests be extended to no more than the cattle actually and fairly necessary to the ryot.

(iv) That such forests be open to grazing only during such periods as is found to be actually necessary.

(v) That since the cutting and removal of grass is less injurious than grazing, ryots may be allowed to cut grass for stall feeding their necessary cattle in lieu of grazing, and under such circumstances grazing fees may be refunded to such persons at the end of the year.

(vi) That by setting aside separate blocks for each village friendly competition in the maintenance of blocks and carrying out of cultural operations be encouraged, and further supplemented by bonuses of a portion of such grazing revenue as may be realised.

(vii) The “unsylvicultural” system of allowing free grazing as a reward for fire-protection must be discontinued, for such benefits as are derived from fire protection are constantly nullified by the grazing.

(viii) The areas opened to grazing must be so selected, and gone over in such rotation that the least possible extent of regeneration is damaged by the grazing.

(ix) All Cattle to be under the charge of a responsible herdsman, who should not have under him more cattle than he can manage and who would be held responsible for any infringement of the regulations.

(x) All blocks selected for grazing must have well defined natural boundaries, as these will prevent cattle straying.

(xi) Areas on which repeated infringements of these regulations occur, should be closed to grazing for some time.

If such and similar regulations are enforced, we can be assured that the vexed question of grazing will vex the forester no more.

“SPIRO SPERO”

Prize day at the Madras Forest College; June 28th, 1924.

On the 28th of June last, a large and distinguished gathering assembled in the hall of the Madras Forest College, to witness the distribution of prizes, medals and certificates to the eleventh batch of successful students. Six students passed with Honours, fifteen obtained the Higher Standard and five the Lower Standard certificates. The Honorable Sir Arthur Knapp, I. C. S., member of the Executive Council, presided, and Lady Knapp very kindly gave away the prizes, and certificates.

Prominent among those present were :—

Mr H. Tireman, I. F. S., Chief Conservator of Forests, and Mrs. Tireman; Mr. F. Noyce, I. C. S., C. S. I. O. B. E.; Messrs. H. A. Latham, H. F. A. Wood, R. D. Richmond, D. T. Barry, and T. A. Whitehead, Conservators of forests; Mr. C. S. Martin, Chief Forest Engineer; Mr. and Mrs. Connel; Messrs. G. C. Robinson, J. W. K. Weruham, M.F. Bridge, J. S. Conolly, J.K. Pearce, (Logging Engineer), Abdul Qadir, W. C. Hart and Captain H. A. Irwin, (Examiners), M. R. Ry. C.V. Venkatramana Ayyangar, Avergal, B. A., B. L., M. L. C., Rao Sahib, M. R. Ry. C. S. Ratnasabapathy Mudaliar Avergal.

Mr. W. G. Dyson, Principal of the College, before requesting Lady Knapp to distribute the prizes spoke as follows:—

“Sir Arthur Knapp, Ladies and Gentlemen,

The year we are now bringing to a close started with an almost complete change of staff. When we reassembled last August, Mr. Brand

was the only member of it with more than a few weeks' service at the College. In the course of the year we have lost Mr. Ward, whose place was taken last February by Mr. Mitchell.

Both Divisions started 26 strong. Of the seniors all have completed the course. One student of the Junior year has recently been expelled.

Judged on the average marks scored in the Final Examinations, the Seniors year show a falling off from the standard reached last year. An attempt was, however, made to set more practical, and therefore more difficult papers; and the unusual number of Honours certificates won last year naturally resulted in a tightening up of the standard of marking. I think the present Senior year is up to the average and it can claim one student of exceptional merit. I should like to take this opportunity of congratulating him on his success. His name will be evident when the Prizes are distributed. The Juniors, with one or two exceptions show very fair promise.

Of the 26 Seniors who finish their course to-day, 6 have obtained Honours, 15 the Higher Standard, and 5 the Lower Standard certificates. No student has failed to qualify.

Tours have been carried out in accordance with the sanctioned programme, and our thanks are due to the District forest officers in whose charges we have camped, and to their Rangers and subordinates for all the help they have given us. Without it the tours would lose half their value.

In games it looked as though we were going to be rather badly left by the departure of last year's seniors. But the new students put forward several useful cricketers, and with Mr. Ward's help and coaching we won the local Cricket Tournament (for the 2nd year running) before our first camp in September. At Hockey we were not so successful. In the 1st round we met Stanes School, and they gave us a very decisive beating.

At the sports, which were held in November, Rahim of the Senior year, broke the College record for the Long Jump. He also won the Richmond cup. Bushanam, who won it last year, and who had a very good chance of winning it again, had the bad luck to break his kneecap practising for the Hurdles a couple of days before the Sports.

The Cowley-Brown cup for Inter-Division Hockey was won by the Seniors a few days ago. The Juniors were perhaps the better team, but they played one man short for most of the game. The Juniors won the Marathon.

The general standard of discipline, and conduct at the College has been satisfactory. The health of the students both at head-quarters, and in camp has been excellent.

I will now ask Lady Knapp to be so kind as to give away the Prizes and Certificates :—

(1) The *Campbell Walker Prize*, for the student judged likely to make the best all round Ranger :—

K. P. Rajalingam, Ceylon.

(2) The *Brazier Prize*, for the best practical out-door Ranger :—

K. P. Rajalingam.

(3) *Gold Medal*, presented by Government, for the best senior Division student on marks :—(His Honours certificate will be presented at the same time):—

K. P. Rajalingam.

(4) *Silver Medals*, presented by Government, for Honours. (Their certificates will be given at the same time):—

Ananda Rao	Madras.
Rangasawmi	do
Vridachalam	do
Dooma Shetty	do

Krishnamachari (Madras private student).

5. *Prize for Forestry*, presented by the Madras Conservators :—

K. P. Rajalingam.

6. The *Lodge Prize* for Engineering :—

K. P. Rajalingam.

7. The *Indian Forester Prize* for an essay on "the regulation of Grazing in forests."

K. P. Rajalingam.

8. The Chief Conservator's Prize for the best Junior student :—

Narayanasawmi Ayyar (Madras).

9. The *Pentland Shield* for the best all round Athlete:—
Khan Muhammad (Junior Division.)
(Central Provinces.)

10. The *Fischer cup* for Tennis:—
Phillips (Ceylon).

11. The *Moopil Nair cup* for the Marathon Race:—
Tanpure (Bombay; Juniors).

No. Name of student. Circle or State to which
attached.

Madras Ranger with Honours.

- | | | |
|----|--------------------------|----------------------------|
| 1. | K. Puspa Rajalingam. | (Ceylon.) |
| 2. | B. H. Anandathirtha Rao. | (III Circle, Madras.) |
| 3. | S. Rangaswami. | (IV „ „) |
| 4. | U. Vridachalam. | (V „ „) |
| 5. | T. Krishnamachari. | (Private student, Madras.) |
| 6. | K. Dooma Shetty. | (VI circle, Madras.) |

Madras Ranger Higher Standard-

- | | | |
|-----|-------------------------|----------------------------|
| 7. | A. E. Perera. | (Ceylon.) |
| 8. | H. B. Divulwewa. | do |
| 9. | Gopal Das Mehta. | (Central Provinces.) |
| 10. | Babu Sarat Chandra Das. | (Orissa Feudatory States.) |
| 11. | Devaraj Shukal. | (Central Provinces.) |
| 12. | Bachu Ramadas. | (Vizianagaram State.) |

- | | | |
|-----|-----------------|---------------------|
| 13. | T. R. Bushanam. | (Court of Wards.) |
| 14. | B. L. Gupta. | } |
| 15. | M. M. Rahim. | |
| 16. | Kushiram. | |
| 17. | Shivaram. | |
| 18. | H. C. Sen. | (Behar and Orissa.) |
| 19. | L. N. Tiwari. | } |
| 20. | Karamchand. | |
| 21. | M. G Sirpurkar. | |

(Central Provinces.)

(Central Provinces.)

Madras Ranger Lower Standard.

- | | | |
|-----|----------------------|------------------|
| 22. | M. S. Khan. | (Hyderabad.) |
| 23. | K. Kanapathi Pillai. | (Ceylon.) |
| 24. | A. Jayasundara. | (do) |
| 25. | S. N. Kaul. | (Central India.) |
| 26. | Md. Abdul Aziz Khan. | (Hyderabad.) |

Mr. H. Tireman, the chief conservator of forests, then addressed the gathering as follows:—“I wish, on behalf of the Forest Department in general and of the College in particular, to thank the Hon. Sir Arthur Knapp for presiding at the annual gathering to-day. To-day is a holiday, and a busy man like the Hon. Member in charge of Forests might reasonably be expected to take a day's rest, but Sir Arthur Knapp has ungrudgingly sacrificed his holiday to come among us, and we much appreciate the honour he has done us. We are greatly indebted to Lady Knapp for gracing our proceedings with her presence and for so kindly giving away the prizes.

I further wish to accord a hearty welcome to Mr. Noyce, Secretary in the Development Department, who has also sacrificed his holiday to be with us. He takes a keen interest in the department, and I wish to take the opportunity of thanking him for the help which he is always ready to give me.

