

Home (1919) Department.
Education

Ordinary SERIES.

G.O. No. *1608*

DATED *31-12-19*

INDEXED

[Despatch Abstract.]

University of Madras.-

Communicating to the Syndicate, -----
an extract from the Proceedings of the second meeting of
Mycological workers in India.

BACK PAPERS.

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.

FURTHER PAPERS.

G.O.	No.	Department.	Date.	G.O.	No.	Department.	Date.

No. 1347 *hon 2567 B*
16.12.19.



Government of India,
Department of Education.

(Education)

Delhi, the 12th December 1919.

From

The Hon'ble Mr.H.Sharp, C.S.I., C.I.E.,

Secretary to the Government of India,

To

The Secretary to the Government of Madras,

Home (Education) Department.

Sir,

I am directed to forward herewith an ~~ex~~tract from the Proceedings of the Second Meeting of Mycological Workers in India on the subject of mycological science in Indian Universities and to request that with the permission of the governor in Council the matter may be brought to the notice of the University of Madras.

I have the honour to be,

Sir,

Your most obedient servant,

H. Sharp.

Secretary to the Government of India.

X With a copy.

c.m.k.

Extract from the Proceedings of the Second Meeting of Mycological Workers in India held at Pusa on the 20th February 1919 and following days.

SUBJECT V.—MYCOLOGICAL EDUCATION IN PROVINCIAL COLLEGES.

The Chairman said that it was not suggested that this meeting should lay down any curriculum for mycology in provincial colleges. An exchange of the actual experience of those engaged in teaching mycology in agricultural colleges was what was required. He invited Mr. McRae to give the meeting the benefit of his experience.

Mr. McRae said that in Coimbatore they had two courses, a 4-year course and a 2-year course. In the 2-year course, which aimed at giving a general education in agriculture, there were 6 mycological lectures in the first year and 15 in the second year; each lecture being followed by 2 hours' practical. There was no attempt to teach the students microscopic technique. They examined slides prepared prior to the lecture. In the 4-year course a period of 3 months was devoted to mycology, during which time 30 lectures were given, each followed by 2 hours' practical as before. This course included microscopic technique. The students made their own preparations and supplemented them from laboratory slides. The course aimed at giving students a knowledge of the common diseases and simple remedies, and how to collect and send in specimens. For illustrating the manner in which a fungus lived on its host plant, he preferred the use of models to diagrams, and the two models which he had brought with him were samples of what were used in the Coimbatore classes. They were made by local workmen at Coimbatore. The headings of the lectures given in the 2-year course were as follows:—

Year.	Serial number of the lecture in the syllabus.	Title of the lecture.
1st .	27, 28 and 29	What a fungus is, on what it lives, and what parasitic fungi do to host crops, relation to crops, fungus diseases.
	63	Fungi on germinating seed. Smuts, damping-off. Disinfection of seed.
	85 and 86	Life-history of a fungus.
2nd .	126	Parasites and saprophytes, their methods of getting food, <i>mycor</i> , <i>Pythium</i> .
2nd .	127	Mycelium, hyphae, suckers, rhizomorphs, sclerotia.
	128	The common forms of fruit body, mushroom, bracket fungus, rust.
	129	Spores, conidia, sporangiospores, resting spores, germination of spores. Infection of host plant.
	130	Dissemination of fungi.
	131 and 132	Effect of fungi on their host plant.
	133	Methods of control of fungus diseases.
	134	Sprayers.
	135	Preparation and application of fungicides.
	136	Diseases of cholam,* cumbu,† tenai.‡
	137	„ paddy, sugarcane.
	138	„ cotton, tobacco.
	139	„ palms and fruit trees.
	140	What to observe and how to record the progress of a disease. Selection and preparation of specimens for examination. Demonstration of the simple laboratory methods of examining a diseased plant. Plotting, pure culture.

The Chairman said that the meeting was extremely indebted to Mr. McRae for his interesting explanation and exhibits. The models were very excellent examples of their kind, and it would be a great advantage if they

* *Andropogon Sorghum*;

† *Pennisetum typhoides*;

‡ *Setaria italica*.

could be made and distributed to all colleges. Show cases such as were used in Pusa might also be useful.

Mr. Tunstall suggested that such show cases instead of being made of wood might be made from card board covered with celluloid.

Mr. Ajrekar said that, at Poona, the equipment was insufficient; they had nothing as good as Mr. McRae's models and relied rather on lantern lectures. He would like to purchase models from Coimbatore. The lectures were divided up into:—

- (1) general morphology and physiology of fungi,
- (2) parasitism,
- (3) diseases of crops.

The Chairman inquired whether any officer engaged in mycological teaching ever thought of publishing his lectures in book form. There was at present no suitable text-book for the use of students. A small, handy and cheap book was required.

Mr. Robertson Brown expressed the hope that in thinking of mycological education the meeting would bear in mind the needs of the cultivator in the field and not only those of the student in the college. He would like to see suitable models and show cases at the Agricultural Department's farms where visitors would see some of the simpler and more important facts clearly demonstrated.

Mr. Ajrekar said that in Bombay they had mycological stalls at the various agricultural exhibitions throughout the Presidency.

Mr. Srivastava, in response to an inquiry from the Chairman, stated that the mycological course in Nagpur consisted of 10 lectures, each followed by 2 hours' practical, delivered in the last month of the season. The lectures dealt with specific common diseases and their remedies.

Mr. Venkata Rao stated that in Mysore they had an agricultural school attached to the Hebbal Experimental Farm. The lectures given were general and dealt with common diseases and fungicides. The object was to train men as observers to collect and send in material of diseased crops.

Mr. Hafiz Khan said that at the Forest College at Dehra Dun the mycological instruction consisted of a few lectures—there was no practical work.

The Chairman referred to the mycological courses given in agricultural colleges and some universities in the United States. The elementary courses seemed to be on the lines of those in India. In some of the more advanced of the American courses the students did an infection for themselves.

Mr. McRae remarked that at Coimbatore the students were shown any infections which were actually being done at the time.

Mr. Ajrekar then briefly described the revision classes in field mycology which were held during the 3rd-year work at Poona.

Mr. McRae next described the mycological classes for "estate writers" at Coimbatore. The object of these classes was to train "writers" from rubber estates to carry out plant pathological observations and plant sanitation on rubber estates. The course aimed at giving the men sufficient instruction to enable them to recognize the common diseases, and to carry out simple remedies. If necessary they would know how to collect material and send it in for examination. The classes consisted of 10 men, and it was absolutely essential that the men should know English. The first 10 days of the course were given to ordinary botanical instruction—this was necessary as the men had no scientific training—and the remainder of the time was spent in studying diseases of rubber.

Mr. Anstead stated that at present the course is rather in an experimental stage but the men turned out, so far, have done well. They are placed in charge of "pest gangs" on the estates. He was greatly indebted to Mr. McRae for taking over this work of training "writers." With the appointment of a rubber mycologist the work would, of course, be done by him.

Mr. Ajrekar said that in Poona they had one month classes in sugarcane culture in the vernacular, and classes in arboriculture in English.

Mr. Tunstall stated that any attempt to train men for work on tea gardens on the lines of the "writers class" at Coimbatore would be hampered by the necessity of conducting it in the vernacular. At present his energies were absorbed in teaching laboratory technique to his staff.

The Chairman commented on the neglect of mycological teaching in the universities.

Dr. Shaw referred to the unsuitable character of such mycological education as existed in Indian universities. Students taking examinations in botany of the standard of the M.Sc. degree were totally ignorant of the fungi of their own country, although they could answer complicated questions on European fungi and plant diseases. Their knowledge of such matters could only be derived from periodicals and text-books published in England, although better and more practical instruction could be obtained from examples and publications in their own country. A student taking an honours degree in botany ought to know the botanical literature and plants of his own country, before any other, but some Indian universities appeared to resent any questions in their examinations set on these lines.

Captain Froilano de Mello favoured the meeting with his experience in Goa. He had had to organize a course in microbiology and tropical pathology. A standard mycological text-book suitable for use in all colleges, and not merely in agricultural colleges, was very desirable. It should contain complete instruction in laboratory methods. He trained his students so that they could themselves give instruction in what they had learned.

Mr. Tunstall agreed that a mycological text-book for Indian colleges was much required.

The Chairman then inquired whether the sense of the meeting was in favour of passing a formal resolution calling attention to the neglect of mycological teaching in Indian universities.

Mr. McRae deprecated the passing of any formal resolution.

Mr. Dastur considered that such a resolution should be put to the meeting.

The Chairman then proposed—

"That this meeting desires to call attention to the neglect of mycological science in Indian universities, and wishes to emphasize the importance of the subject in India, and to urge on the Universities to give courses and found lectureships or chairs in the subject."

Resolution IX.

Dr. Shaw seconded this.

The resolution was carried.

Home (Ed. 2)

2567/13



Order 1608 of 31-12-19
MOS.

Communicated to
the Syndicate of the University
of Madras for information.

To the Regt, Univ. of Madras
(~~with enclosure~~)
(q to with encb.)

17.12.19
18.12.19
19.12.19

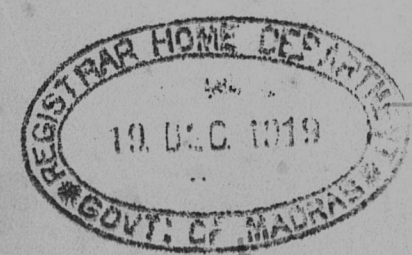
Sub? to Leg proposal
19.12.19
S

Note:- Rev. (Sph.) w/o for
proposal.
17.12.19
18.12.19

Gen no 2567 B-1/18.12.19
(Rev. Spl)

Rev. Spl. Dept
to India Leg
The G. of S. Communi-

1745 III
18-12-19
Rev (Spl) 18.12.19
1745 III - 19.12.19



Cation may be presented and the
file returned to Ed. / Dept
18.12.19
Home (Ed. Dept)

When signed

191

READ AGAIN G.O. No.
191 .

, DATED

CURRENT No.

ENCLOSURES TO C. No.

ORDER OF GOVERNMENT

TER OF GOVERNMENT

STATEMENT WITH LITTO.

PAPERS NOT FILED UP, BEING MEANT FOR DESPATCH
IN ORIGINAL.

N.B.—

A = Copy in full.
B = Not to be copied.
P = Copy abstract only.
Q = Copy heading only.