Turning to the students, the speaker observed : " advice is a thing of which young men are not particularly fond, at least that is my recollection of my younger days, but for all that, I am going to give you some advice which I at least consider to be good advice. A number of you young men are leaving this College to-day after an instructive, and I hope, an enjoyable period of two years. I want you to remember that your education is not finished ; it has really only just begun. Forestry is a science which is continually advancing, and new knowledge is continually being acquired. You should regard what you have learnt here chiefly as a foundation on which you can now proceed to build up, year by year, more and more knowledge on a very fascinating subject. Do not, therefore, forget what you have learnt, and think that no further study is required of you. These remarks apply with special force to Sylviculture. Many of you, before you came here, had never seen real forests and those who go back to districts where trees don't grow higher than 20 feet may imagine that the time spent here on Sylviculture is time wasted. But remember that you never know when you will be transferred to a district where you require everything you have ever learnt about Sylviculture. I do not know much about the conditions

outside this Presidency. But, as far as Madras is concerned, times are changing, and the centre of gravity of forest work is tending to move towards the districts where real timber forests are situated. The chances are, therefore, that in future, most, if not all the rangers of this Presidency will, at one time or another, require to possess a knowledge of Sylviculture, and I strongly advise all of you young men to keep yourselves up to date in this branch of your profession. I lay particular stress on Sylviculture, although for the moment one hears more about exploitation, because in well-ordered forestry, exploitation is impossible without Sylviculture. You cannot afford to cut down your forests unless you are prepared to raise a new crop, and know how to do it. You have all doubtless read the articles which have recently appeared in the *Madras mail* on Forest Exploitation, and have been told what immense possibilities of development exist in our large and valuable timber forests. Now the life of the Ranger in the Exploitation Branch is going to be a hard life, as hard a life as any in India. It is going to be much harder than that of a Ranger in Chingleput or Bellary. But it is a life which has its compensations, for, it offers ample opportunities to the good man to show what he is made of. We have no use however for the milksop, and the man who shows the white feather, and cannot put up with discomfort or with a little rough language from his superiors and asks—as I understand certain men have recently asked—to go back to the ordinary line, will go back with no credit to himself for he will be known as the man who did not make good.

It has been customary at these gatherings to allude to the rangers as the backbone of the Department. Now, don't you run away with the idea that this applies to you. You have first got to show that you have backbones of your own. Now, what I have been telling you may not be very palatable, but life in the Forest Department in future is not going to be a bed of roses. You will have to take a large amount of rough, with a very small proportion of smooth. Forestry in Madras, however, is in its infancy, and no man can tell to what the present-day developments may lead. To the man who will take his coat off, work hard, bear discomfort without complaint, and above all, keep straight, the Forest Department offers prospects as good as are to be found in any other service in the Presidency."

Sir Arthur Knapp then spoke at length, in the course of which he said that he felt it a great honour in having been asked to preside on the occasion. After referring briefly to his intimate relations with the Forest Department and his interests in the working of the College, he observed that the institution was well organised and equipped and that it had many pleasant surroundings in spite of the fact that it was in the midst of black cotton soil, where, he was informed, nothing would grow.

He then referred to the depressing description of the future forest Officer's life given by Mr. Tireman and thought that the students should look upon the profession they had chosen with great interest and that whatever the position and prospect of the officers in other departments

of the Government of this country might be, the position of forest officers was not more discouraging, and that the Forest Department, not only in Madras but all over the whole of India, had a future of continued and increasing success and usefulness. He was glad to see that the people had begun to realise that the department existed for their own benefit, and explained that wherever exploitation went on regenerative operations were also undertaken side by side.

Lastly, he said that the Madras Forest Department had made a very good show indeed at the British Empire Exhibition. The latest information available was that in the general timber export, Madras timber had been very prominent and very striking and so much so it might be confidently expected that the result of it would be large and valuable orders. This was due to the progress and development which the Forest Department was making.

Then appealing to the students, he said that what he expected of them was to render service of very great value in protecting and improving and developing one of the great valuable assets of India.

He concluded thanking Mr. Tireman for having invited him for the occasion.

With a vote of thanks to the chair, the gathering adjourned to the ground floor of the college, where the guests were entertained to tea by the Board of Visitors and the Staff.

“A fight between wild-dogs and a sounder of wild-pigs.”

This very interesting incident I am going to relate was witnessed by me nearly a year back in the Upper Godavari Division, while I was in charge of it. Though it is a long while ago, still the whole thing is as vivid to me as if it only occurred the other day, and I don't think I will forget the details of it in a hurry, either.

2. I had made an early start one morning to inspect one of the clear-felling coupes, and had gone about a mile from the Murmur Forest-bungalow, when in the hazy light I thought I saw some shadowy forms about one-hundred yards in the front of me. I got hold of my rifle—a 355 Mauser—from the forest Guard and did a quiet stalk and on getting fifty yards closer made out the shadowy forms to be seven wild dogs, which were having a very “barra” chota-hazari off a sambhur they had pulled down, probably less than an hour ago. I could not advance closer without being spotted, so drawing a fine bead on one of the wild-dogs, which I marked down as the largest, fired. The brute got it clean in the shoulder and went down as if struck by lightning. While the others were going like smoke I had another shot, but missed. There were also a couple of Koyas—one of the Jungle tribes of Upper Godavari—with me, and I told one of them to take the jungle-dog back to camp, and have it skinned. It was needless to tell the Koya to remove the remains of the Shambhur hind, for he saw to that part of the business before he carried in my wild-dog, as I afterwards learnt. The Koyas are

passionately fond of meat of any description from that of an old buffalo to that of a bear and eat carion, which even a hyena, I am sure, would hesitate to sample, and I consider this as one of the reasons why a large percentage of them—both adults and children—suffer from a kind of skin disease. At any rate, this avidity on their part for flesh of any kind is a curse to the sports-man, for it is almost next to impossible to get “khubber” of natural kills of tigers and panthers. However, I am digressing and must get on, for I have a good deal to say yet.

3. From the spot where I shot the wild-dog, the reserve line was about half-a-mile off, and as I was almost on it I heard some wild-dogs give tongue, about 200 yards in the front of me, in the reserve and soon afterwards a regular pandemonium arose—wild-dogs yaffing and pigs squealing. I never heard such awful blood-curdling noises before!

4. What happened was this:—the remaining six dogs after being disturbed by me ran into a large sounder of wild-pigs and according to their blood-thirsty and greedy nature forthwith tried to get one to have another feed. I did not lose much time, and snatching hold of my rifle dived into the jungle in the direction of the noise: it was difficult going, the jungle here being low scrub, with a lot of wait-a-bit and other thorn bushes. However, I managed to get within 50 yards, but could not see anything, while the noise was growing louder than ever and, at one time, I really thought a pack of wild-dogs

had attacked a couple of tigers, for the pigs in their fury were growling (I cannot find a more appropriate word) like a whole family of tigers! I must admit, I did feel rather creepy when this thought flashed across my mind, and looked about to see if there was a nice, tall tree close at hand to shin up in case things became unpleasant, and also, for the first time, turned round to see whether the forest-guard and the Koya had followed me—but, brave lads, they were calmly cooling their heels on the reserve line! However, one of the pigs gave a squeal—and quite a comforting squeal it was, too, to me—and I pushed on again towards where the battle royal was taking place. Well, eventually I managed to creep within thirty feet, and screened behind the trunk of a fairly thick tree, the sight that met my eyes was this :—

5. A sounder of pigs—twenty or more in number—the small ones all bunched up in the middle and the big ones forming a circle round the latter—with snouts pointing outwards, bristles stiff in the air, and their small tails switching viciously from side to side. Round the pigs again were six wild-dogs—two of them were only about half-grown, but, they, I remember quite well, were making the most noise and kept well out of the danger zone; so the pigs were nearly four times as many, or else they would not have got off so easily as they did.

6. The chief aim of the wild-dogs, no doubt, was to try and scatter the pigs and then pull down one of the smaller of them and

the tactics adopted by them to do so were numerous and exceedingly clever. For instance, once during the fight all the dogs pretended they had had enough and slinked off to some distance and lay perfectly still behind cover, but evidently the pigs knew their little dodge, and kept where they were with their eyes glued on them; and the wild-dogs seeing that their little manœuvre did not work returned to the fight with renewed vigour—snapping and leaping in the air round and round the pigs. It was at this stage that one of the dogs nearly did for itself by being too rash and bold. There was one huge boar, and this a wild-dog attacked by taking a flying leap at him, but Mr. "Bristles" was ready and caught him nicely with his snout in the ribs, and sent the dog flying for about four feet high into the air. However, the dog was lucky in not getting the tushes and landed on his feet seemingly none the worse for his aerial flight! This sort of thing went on for nearly fifteen minutes, and then the dogs showed distinct signs of tiring and took it in relays to attack their adversaries; while one batch attacked, the others lay down or sat on their haunches to look on and rest. One of the dogs was so tired that, though he came and squatted down so near to me that I could have poked him in the ribs with my rifle, was unaware of my presence.

7. I am positive that the fight lasted for over half-an-hour and the wild-dogs understanding that they were up against it this time and thinking, no doubt, that discretion was the better part of valour started to leave one by one. The pigs knowing this also broke up

and began to disappear and in a few seconds the spot which was the scene of a deadly jungle-fight was empty and supreme silence reigned once more. I am certain some of my readers will wonder why I did not shoot one of the pigs or wild-dogs! Yes, I often asked myself the same question, but, to tell you the truth, I was so interested that I absolutely forgot that I had a rifle! However, if I did think of it I would have certainly shot one of the wild-dogs and did look for them afterwards, but they had vanished and I never set eyes on them again; it is really marvelous how quickly and quietly they can move. They are pucca vermin and the amount of game—especially the young of Sambhur and deer—destroyed by the beasts is simply appalling, and I always make it a point to shoot them at sight, and during my stay of nearly three years in upper Godavari I bagged no less than a dozen of them.

8. After the fight had ended, I went over the ground where it took place and found specks of blood in many places. I am not quite certain whether the blood was that of a pig or a wild-dog, but I am inclined to think it must have been the blood from one of the pigs which was attacked and bitten by the wild-dogs at the very beginning of their sudden meeting.

9. It has always been a point of controversy whether wild-dogs hunt in silence or give tongue. In my opinion, which I give from experience, they hunt dumb till they spot their quarry and then they give tongue. Another point is, do wild-dogs eat carion? I don't

think so, as I will set out to prove by the following two instances in point. On a certain occasion a pack of nearly a dozen wild-dogs killed one of my buffaloes, which I had tied out for tiger, quite early in the morning, and my shikarie peon going round to see and report to me whether there were any kills, came across the pack busy feeding and doubled into camp and informed me. I went out and shot one dog and the place being quite close to the forest-bungalow I kept the peon on watch and so was able to bag two more dogs at intervals of about half-an-hour. After that the dogs did not turn up again and thinking that they would do so in the evening I went and sat up behind a thick bush from 4 p. m. However, no dogs turned up and as it was getting dark I returned to camp and left the carcass where it was. But the wild-dogs never returned in the night, and the Koyas and my Shikarie peon informed me that wild-dogs will never eat flesh which is even slightly tainted. The reason seemed quite plausible, but all the same I was rather sceptical about it, but shortly afterwards the following incident made me believe they were perfectly right. One morning while out inspecting I came across a Nilghai which had been pulled down, and partly eaten by wild-dogs, and as there was quite a lot of the flesh still remaining I decided to sit up in the evening and slay one of the beasts, if possible. I remember the Koyas telling me it was a waste of time my doing so, as wild-dogs never returned to a kill of theirs which was even a few hours old, and therefore begged of me to allow them to remove the 'carcass.

However, I did not believe them and my vigil was in vain, and I am now fairly well convinced that wild-dogs do not eat flesh even a few hours old, and therefore slightly tainted. It is a well known fact that wild dogs pull off and devour junks of flesh from the animal they are chasing while it is on the move and the poor beast eventually collapses from sheer exhaustion, through loss of blood, when the wretched creature is made a meal of while it is still half alive!

10. The manner in which wild-dogs feed is both peculiar and disgusting in the extreme. As soon as an animal is downed, the first thing one of the pack does is to go for the eyes—evidently a great delicacy—and makes regular wells into the sockets. The stomach is then ripped open and the entrails eaten and after that the ribs are set upon. The fleshy parts, like the thighs, in a big animal are as a rule not touched; unless, of course, the pack is a big one, when everything is finished off.

11. In conclusion, I hope some sporting-reader will let me know, through the College Magazine, his experiences of wild-dogs especially whether they eat carion or not: any enlightenment on this point will be exceedingly welcome.

ROLAND MITCHELL,
Instructor, M. F. C.

Forest village system on the Javadi Hills of the North Arcot District.

The duties pertaining to an officer of the Forest Department are peculiar. Unless he has the good will of the people who live in, or adjoining, the forest, the protection of his forests becomes difficult, and both his silvicultural and engineering works come to a stand still. In most cases he cannot import workmen, as the centres of work lie usually in unhealthy tracts remote from towns and villages. He has to manage only with the hill-tribes who have not learnt the rudiments of civilization, and if he does not show kindness and tact they become stumbling blocks in the progress of his works.

The Javadi hills of the North Arcot District are notoriously malarious, containing very valuable sandalwood forests and are inhabited by a hill-tribe called the *Malayalees*. Its protection offers great difficulties, for, not only was smuggling of sandal going on, but the people were also keeping a good number of goats. Moreover to bring the forests under some kind of systematic working much labour was necessary throughout the year. In order to provide an adequate and willing labour supply both for works, protective, etc., Mr. C. C. Wilson, I. R. S. suggested in his working plan for these forests that the Malayalees should be given certain concessions in grazing, etc., in return for their guaranteed labour and extermination of goats. M. R. Ry. Rao Sahib K. R. Venkatramana Iyer avl, when District Forest Officer of the South Vellore Division, took up the question and introduced "the Javadis Forest village system." Under this system the people enjoy free grazing

and free removal of building materials, such as bamboos, grass and small timber of unclassified species, in return for the proper protection of the forests and supply of labour for the various forest works.

Any village wishing to come under the forest village system puts in a petition to the District Forest Officer. A cattle census is then taken in that village by a forester and the villagers are asked to pay down a lump sum grazing fee, calculated at three annas per cow-unit. A block of forest called "Forest village" is allotted to them. Its limits are fixed by natural boundaries and generally adjoins the village. The villagers execute an agreement that they will, free of cost, protect the forest allotted to them from illicit fellings and fire, cut regularly creepers growing on all sandal trees growing on the area, and sow sandal seeds in blank areas in their blocks, that they will not keep any foreign cattle, that they will not keep any goats, that they will supply labour for the various forest works and transport all officer's samans when they camp on the hills, and that they will be fined for any delinquency noticed on their part. The village headman or 'Uran' as he is called is made their representative. The District Forest Officer in turn gives them an order stating the various concessions they are entitled to.

The villagers, when they go out for grazing their cattle, are allowed to carry bill-hooks and are expected to cut any creeper they find growing on sandal trees then and there, and free the crowns of any sandal seedlings or saplings that are suppressed by other trees. When any forest work has to be executed the forest subordinate informs the

Uran of the village about it, and the number of coolies he requires. The *Uran* communicates this to the villagers and each house furnishes one man for the work. The forest subordinate has, therefore, little or no trouble at all about labour, and has simply to supervise the work. The villagers are paid on contract for all the works they do, except general tending and creeper cutting, at rates sanctioned by the conservator. Each village is provided with a measurement book in which all works done by that villager, with payments made to it, are recorded. Whenever any village doubts an under payment it can show the measurement book to the District Forest Officer or the Range Officer and satisfy itself. They know that the subordinates cannot dupe them in the matter of payments.

Under the Forest village system, no particular individual can be charged, fined, or prosecuted for any offence, but the whole village, and not any single individual, is responsible for irregularities. It is their look-out to see that an offender is traced and punished suitably, which is done by a panchayat. What the subordinate does is this: When he finds any irregularity he calls on the man to explain, and submits his explanation to the District Forest Officer. The District Forest Officer passes orders warning or fining the villages and the fine, if any, is paid by the villagers.

All these blocks-i. e. "Forest villages" are inspected by the Forester, Ranger and the District Forest Officer as often as possible or at least once a quarter to see whether the villagers have really

carried out the terms of their agreement. At the end of the Forest year the work of the villages and their co-operation with the department is reviewed. If entirely satisfactory a refund of the grazing fee is sanctioned by the conservator in full. If only partially, then a certain portion of it is deducted as a fine and the rest is refunded. Once a year the District Forest Officer camps at convenient centres, assembles all the villagers and distributes the refunds of their grazing fees. He also collects the next year's grazing revenue as per cattle census, which is taken once in three years. He also distributes money rewards for successful fire protection.

The result of the introduction of the system is very well seen from the better protection of the Forests. Owing to the extermination of goats natural regeneration of sandal is very profuse. The various works prescribed in the working plan are carried out without arrears. It has led to a better understanding of the aims of the Forest Department by the villagers and they now approach Officers freely and express their grievances. They are now happy and contented, as they know fully well that their welfare is one of the aims of the Forest Department.

P. K. S. NARAYANAN,
Junior Dn. M. F. C.

"Six-aside foot-ball tournament."

The college had hardly reopened for a week when it was announced that we had entered for "The International Peace-week" six-aside foot-ball tournament, and a team had to be got together. There was no time to have a practice match in order to see what the Juniors, who had just arrived, were like, and so a scratch team, with no practice whatever, was selected and consisted of four seniors and two juniors. However, everything was against us—even the floods, which prevented certain senior students, who were foot-ball players, from joining college in time to play in the tournament.

In the first round the college met St. Michael's High School on the Y. M. C. A. grounds on the 5th of August 1924, and defeated them by one goal after quite an exciting match. The goal—the only one scored—was shot by R. Ramaswami, the Captain of our team.

On the 7th we met the Y. M. C. A. Night School in the semi-finals on the same ground, but were unfortunate in getting beaten by two corners; since no goals were scored by either side the match was decided in favour of the team which had the lesser number of corners against it.

It was bad luck, and if our team had a few practices and learnt to combine, I am sure, we would have not only put up a better show, but would have walked off with the tournament. However, better luck next time.

T. S. SANKARAN,
Secretary,
Athletic Club, M. F. C.

Balance Sheet of the Madras Forest College Magazine for the year 1923-24.

RECEIPTS.

Serial No.	Particulars.	Amount. Rs. A. P.	Serial No.	Particulars	Amount. Rs. A. P.
1	Entrance Fees : from (a) One Dy. conservator 10 0 0 (b) 28 officers of the Subordinate Forest service @ Rs. 2 each 56 0 0		1	Paper, printing & binding charges	597 5 0
2	Annual Subscription : from (a) 29 new members @ Rs. 2 each 58 0 0 (b) 241 old do. 482 0 0	66 0 0	2	Postal charges	108 2 3
3	V. P. P. Registration fee recoveries.		3	Stationery and sundries	19 13 0
4	Advertisements		4	Balance at Bank on 30-6-24	375 5 8
5	By sale of 26 copies of Mr Fischer's "key to the identification of trees etc." @ Rs. 1-2-0 each	26 10 0	5	Cash Balance with treasurer on 30-6-24	0 14 0
6	By sale of 3 copies of Magazine.	46 8 0			
7	Interest accrued on deposit in Bank.	29 4 0			
8	Balance at bank at beginning of the year	1 8 0			
9	Cash Balance with treasurer	19 14 4			
	TOTAL Rs.	365 5 4		Total	1101 7 11

G. VISWANATHAM,
Editor and Treasurer.

K. S. VENKATA RAO,
Accountant, M. F. C.

ROLAND MITCHELL,
Business Supt.

C. R. F. WILLIAMS,
President.

Grigg Sports, Coimbatore.

It has always been our good fortune to do well in the open events at the Grigg Sports, but this year the College was singularly fortunate. This year four open events were included in the programme, and a cup was awarded to the institution which secured the most points, first, second, and third places in each race carrying 9, 6, and 3 points respectively. Five institutions came forward: (1) Forest College (2) Agricultural College, (3) Medical School (4) Government College (5) Government arts, each entering two competitors for each race. The events were (1) 100 yards (2) 120 yards hurdles (3) half mile (4) mile.

No. (1) was easily won by Khan Mohammed in 11 seconds. No. (2) was a very close race between Ramasamy and Verghese, the former just getting to the tape first.

No. (3) Lagu won after a very good race all out from the starting point.

No. (4) Lagu again won with Phillips third.

The total number of points obtained by the College was:

4 firsts	...	36
1 second	...	6
1 third	...	3
		45

while the next best score was 15 followed by the sixes.

We congratulate the students who upheld the honour of the College so successfully, and are sorry that the cup was not available for presentation at the sports.

C. R. F. W.

The Madras Forest College Athletic Sports. 1924.

The athletic sports were held on September 6th, when, as usual, the staff and students were at home to some two to three hundred visitors.

A heavy shower at about 2 P. M. threatened to spoil the day, but the weather cleared, and despite the rather heavy ground at first, I think we may congratulate ourselves on a successful event.

This year entries were most satisfactory except in the long races, mile and half-mile. But why this dearth of long distance runners? Presumably, students are reserving themselves for the Marathon. In any case I should personally very much like to see a greater display of keenness for long distance work than has been shown this year.

Preliminary heats were run off on Monday and Tuesday, so that on sports day itself finals only were run. This year we included throwing the Cricket ball in our programme.

A most promising start was made in the 100 yards, when Khan Mahommed broke the record and brought it down, by 1/5 second, to 11 seconds.

Throughout, the flat races proved very interesting indeed, and contrary to the usual, the finish of the mile and half-mile were decidedly exciting, the struggles between Lagu and Phillips being well worth watching.

As a change from flat races, however, we turn to the jumps where a very different story has to be told. 16 ft. 6 in. in the long jump and 4 ft. 8 in. for the high jump are performances one expects from school boys, and cannot be considered good where athletes of the type we possess in the College are concerned. More galling still is the knowledge that even a little training would have resulted in much better results.

In the obstacle race, we congratulate not only those who gained prizes, but also every one who finished the course, which in my opinion is more exacting than that of any other race.

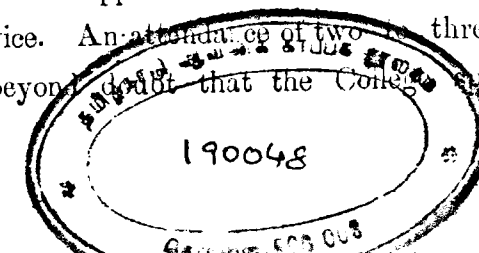
The day closed with the distribution of prizes by Mrs. Vernon, whom we all thank for her kindness in consenting to perform this duty.

The Richmond Cup was won by Lagu with 18½ points, Khan Mohammed being second with 16 points, and we congratulate them both on their fine performances.

A very successful day was marred only by one thing which cannot escape mention, since it was noticed and remarked on by several of the visitors. This is the apparent lack of interest displayed by members of our own service. An attendance of two or three hundred private visitors shows beyond doubt that the College sports day is

55, 21/11/16

N 24



accepted as a red letter day in Coimbatore, yet only two forest officers thought it worthy of their attention.

J. A. W.

Extracts.

I. A Tree Planting-Machine.

Attention is drawn in the February (1924) Number of "South African Journal of Industries" to a recent invention designed to facilitate the planting of trees. It is known as the Duivel Tree-Planter, and the principle on which it works is that of taking up the rich nursery soil around the young tree, with the tree in the centre, and planting the whole in the position which the tree is to occupy permanently. The roots are thus left undisturbed, and the tree suffers nothing from its change of position. The removal is accomplished by means of a cylinder which is placed around the tree and pushed down into the soil. By this means a young tree can be removed with a block of soil round its roots nine inches deep and nine inches in diameter. The cylinder is then planted in the designed spot and withdrawn. It is claimed that a young tree can be planted out with the Duivel machine in the hottest sun at any season of the year without suffering any serious set back. [Jour. Royal Soc. Arts, No. 3729].

Extract from "The Agricultural Journal of India Vol. XIX, Part IV

II. Value of Honey-food and Medicine.

(By Dr. P. D. Raju M. D.)

Few people do really know or believe the fact that honey as an article of food is very valuable and nutritive, and can be taken in different forms and ways. In England, America, France and Germany this sweet substance is getting more and more popular in the daily use as a nourishing article of food with the people. The ancients in India knew its values, advocated and used it both as food and medicine more freely than the present generations. It is a fact to be remembered that before the introduction of sugar, honey was wholly used in the place of sugar for all purposes—domestic, culinary and commercial—as a sweetening agent. But sugar does not possess such valuable properties as honey as an article of food. It should be noted that when honey is consumed the whole of it is usually assimilated by the human system as hardly any digestion is needed, there being little or no residue in it. And it is a fact that the ordinary sugar requires what is called "inverting" before it can be absorbed into the system; but honey calls for no tax or labour on the digestive organs, it being partly digested already by the bees themselves.

Honey is therefore really valuable not only for children, but also for adults who are, for certain individual or constitutional reasons, unable to take ordinary sugar. It will be thus seen that the natural honey in its pure state is a very useful factor for domestic

use and in the kitchen in daily use as a wholesome food where it can very well take the place of artificial sugar in the making of many dishes, and for the preservations of fruits, honey is particularly serviceable, it being superior to sugar or syrup.

Also the Date is another nutritious article of food. Honey and Dates make a very delicious diet and are eaten as a chief staple food of high nutritive value by the people of Arabia, Egypt, Persia and Mesopotamia etc. The Dates contain 58 per cent of sugar, together with some 'pectine', 'gum' 'proteids'; possessing such high nutritive value it can be used with benefit more extensively by the people of this country.

It may be carefully noted here as a precautionary method that honey should never be left exposed to light and air as it is hygroscopic in nature and readily absorbs moisture from the air and thus ferments and becomes sour later on, even if it is covered afterwards. So honey must be kept in glass bottles or jars to keep well for a long time; and it is best kept in a dry, cool dark room. Pure honey placed in a clean fruit jar and gradually heated to a temperature of 160 degrees and sealed up will remain in liquid form.

Honey is Medicine.

As a medicine honey is in all ages and countries highly recommended and employed in manifold ways both by Oriental and Occidental physicians in various complaints such as Coughs, Colds,

Asthma and throat and chest affections and also for constipation and allied stomach troubles and disorders. Honey, it is unique, at once loosens, purges and strengthens the system.

In Bronchitis, honey, simple and pure, gives more relief by frequently tasting or sipping it than is obtained from anything else. Honey is a good mild natural laxative and demulcent. Honey mixed with borax is an old serviceable household remedy for children in cases of Thrush or ulceration in the mouth or in fauces and in many little complaints and stomach disturbances and indigestion. Honey ointment is more efficacious, speedy and simple in treating boils than any other ointment. An ointment called 'Ceromel' is prepared by melting together an ounce of yellow wax and 4 ounces of clarified honey on a gentle heat or fire.

The use and position of honey in the British Pharmacopia is unfortunately a very modest one, and its use being chiefly recognised as that of a vehicle, as is done in the Ayurvedic, Unani and other Indian systems, for other medicines and as an adjunct to gargles.

The ancient Gauls or Germans, besides several other sweets, have been manufacturing certain kinds of Ale, chief of which is known as 'Mead' and they largely used this honey-wine for purifying, nourishing and strengthening their system in the olden times; and the Gauls were also making and using a delicious beverage called 'Hydromul' which was a sacred drink of the Gods. Tacitus, tells us

that the old Germans ascribe their strength and long life to this remarkable natural beverage.

Internally it is a beneficial habit every morning, to take pure honey mixed with pure water in the proportion of 1 to 4 parts of the first to that of the latter. For Dyspeptics too, honey has been found of much service or benefit. It is also used as a good remedy for sleeplessness i. e., two teaspoonfuls of pure honey mixed in a glass of cool water and drunk. Even small tumours in the stomach are speedily healed by its use.

A distinguished modern authority Dr. Taylor in the British Medical Journal, says recently that remarkable results have been obtained in Influenza cases by the use of Honey mixed with equal part of Tincture of Iodine; i. e., two or three drops of the honey-Iodine mixture placed on the tongue every 2 or 3 hours or even more frequently. Honey simple and pure, at the present day is also often used by the Western educated medical men as a cure for Scorpion and other poisonous insect stings with good success or result.

I may quote from certain other medical Journals for the information and use of the public who are interested, a few cases of cures which are almost incredulously efficacious as stated by some authors or writers. It is asserted that inflammation and congestion of the lungs followed by unconsciousness were cured by eating honey at all times or the whole day and night until 10 lbs. were consumed. A German by name Her Carl Gaiter was at the verge of grave, nad

was restored to life and perfect health by the entire use of honey. Even consumption, strange enough to know, is asserted to have been cured by honey treatment. In olden days it was used as a means to prolong life; and it is said to be an excellent remedy in diseases of the Bladder and Kidneys.

There are some good old recipes such as honey cough syrups; honey salves and balsam of honey for Asthma, croups and Bronchitis; honey wash for the sore-eyes; honey gargle for sore-throat etc. The honey lotion is a splendid and safe gargle for public speakers to clear their voice.

Now granting all these prescriptions are good and effective it may naturally be questioned what is there so much about honey that is absent in sugar which brings about such apparently remarkable results? There is no doubt that Formic acid secreted by the discriminative Bee and contained in the honey for its preservation, is beneficial both to the stomach and liver.

Besides the Formic acid, wild honey usually contains small or infinitesimal quantity of Citric Acid, Tartaric, Malic, Galic, Tannic, Hydrochloric, (prussic) Oxalic and Myronic acid. Also Quinine, Morphine, Strychnine, Atrophine, Veratrine, Piperine and Thein and Caffeine etc., being collected by the wise Bee from the numerous and various kinds of blossoms and flowers. Honey furthermore

consists also of gunny, waxy, colouring and essential odorous oils with a small quantity of mineral matter.

Herein is a beautiful provision of Nature or All-wise Creator exemplified in the minute quantities of antidotal mixing of medicinal properties and juices gathered by the intelligent bee, and so mixed in its tiny store-house, that even strong doses are rendered innocuous and harmless quite unlike our artificial mixtures and draughts prepared by chemists and druggists which are often injurious and risky if not dangerous.

Hence it will be seen that Honey with its numerous and varied powerful medicinal agents has the remedial virtue of restoring to normal health disordered and diseased vital functions of the body.

—Extract from "The Hindu" dated 26th May 1923.

III. To ascertain the contents of Timber. There are five systems of measurement, known as,

1. *The die square*, which represents the cubic contents obtained by multiplying the length by the area of the inscribed square at the centre of the butt.

2. *Calliper Measure*, in which the area of the *circumscribed* square (at the centre of the butt) is the basis of calculation

3. *True contents*, for which the sectional area at the centre, and the length are the factors.

4. *Board Measure*, by which the contents are reckoned according to the number of superficial feet of one inch boards which can be cut out a log allowance for bark etc., being made.

5. *Quarter girth*, in which the contents are taken as the product of the length and the square of one quarter of the circumference at the centre.

The cubic contents according to (1) (2) (3) (4) (5) respectively, can be ascertained by the following formulæ:—

$$\text{For (1)} \quad \frac{(\frac{1}{4} \text{ girth in inches})^2 \times \text{length in feet.}}{181}$$

$$\text{,, (2).} \quad \frac{(\text{mean diameter in inches})^2 \times \text{length in feet.}}{144}$$

$$\text{,, (3).} \quad \frac{(\frac{1}{4} \text{ girth in inches})^2 \times \text{length in feet.}}{113}$$

,, (4). When a log does not exceed 10 feet in length the following rule may be applied:— Take the mean diameter in inches at the small end of the log and deduct $1\frac{1}{2}$ " from it. The result squared x 0.785 gives the sectional area at the small end.

Then;—

$$(\text{sectional area} - \frac{1}{11} \text{ sectional area}) \times \text{length in feet.}$$

= the number of feet super, board measure.

$$\text{For (5).} \quad \frac{(\frac{1}{4} \text{ girth in inches})^2 \times \text{length of log in feet.}}{144}$$

K. PUSPA RAJALINGAM.

—Extract from "Surveying and Building Construction" by
Haines and Hood Daniel.

*IV. Old-Age Pise Construction as an Answer to the Houses of Mud
—Building Materials and Labor.*

By Juanita W. Porter.

Since Kansas City is to have the first house in America to be built of a material used in Europe for ages—pise—the public is anxious to know something about this substance. Pise: what is it? What is its origin, its appearance, its advantages as a building material—if it has any?

The structure to be made of the pise is an English residence. A model farm may follow this experiment provided it comes up to the expectations of the builders. The house just being erected is one which promises much: it is old English in type, is made of the pise or rammed earth with a stone foundation upon which are laid split railroad ties. Shingles of asphalt are to be used for roofing. A dividing wall in the grounds will be made of the same pise material, coped with tiles.

Just what is pise? It is merely the French for rammed earth, and rammed earth is an exceedingly good material for building walls, walls for buildings as well as walls for defense. The odd thing is that its very obvious merits should so far have received such small attention. The construction of buildings by this method is exceedingly simple, the earth being converted into walls by means of molds made of shuttering, into which the earth is rammed by a means of a piseoir or rammer. The rammer is of the greatest consequence, as it is on the skilful handling of this tool that the firmness and durability and, in short, the perfection

of the work, depends. Although it may appear very easy to make—and an amateur *may* make it if he follows directions carefully—more difficulty will be found in the execution than at first seems possible.

A frame to hold the earth is made of shuttering. The planks are light wood one-inch thick, each ten feet long and fastened together with four strong ledges on each side made two feet nine inches in height. This mold is divided into three divisions, each of which requires one workman. Of these three, however only one needs to be a skilled workman, thus eliminating much expense. Into this mold, earth is poured to the depth of three or four inches. It is rammed or beaten with the rammer until it is firm and hard and the rammer does not leave a print. All water must be pressed out of the soil. This process is repeated until the mold is filled; then the boards are removed and another tier is made on top of the wall just completed. A nine-foot wall can be made in a day. In fact, the building may be accomplished much more rapidly than by any other building process known, so it is claimed by the pise proponents.

As regards the kinds of soil suitable for pise building, all earths in general are fit for the use when they have not the lightness of poor lands nor the stiffness of clay. All earths fit for vegetation are suitable, as well as brick earths. Strong earths, with a mixture of gravel, which for that reason cannot serve for making either bricks, tile or pottery, are also suitable. These gravelly earths are very useful and the best pise is made from them.

It is obvious that a person experienced in handling pise must superintend, at least in part, buildings made of this material. So fast is this method gaining ground in Great Britain that improved machinery is being introduced to do the ramming of the walls and this will expedite the work. Meanwhile, the actual erection of pise buildings presents so little difficulty that it can be done by anyone who has the strength to shovel earth and wield a rammer, provided he will exercise the care to see that the molds or boxes into which the soil is shovelled, are kept plumb and in straight lines. The pioneer settler, even with no previous knowledge of pise, may work on his building if he has a well-thought-out plan.

One difficulty in the use of pise seemingly has been removed namely, the long-supposed belief that the work could be done only in the warm season. In Canada, where the climate is rigorous more than half the year, structures erected in cold weather have been as free from cracks and as solid as those made in warm seasons. The consensus of opinion, however, is that it is better to build pise houses when the weather is not too cold, thus eliminating an element of chance.

In order that a test might be made by modern builders of this old art, a demonstration house consisting of six rooms and a barn attached, was erected at Guildford, England, several years ago. The walls, though 18 inches thick, cost less than \$100 for the entire building, as against the cost of brick walls which would be \$1000. A house of

this size can be built in a fortnight, and it will last for generations. The test was so satisfactory that leading English architects have taken up the work of building pise houses as one outlet, and a very important one, through the almost black wall of building pessimism existing in England today. Indeed, it is largely through building with pise that there seems any possibility of relieving the housing situation in those countries, where the shortage in lumber, brick, cement and almost every material needed in a house, with the added difficulty of the extortionate freight rates when those materials may by secure, drove builders to seek some substitute. It seems highly probable that pise offers the much-sought way out of the dilemma.

Official Government reports show that in Britain "raw timber is hardly obtainable and seasoned timber does not exist. The same is true of tiles, slates, corrugated iron and every other form of legitimate roofing substance. And if these products can be found in the raw, all the brick-yards in great Britain cannot half way supply the demand, since it will be five years before the output can equal what is needed now if those materials alone have to be depended upon."

Among the manifest advantages of pise as a building material are: Its extreme cheapness. Untrained labour mostly can be employed. Besides this economic advantage, there is the saving of transportation charges, now such a bugbear to builders, since soil always is near at hand.

Comfort of pise houses: Many degrees cooler in summer than even houses of brick; and warmer and easier to heat in winter than any other.

Practically indestructible: Records exist of houses built nineteen centuries ago and still in perfect preservation.

Small expense of upkeep: The doors and windows are the only parts requiring paint or replacement.

Practically fireproof: Since only the floors, windows and door casings are of lumber, and often even the floors are concrete, there is little to burn.

Another way in which pise makes an appeal is its adaptability to many finishes. With either stucco or fresco—the latter a very inexpensive yet beautiful finish employed in France—a most beautiful exterior can be obtained. Such houses appear like far more costly residences. If a perfectly unadorned building is needed—such as barn in a country place or houses to hold war supplies, pise with no finish answers all needs of service and durability. The same building, with a coat of rough gravel, makes a more sightly building at a very little added cost.

—Extract from 'Scientific American' April 1924.

Contributions to the Gass Forest Museum.

Serial No.	Contribution.	Contributor.
1.	An abnormal specimen of a fully developed chicken with two distinct heads, one body, and two legs.	W. C. Hart Esq., E. A. C.
2.	Forty eight butterflies	
3.	Seedling of <i>Pterospermum rubiginosum</i> .	The District Forest officer, Palghat.
4.	A climber (<i>Hippoeratea indica</i>) on two different supports showing two different modes of embrace.	
		H. A. Latham Esq., I.F.S.

Additions to the Library.

1. Memoirs of the Indian Museum Vol. VIII No. 1.
2. Census of India 1921. Vol. XI—C P. & Berar.
3. Report of the Council & auditors of the Zoological society of London for the year 1923.
4. Report of the Department of Industries, Madras, for the year ending 31st March 1923.
5. The Role of Yale in Forestry. New Haven. 1924.
6. Forest working plan, Gali Forests, Hazara, N. W. Frontier Province.—By, E. A. Greswell. 1923-24 to 1942-43.
7. Botanical Notes, Kimberley Division of Western Australia —By, C. A. Gardner.
8. The Madras Year Book. 1923 & 1924.
9. Working Plan for the North Kheri Forest Division. U. P. 1923-24 to 1932-33.

10. *Presented by C. R. F. Williams Esq:—*
 (a) The Forester—A practical treatise on British Forestry and Arboriculture for land owners etc —By, John Nisbet. Volumes I & II
 (b) The Forest Trees of Mysore & Coorg.
11. *Presented by H. A. Latham Esq:*
 The Fauna of British India.
12. Indian Forest Records. Vol. IX. Part I.
13. Yale University School of Forestry, Bulletin No 10
 "Nursery investigations with special reference to damping off
 —By, J. W. Toumey. 1924
14. The Indian Forest Records: Vol. 10 Part IX.
 Tannin Investigation—By, J. A. Pilgrim.
15. Forest Bulletin No. 56. 1923. A report on the tan values of Indian myrobolams, and Burma *Terminalias*.—By J. A. Pilgrim.
16. Impressions of the Imperial Education Conference 1923—By, F. R. Tomlinson M. A.
17. Madras Forest Bulletin No. 5. Note on the Sriharikota Island, Nellore District. 1923-24—By, M. R. Ry. V. V. Seshagiri Rao Ayl,
18. Logging and Lumbering—or, Forest Utilization.—By C. A. Schewk
19. The Journal of the Indian Botanical Society Vol. III May 1922 to September 1923.
20. Review of Applied Entomology, Series A & B Volume X.
21. Journal of the Bombay Natural History Society Vol XXVIII Parts 1 to 4.
22. Agricultural Journal of India. Vol. XVIII 1923.
23. 'Nature' Vol. CXI Jan. to Dec. 1923.
24. American Forestry Vol, 29. Jan to Dec 1923
25. Scientific American Monthly journal Jan. to Dec 1923.
26. Botany of Behar and Orissa—By H. H. Haines Esq.,

Gazette Notifications.

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3—6—1924.

Mr. F. D. Ardagh, Dy. Conservator of Forests, an extension of leave^e on average pay for three days in continuation of the leave for one month already granted to him.

Captain H. A. Irwin, M. C. Forest Exploitation officer, to hold full charge of the duties of the Forest Engineer in addition to his own from the afternoon of 1st April 1924 until the date of Major Chipp's assumption of charge as Forest Engineer.

Mr. D. Mc. D. Currie, on special duty, to act as D. F. O. the Nilgiris *vice* Mr. F. D. Ardagh granted leave, or until further orders. (To take effect from the date of joining.)

Mr. W. G. Dyson, M. C., Principal, Madras Forest College, to be District Forest officer, the Nilgiris, from or after, 20th July 1924 in relief of Mr. Currie.

Mr. C. R. F. Williams, Senior Instructor, Madras Forest College, to be Principal of that College, *vice* Mr. W. G. Dyson.

Mr. T. A. Whitehead, Acting Conservator of Forests, Third Circle, to undertake the re-classification of the reserved forests in the Presidency in addition to his own duties.

M. R. Ry. B. S. Kesava Vittal, E. A. C. of Forests, is on the expiry of his leave, posted to the Wynad Divisions, to work under the District Forest officer.

10—6—1924.

Mr. O. H. C. Shelswell, Dy. Conservator of Forests, special disability leave for twelve months with effect from the date of relief.

Mr. T. Clear, Acting Conservator of Forests, II Circle, leave on average pay for fifteen days with effect from the 9th June 1924.

Mr. F. D. Ardagh, Dy. Conservator of Forests, leave on average pay for eight months with effect from the date of relief.

ii.

Mr. T. A. Whitehead, Ag. Conservator of Forests, Third Circle, to be in full additional charge of the Second Circle during Mr. Clear's absence on leave or until further orders.

M. R. Ry. E. K. Krishnan Avergal, E. A. C. of Forests, to be D.F.O North Vellore, on return from leave.

Muhammad Abdul Hafiz Sahib Bahadur, E. A. C. of Forests, to be District Forest Officer, East Kurnool, on return from leave.

1—7—1924.

1. Mr. M. F. Bridge, District Forest officer, South Coimbatore to be on special duty under the Forest Utilization officer, Madras, until further orders.

2. Mr. J. S. D. Conolly, District Forest officer, Palghat, to be District Forest officer, South Coimbatore, *vice* No. (1) above.

3. Mr. J. M. Sweet, Forest Research officer, to hold full additional charge of the Palghat Division, until further orders.

M. R. Ry. E. B. Ramachandra Rao Avergal, E. A. C. of Forests, on return from leave, to be District Forest officer, North Cuddapah Division.

Mr. D. A. Stracey, E. A. C. of Forests, on return from leave, to be District Forest officer, Bellary.

1. Captain H. A. Irwin, M. C. Forest Exploitation officer to do duty as Forest Engineer, until further orders.

2. Major Chipp, Temporary Forest Engineer, to do duty as Forest Exploitation officer, Chenat Nair, under further orders on relief by No. (1)

M. R. Ry. P. Govinda Menon, Extra Assistant Conservator of Forests, Nilambur, granted privilege leave for one month with effect from 29th May 1924 or date of relief.

iii.

8—7—1924.

Mr. P. W. Davis, and Mr. H. A. H. G. Hicks, Assistant Conservators of Forests on special duty in connection with the agency operations, are granted leave on average pay for one month from date of relief in the Agency.

Mr. A. M. C. Littlewood, Deputy Conservator of Forests, is granted extension of leave on average pay till the 15th July 1924 in continuation of the leave already granted to him.

15—7—1924.

Mr. H. F. A. Wood, Conservator of Forests, Fifth Circle, leave on average pay for eight months with effect from 12th October 1924.

22—7—1924.

Mr. H. E. Brown, Probationary Extra Assistant Conservator of Forests, is confirmed with effect from 30th March 1924.

Messrs. P. W. Davis, and H. A. H. C. Hicks, Assistant Conservators of Forests will be attached to the Nilambur Division on the expiry of their leave.

Saiyid Riazuddin Sahib Bahadur, E. A. C., Kistna, is attached to the South Cuddapah Division.

22—7—1924.

Mr. D. F. Stileman, Deputy Conservator of Forests, has been granted by the High Commissioner for India, an extension of leave for five days.

5—8—1924.

Mr. A. M. C. Littlewood, Deputy Conservator of Forests, an extension of leave up to 15th August 1924 in continuation of the leave already granted to him.

Mr. S. K. Basu, Assistant Conservator of Forests, South Mangalore, granted leave on average pay for one month with effect from 26th July 1924.

iv.

M. R. Ry., P. Govinda Menon, E. A. C. of Forests, Nilambur, is granted, in continuation of the one month's privilege leave already granted to him, an extension of leave for seven days.

M. R. Ry. K. G. Belliappa, E. A. C. of Forests, is granted, in continuation of the leave on average pay for four months and three days already granted to him, an extension of leave on Medical Certificate for six months. M. R. Ry. K. G. Belliappa's leave salary will be debited to Coorg, during the period of the extension of leave now sanctioned.

M. Amir Padsha Sahib Bahadur, E. A. C. of Forests, will, on the expiry of his leave, be attached to the South Cuddapah division.

M. R. Ry. A. V. Sundaram, E. A. C. of Forests, transferred from the South Vellore Division to the South Kurnool division.

Mr. S. R. Rao, Assistant Conservator of Forests, Guntur, granted leave on average pay for twelve days from or after 25th July 1924.

12—8—1924.

M. R. Ry. A. Raju Nayakkar Avl., District Forest officer, Central Salem, leave on average pay for one month and a half with effect from the date of relief.

Mr. G. C. Robinson, District Forest Officer, Nilambur, leave on average pay for eight months, and in continuation thereof leave on half average pay for four months with effect from or after 15th August 1924.

Saiyid-uddin Ahmad Sahib Bahadur, E. A. C. of Forests, on return from leave, to be D. F. O. Palghat.

Mr. Roland Henry Mitchell, D. F. O. Bellary, to be senior Instructor Madras Forest College, *vice* Mr. J. E. Mitchell.

M. R. Ry. V. Narayana Ayyar Avl., D. F. O. North Cuddapah, to be D. F. O. Guntur *vice* Mr. C. J. Van Haeften.

v.

M. R. Ry., E. V. Padmanabha Pillai Avl., D. F. O. South Kurnool, to be D. F. O. Central Salem, *vice* M. R. Ry., A. Raju Nayakkar Avl., granted leave.

M. R. Ry., S. Ramasami Ayyar Avl., E. A. C. of Forests to be D. F. O. South Kurnool, *vice* M. R. Ry. E. P. Padmanaba Pillai Avl.

Mr. H. P. Ward Assistant Conservator of Forests doing duty under the Forest Utilisation Officer, to be Forest Utilisation Officer *vice* Mr. J. W. K. Wernham on deputation.

Mr. M. F. Bridge, Deputy Conservator of Forests, doing duty under the Forest Utilization Officer, to be on special duty under the Chief Forest Engineer.

19—8—1924.

Mr. A. Wimbush, Dy. Conservator of Forests has been granted an extension of leave for fourteen days.

Mr. A. Wimbush, Dy. Conservator of Forests, on return from leave, to act as conservator of Forests, V Circle, *vice* Mr. H. F. A. Wood granted leave.

Mr. C. C. Wilson, Dy. Conservator of Forests, on return from leave, to act as Conservator of Forests, II. Circle, *vice* Mr. T. Clear.

Mr. T. Clear, Acting Conservator of Forests, II Circle, on relief by Mr. C. C. Wilson, to be District Forest Officer, East Salem.

Mr. D. M. Currie D. F. O. Nilgiris, to special duty under the Conservator of Forests, VI Circle, with effect from or after 21st July 1924.

Mr. P. W. Davis, Assistant Conservator of Forests, to be D. F. O. Nilambur, *vice* Mr. G. C. Robinson granted leave.

Mr. D. F. Stileman, Dy. Conservator of Forests on return from leave, to be D. F. O., Nilambur, *vice* Mr P. W. Davis.

Muhammad Abdul Hafiz Sahib Bahadur, D.F.O. East Karnool, granted leave on average pay for one month with effect from 15th August 1924.

M. R. Ry. M. Srinivasaraghava Acharya, E. A. C. of Forests, West Karnool division, to be in charge of the East Karnool division, during the absence of Muhammad Abdul Hafiz Sahib Bahadur on leave or until further orders.

26—3—1924.

Mr. D. M. Currie, Deputy Conservator of Forests working under the Conservator of Forests, VI Circle, to be Working Plan Officer, Manantoddy, with effect from or after 11th August 1924.

Notification relating Rangers.

Promotions of Rangers.

The following promotions in the Ranger class are ordered with effect from 1—3—1924 owing to the retirement of M. R. Ry. P. V. Subbaramayya, Ranger IV grade, I Circle and M. R. Ry. C. Ballayya Naidu, Ranger, IV grade, III circle.

I. To IV Grade Permanent.

- (1) M. R. Ry. B. S. Ramaswami Ayyar, Ranger V Grade permanent and IV Grade S. P. T.
- (2) M. R. Ry. P. Sambamurthi Ayyar, Ranger V Grade permanent and IV Grade S. P. T.

II. To IV Grade S. P. T. vice Nos. (1) and (2).

- (3) M. R. Ry. P. S. Varadakrishnamacharya, Ranger V Grade permanent.

- (4) M. R. Ry. A. Manikha Mutaliar, Ranger V Grade permanent.

III To V Grade Permanent vice Nos. (1) and (2).

- (5) M. R. Ry. I. Z. Robert Paul M. R. with Honours 1923, Supernumerary Ranger.
- (6) M. R. Ry. A. Surya Rao Naidu, M. R. with Honours 1923 Supernumerary Ranger.

2. The following promotions are also ordered in order to fill up the two additional posts in the VI Grade sanctioned for Wynaad and South Mangalore Divisions in G. O. No. 522 dated 25-3-24. These promotions will take effect from the date of formation of the new ranges which the Conservator, VI Circle will report.

To VI Grade Permanent.

- (1) M. R. Ry. Raghuraman, Supernumerary Ranger and Ranger VI Grade S. P. T.
- (2) M. R. Ry. D. Krishnaswami Ayyar, Supernumerary Ranger and Ranger VI Grade S. P. T.

To VI Grade S. P. T. vice Nos. (1) and (2).

- (3) M. R. Ry. V. N. Subrahmania Ayyar, M. R. H. 1921. Supernumerary Ranger.
- (4) M. R. Ry. A. Sitaramayya M. R. H. 1921 Supernumerary Ranger
3. In the vacancy caused by the reduction of M. Gulab Singh, Ranger VI Grade to the bottom of VII Grade for a period of 6 months from 18-2-24. M. R. Ry. G. V. Subba Rao, Ranger VII Grade is promoted to act in the VI Grade during the period.

First Circle.

7—7—1924.

1. Under Rule 81 of the Fundamental Rules the leave on average salary for two months granted to Mr. W. S. Fernandez Ranger IV grade in this office S. O. No. 25 of 1924 dated 8—5—24 is extended by two months.

21—7—1924.

2. 1. M. R. Ry. K. Raghava Rao, Range Officer, Sarvasidhi, is granted leave on full average salary for 3 months from date of relief.
2. M. R. Ry. A. Tirupatirayudu, Supernumerary Ranger, Lower Godavari, is posted to charge, of to relieve No. 1.

30—8—1924.

3. Under Rule 81 of the Fundamental Rules M. R. Ry. K. Venkatesam, Supernumerary Ranger, Godavari Upper, is granted leave on average pay for 2 months and 10 days i. e. from 17-7-1924 to 25-9-1924 both days inclusive.

Second Circle.

5—6—1924.

4. M. R. Ry. G. N. Subba Rao, Ranger VI Grade on special duty in charge of building work at Rudracode is granted leave, on Medical Certificate (25 day's privilege leave from 26-4-24 and furlough on half average pay for 11 days from 21-5-24) under the old leave Rules.

14—6—1924.

5. M. R. Ry. D. N. Subramania Iyer Ranger VI Grade Nandyal Range is granted leave on medical certificate for two months from date of relief by No. 2.

2. M. R. Ry. V. N. Subramania Iyer, Supernumerary Ranger on special duty Kurnool West Division is posted to be in charge of Nandyal Range: To join expeditiously.

21—6—24.

6. M. R. Ry. C. Ramasawami Naidu Ranger I Grade Sirvel Range, Kurnool South Division is granted extension of leave on average pay on Medical Certificate for 3 months (three months) in continuation of one month's leave already granted to him by the District Forest Officer in his S. O. No. 102/24 dated 1-5-24.
2. The existing arrangements will continue.

5—7—1924.

7. M. R. Ry. O. Venkataramana Aiyer, Ranger I Grade, Gundlabrahmeswaram Range, Kurnool West Division, is granted leave on average pay on Medical Certificate for three months from date of relief.
2. M. R. Ry. T. K. Ramaswami Iyer Ranger II Grade, on return from leave, is posted to Gundlabrahmeswaram Range; to relieve No. (1) forthwith.

11—7—24.

8. M. R. Ry. S. Chinnadurai Pillai Ranger II Grade is granted an extension of leave on half average pay on Medical Certificate for six weeks in continuation of the leave granted to him in this office S. O. No. 32/24 dated 27—5—24.

23—7—24.

9. M. R. Ry. Sundaresa Iyer Ranger III Grade on return from leave is posted to Nandyal Range to relieve No. (2).
- (2) M. R. Ry. V. N. Subramania Iyer Supernumerary Ranger in charge of Nandyal Range on relief by No. (1) is posted to Bairlutty Range. To relieve G. N. Subba Rao, reported sick.

x.

(3) M. R. Ry. C. G. Ganapathi Ranger III Grade on return from leave is posted to Sirvel Range, Kurnool South Division, To relieve No. (4).

(4) M. R. Ry. P. Gopalan Supernumerary Ranger, on relief by No. (3) is posted to assist the (Extra Assistant Conservator) Working Plan Officer in Kurnool South Division.

28—7—1924.

10. 1. In modification of this office S. O. No. 43/1924 dated 25-7-24 M. R. Ry. N. Sundaresa Iyer Ranger III Grade on return from leave is posted to Bellary Range. To relieve No. (2).

2. M. R. Ry. B. Kistna Rao, Supernumerary Ranger, Bellary on relief by No. (1) will revert to Special duty in Bellary District.

(3) M. R. Ry. V. N. Subbramania Ayyar Supernumerary Ranger Nandyal will continue as Assistant to Mr. M. K. Nayar, Assistant Conservator of Forests, in charge of Nandyal Range.

28—7—1924.

11. M. R. Ry. G. N. Subba Rao Ranger VI Grade on special duty in Kurnool West Division is granted furlough on half pay under the old leave rules on Medical Certificate from 14—7—1924

2. M. R. Ry. P. Gopalan, Supernumerary Ranger, Sirvel Range on relief by Ranger C. G. Ganapathy is posted to special duty in Bairluty Range, Kurnool west Division vice Ranger G. N. Subba Rao granted leave

28—7—1924.

12. M. R. Ry. G. N. Subba Rao Ranger VI Grade on Special duty in Kurnool West Division is granted furlough on half pay under the old leave rules on Medical Certificate for four months from 14-7-24 afternoon.

xi.

2. M. R. Ry. P. Gopalan, Supernumerary Ranger, Sirvel Range on relief by Ranger C. G. Ganapathy is posted to special duty in Bairluty Range, Kurnool West Division vice Ranger G. N. Subba Rao granted leave.

8—8—1924.

13. M. R. Ry. B. Ponnaiih Panthulu, Range Officer, Bairluty Range Kurnool West Division is granted leave on average pay for three months from the date of relief by No. (2).

2. M. R. Ry. S. Chinnadurai Pillai, Ranger II Grade, on return from leave is posted to Bairluty Range, Kurnool West Division.

11—8—1924.

14. Mr. Abdul Hussain Kirmani, Range Officer, Rachakonda, Kurnool East Division is granted leave on average pay on Medical Certificate for 14 days from 20-6-24 to 3-7-24 both days inclusive.

11—8—1924.

15. M. R. Ry. N. Sundaresa Iyer, Ranger III Grade, Bellary Range, is granted an extension of leave on average pay on medical certificate for six weeks in continuation of leave sanctioned to him in S. O. No. 31/24 dated 20-5-24.

2. The existing arrangements will continue.

18—8—1924.

16. Mr. M. Hussain Khan Ranger II Grade, Kurnool Range Kurnool West Division is granted leave on average pay on Medical Certificate for four months from date of relief by No. 2.

2. M. R. Ry. K. Thirvenkatachari Ranger V. Grade, Dhone Range, is posted to be in additional charge of Kurnool Range until further orders.

21—8—1924.

17. M. R. Ry. A. Vyasulu Ranger VII Grade, Palnad Range, Guntur District is transferred to Sivapuram Range, Kurnool West Division. To join on relief by No. 2.

2. M. R. Ry. Y. Venkataswami Naidu Ranger VII Grade, Sivapuram Range, Kurnool West Division is transferred to Palnad Range, Guntur District. To hand over charge to Range Bairluty Officer and relieve No. 1.

28-8-1924.

18. Mr. A. Joseph, Ranger VI Grade, Bukkapatnam Anantapur Division is granted leave on average pay for 12 days from 6-9-24 to 17-9-24 only, both days inclusive.

The Range Officer, Kadiri is directed to be in additional charge of Bukkapatnam Range.

28-8-1924.

19. M. R. Ry. N. C. Mahadevan Pillai Ranger III Grade, Harpanahalli Range, Bellary Division is granted leave on average pay for 26 days from 19-7-24.

28-8-1924.

20. M. R. Ry. D. N. Subbramania Iyer, Ranger VI Grade, on return from leave is posted to Kurnool Range, West Kurnool Division.

29-8-1924.

21. M. R. Ry. C. Ramaswami Naidu, Ranger I Grade on return from leave is posted to Sirvel Range, South Kurnool Division. To relieve No. 2.

2. M. R. Ry. P. Gopalan Supernumerary Ranger on relief by No. 1 to Join in Bairluty Range (Special duty) as already ordered.

Third Circle.

3-6-1924.

22. M. R. R. S. Vasudeva Reddi Ranger I Grade is granted extension of leave on average pay on Medical Certificate for 5 months in continuation of the leave granted to him in this Office Service Order No. 29/24 dated 3-4-1924.

10-6-1924.

23. M. R. Ry. V. P. Narayana Menon, Ranger IV grade and temporarily reduced to V grade in this office proceedings C.No. 2398/22. dated 10-1-23, is reinstated in the IV grade in his permanent post.

13-6-1924.

24. M. R. Ry. A. Siddhan Pillai, Ranger IV Grade is granted extension of leave on average pay on medical certificate for 4 months in continuation of the leave granted in this Office Service order No. 17/24 dated 26th February 1924.

21-6-1924.

25. The period of absence of Ranger E. W. Fernandez from 6-5-24. to 14-5-24 both days inclusive is treated as extension of leave on $\frac{1}{2}$ average pay on medical certificate in continuation of the leave granted to him in this Office S. O. No. 21/1924 dated 4th March 1924.

6-7-1924.

26. 1. M. R. Ry. C. N. Narasimbachary, Ranger on special duty, Mamandur, is posted to Chamala Range to relieve Mr. T. E. Varadachary on or before the 7th instant.

2. M. R. Ry. T. E. Varadachary, Range Officer, Chamala Range on relief by No. 1 is posted to Palmaner Range to relieve Mr. J. A. Wilson on or before the 15th instant.

12-7-1924.

27. Mr. H. MacBride, Ranger IV Grade is granted extension of leave on average pay for 2 months in continuation of the leave granted to him in this Office Service order No. 30/1924 dated 4th April 1924.

16-7-1924.

28. M.R.Ry. B. H. Anandathirtha Rao Probationary Ranger posted to South Cuddapah District on special duty in connection with the thinning of Red Sanders.

17-7-1924.

29. 1. M. R. Ry. L. Govindaswami Pillai Ranger V grade Vellore Range is granted leave on average pay for 4 months from date of relief.
2. M. R. Ry. K. M. Gopalachari, Ranger III grade Odugathur Range will relieve No. 1 at once and hold charge in addition to his own duties pending relief by M. R. Ry. S. Ramachandra Ayyar Ranger III grade who is posted to Vellore Range on relief of his duties as Senior Instructor Vernacular Training School, North Cuddapah.

18-7-1924.

30. M. R. Ry. D. Krishnaswamiah Ranger VI Grade is posted to South Cuddapah District on special duty in connection with the thinning of Red Sanders on relief of his duties as Junior Instructor V. T. School.

22-7-1924.

31. Consequent on Supernumerary Ranger Mr. P. K. Kuttappan Pillai's transfer out of the Third Circle, this Office Service Order No. 55/24 dated 18th July 1924 posting Ranger M. R. Ry. D. Krishnaswamiah to special duty in South Cuddapah District is cancelled. He is posted to the Sreeharikota Range, to join at once on relief at the Vernacular Training School.

31-7-1924.

32. M.R.Ry. A. Ranganayakulu Naidu Ranger II Grade, Gudiyattam Range is granted leave on average pay for 4 months from date of relief by Ranger Mr. MacBride who is due back from leave on 30th August 1924.

9-8-1924

33. Mr. E. W. Fernandez, Ranger V, Cuddapah Range is granted leave on $\frac{1}{2}$ average salary for 2 months from date of relief by Supernumerary Ranger B. H. Anandathirtha Rao now doing special duty in South Cuddapah.

20-8-1924.

24. The leave granted in Service Order No. 61/24 dated 31-7-24 to M. R. Ry. A. Ranganayakulu Naidu, Range Officer, Gudiyattam Range is postponed till Ranger Mr. MacBride returns to duty on 30th September 1924.

26-8-1924.

35. M. R. Ry. S. Chidambara Ayyar, Ranger V. grade is granted extension of leave on half average pay on medical certificate for 1 month in continuation of the leave granted to him in this Office S. O. Nos. 5/24 dated 17-1-1924, 18/24 dated 29-2-1924. and 39/24 dated 23-5-1924.
2. This Office S. O. No. 37/24 dated 12-5-1924 posting the Ranger to special duty for conducting thinning operations of Red Sanders coppice shoots in South Cuddapah District is held in abeyance.

Fourth Circle.

26-5-1924.

36. M. R. Ry. V. D. Ramalingam Pillai, Ranger VI grade, South Salem Division, is reduced to VII grade with effect from 1-6-1924.

6-6-1924.

37. 1. M. R. Ry., R. Manikkam Pillai, Ranger III, on return from leave, will take charge of Dharmapuri Range, North Salem Division.

2. M. R. Ry. S. Nageswara Ayyar, Supernumerary Ranger, on relief by No. 1. is transferred to South Salem Division. He should go to Namakkal and finish the demarcation of proposed Bailnad reserve.

3. M. R. Ry. V. D. Ramalingam Pillai, Ranger VII on return from leave and on production of medical certificate to return to duty, is posted to Shevaroy's East Range (Head Quarters, Papireddipatti) Central Salem Division.

8-6-1924.

38. M. R. Ry. R. Manikkam Pillai, Ranger III grade North Salem Division, is granted an extension of leave on average salary on medical certificate for 10 days in continuation of the leave granted to him in North Salem District Forest Officer's Service Order No. 40 of 1924, dated 6-3-1924.

10-6-1924.

39. M. R. Ry. K. R. Subramaniam, Forest Range Officer, VII Grade, on special duty, Kallakurichi Range, is granted leave on average salary for 17 days with effect from 6-5-1924.

18-6-1924.

40. Supernumerary Ranger S. Nageswara Ayyar is posted to Kadiyampatti Shevaroy's West Range, Central Salem Division to assist the Range Officer till 2-9-1924 after which he will join South Salem.

16-7-1924.

41. Supernumerary Ranger S. Ramlingam Ayyar in charge of Namakkal Range, South Salem Division, on relief by Ranger T. V. Govinda Rao from leave, is posted to special duty in South Salem Division.

16-7-1924.

42. In partial modification of this Office Service Order No. 48 of 1924, dated 18-6-1924, Supernumerary Ranger, S. Nageswara Ayyar, now in Central Salem Division, will join West Vellore Division after 2-9-1924.

18-7-1924.

43. M. R. Ry. M. Pakyanathan, Ranger II grade, and Instructor, Vernacular Training School, on relief at the Vernacular Training School, North Salem, is posted to the charge of Musiri Range, South Salem Division.

2. M. R. Ry. R. Thangavelu Pillai, VII grade, on relief by No. 1, should attend to spike extraction in the South Salem Division.

3. M. R. Ry. T. Perumal Gounden, Supernumerary Ranger and Assistant Instructor, Vernacular Training School, North Salem Division on relief at Vernacular Training School is posted to West Vellore Division.

21-7-1924.

44. Ranger T. V. Govinda Rao having joined duty from leave granted in this Office Service Order No. 118, dated 20-3-1924, on the forenoon of 7-7-1924, the unexpired portion of the leave, viz., one day, is cancelled.

21-7-1924.

45. Supernumerary Ranger J. S. Vedanayagam, on reversion to the regular line on completion of the work of stock taking in Dhoni is posted to West Vellore Division.

21-7-1924.

46. Ranger I. Z. Robert Paul, on reversion to the regular line on completion of the work of stock taking in Dhoni, is posted to Central Salem Division.

28—7—1924.

60. In continuation of this Office S. O. No. 51/24, dated 7th May 1924, M. R. Ry. P. Ramaswamy Ayyar, Ranger VI Grade is granted leave on half average pay for two months from 29th June 1924.

11—8—1924.

61. M. R. Ry. C. Thiruvengadam Pillai Ranger V grade, is granted leave on average pay for 3 months from date of relief.

25—8—1924.

62. The leave granted to M. R. Ry. S. Shunmughekumaran Pillai Ranger II grade, Madura District in this Office S. O. No. 47 of 24, dated 17th April 1924 from 11th February 1924 is extended by three months on Medical Certificate under the simplified rules (one month and 25 days on commuted furlough on average pay and the balance on half pay from 16th August 1924).

1—9—1924.

63. Ranger S. Venkataswamy Naidu is transferred from South Coimbatore to be Range Officer Tinnevely Range.
Ranger C. R. Raghunatha Iyengar on relief is transferred to South Coimbatore.

Sixth Circle.

11—6—1924.

64. 1. M. R. Ry. K. Shankaranarayana Rao, Ranger V grade on special duty in the Wynaad division to the charge of the Sultan's Battery Range to be newly formed in the Wynaad Division.
2. M. R. Ry. P. Kannan, Ranger VII grade from the Nilgiris Division to the charge of the Beltangadi Range to be newly formed in the South Mangalore Division.

11—6—1924.

65. Madavan Nair, Supernumerary Ranger is posted to the charge of Shankaranarayana Range North Mangalore Division.

19—6—1924.

66. Supernumerary Ranger P. Sankunni Nair is on the expiry of his leave posted to the Nilambur Division.

24—6—1924.

67. M. R. Ry. C. Karunakara Menon, Ranger, V grade in charge of Bolampatti Range, Palghat Division, is granted leave on average pay on medical certificate for 3 months from date of relief.

24—6—1924.

68. 1. M. R. Ry. P. Kannan, Ranger, VII grade is transferred from the Nilgiris Division to the Palghat Division for the charge of Bolampatti Range. To join immediately on relief of the Coonoor Range Charge.
2. His transfer to the South Mangalore Division for the charge of the Beltangadi Range ordered in this office S. O. No. 45/24 dated 11th June 1924 is cancelled.

24—7—1924.

69. M. R. Ry. A. Swamikutty, Ranger II Grade in charge of the Ootacamund Range, is granted leave on average pay for three weeks from the date of relief.
2. A. Mahomed Akbar, Forester 1 Grade, to be in charge of the Range vice No. 1.

3—8—1924

70. 1. M. R. Ry. M. N. Raman Pillai, Ranger IV grade, from Begur to the charge of the Sultan's Battery Range.
2. M. R. Ry. K. Shankaranarayana Rao, Rangyr V grade, to the charge of Begur Range.
The posting of Ranger K. Shankaranarayana Rao to the charge of the Sultan's Battery Range ordered in this office S. O. No. 45 dated 11th June 1924 is cancelled.

17—8—1924.

71. M. R. Ry. M. P. Subbiah, Ranger VI grade, from the Nilambur Division to the Wynaad division for the charge of Sultan's Battery Range vice M. R. Ry. M. N. Raman Pillai, Ranger, applied for leave.

20—8—1924.

72. P. Sankunni Nayar, Supernumerary Ranger, is granted extension of leave on average pay on medical certificate for two months in continuation of the leave on average pay for one month from 21st April 1924, sanctioned in this office S. O. No. 32 dated 22—4—1924.

In Memoriam.

Hidayat Ullah Khan,

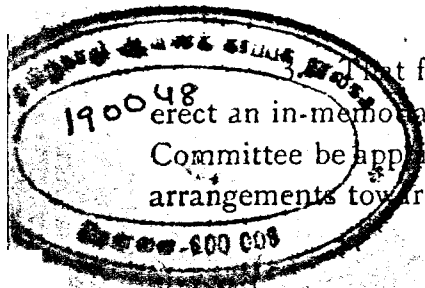
Student, Forest College, Coimbatore.

The following resolutions, in connection with the sad and untimely death of student Hidayat Ullah Khan, were passed at a meeting of the members of the Students' Club, held on the 28th August 1924.

1. That we, the members of the Students' Club, Madras Forest College, wish to place on record our deep sense of sorrow at the sudden and sad death, on the 25th instant at the General Civil Hospital, Coimbatore, of Student Hidayat Ullah Khan (of Hyderabad), a member of this Club, who by his unassuming manner, and amiable character, endeared himself to all, though he was amongst us only for a short time. We take this opportunity to offer our sincerest condolences to his mother and other relations in their sad bereavement.

2. That the above resolution be communicated to his bereaved mother and published in "The Hyderabad Bulletin."

That formal permission of the Principal be obtained to erect an in-memoriam tablet in the Club and that a Special Sub-Committee be appointed to raise subscriptions and make necessary arrangements towards its erection.



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It is not intended that the Magazine should be run at a profit so that as our subscribers increase the magazine will be issued in a more attractive form.

It is the aim of the Management to run the Magazine for the Ranger-class (including Foresters) and mainly by their contributions. Correspondents are needed to supply suitable matter to maintain the magazine on these lines. We feel confident that this appeal will not go in vain. There must be a number of our readers who have something of interest to write on.

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