

nature suggested by its unhappy name, *Eupelmus tachardiae*, Clausen⁷ remarked, in ignorance of my positive findings in support of his views, "In Ceylon (*Anastatus*) *E. tachardiae*, How. is reported as parasitic upon the lac insect, *L. albizziae*, but in view of our knowledge of the habits of the genus the record must at present be considered questionable." Glover does not know this objection nor has he ever cited any of my publications. Since my findings fall in harmony with the views of others, including Imms and Chatterjee and Clausen, the burden of proof rather than the comfort of reassertion lies on the side which claims to have done something first of its kind in India and even outside it.

Glover and Negi mention *Marietta javanensis* as synonymous with *Microterys Hauteфуilli* and further indicate doubts as to who named the insect. I had myself reared the former insect which I considered of such a minor importance that I never felt called upon to mention it yet. Later on some of my specimens were sent to America where they are found in the National Museum bearing Lot No. 1783, dated 16 February 1929. Some four years ago I created a new generic name and the insect is to be called *Lakshaphagus Hauteфуilli*.⁸ I am here reminded of what the late Prof. Lefroy⁹ wrote, "Indian lac experts seem to be asleep and not to know anything of . . ." the literature on lac, a fact which is most easily demonstrated in the writings of Glover and Negi. Glover and Negi refuse to admit plurality of lac species but if they rear parasites from Chamberlin's *L. rangooniensis* which is a later name for my *L. chinensis*, they would obtain the specific chalcid parasite, *Lakshaphagus Hauteфуilli* and may save themselves the unhappiness of confusing two parasites for one.

With regard to the monophagy of *Eublemma amabilis* they seem to imply it has been known for some time. If so they would cite a concrete reference, rather than make a vague mention. I hope to reply to their other disparaging remarks, after reading the statement, if any.

S. MAHDIHASSAN.

Abid Manzil,
Hyderabad (Deccan),
April 23, 1935.

¹ Negi and Glover, *Curr. Sci.*, 1935, 3, 426.

² Glover, *A Practical Manual of Lac Cultivation*, Calcutta, 1931.

³ Glover, *Bull. 21, Ind. Lac Res. Inst., Ranch* Calcutta, 1934.

⁴ Mahdihassan, *Curr. Sci.*, 1935, 3, 365.

⁵ Mahdihassan, *J. Sci. Assoc. Maharaja's Col* Vizianagram, Oct. 1925, p. 64.

⁶ Glover, *Bull. 21, Ind. Lac Res. Inst.*, p. 9.

⁷ Clausen, C. P., *Annals Ent. Soc. Amer.*, 1927, 20, 470.

⁸ Mahdihassan, *Arch. f. Protistenkunde*, 1931, 7: 170.

⁹ Maxwell-Lefroy, quoted in the Preface to *A. Pidance's Report on Lac Refining*, by Mahdihassan Osmania Univ. Press, Hyderabad (Deccan), 1930.

Pongamia glabra Leaf Gall Former.

MASSEE in his paper "A new species of gall mite from South India"¹ described the mite *Eriophyes Cheriani*, on my authority, as the cause of the galls found on the leaves of *Pongamia glabra* Vent. Mani, in his publication entitled "The rôle of the mite *Eriophyes Cheriani* Mass. in the Cephalonion galls of *Pongamia glabra* Vent."² stated that the mite is "not the true gall maker but only a secondary organism which temporarily inhabits the galls" and "that there is absolutely no doubt as to the gall maker which is a Cecidomyid." In his second publication "A note on the polypoid (Cephalonion) galls of *Pongamia glabra* Vent."³ Mani resiled from his previous statement and stated that "though found in the gall the mite is not primarily responsible for its formation. The gall is originally formed by a minute undescribed Itonidid fly and only certain minor changes in the gall are produced by the mite." In his third publication "Dispersal of gall mites by gall midges," Mani stated that "the midges and the mite develop in the same gall for which both of them appear to be responsible." In his latest publication "Studies on Indian Itonidida"⁴ Mani reiterated that both the mite and the midge are responsible for gall formation and further stated that "neither of them alone produce such galls."

In view of this controversy and with a view to settle definitely whether the mite by themselves could produce galls, certain inoculation experiments were devised and conducted at Coimbatore. These experiments were so conducted that the experimental plants were free from any Itonidid at any stage. The results of the experiment have been such as to enthrone the mite once more to its former position, *viz.*, the true gall maker. It is not known why in his experiments Mani was not able to get gall by mites. Mites were introduced by m

when the leaves were very tender, almost when these were in the bud stage. If the mites are introduced after the leaves have developed, it is seen, that the galls formed are either very few in number or they will not be formed at all.

Since the Itonidid by itself cannot produce galls as admitted by Mani and since the mite by itself can produce galls as seen from my experiments I think Mani should revise his views and admit that the mites are the true gall formers.

M. C. CHERIAN.

Agricultural College and
Research Institute,
Coimbatore.
March 19, 1935.

¹ *Ann. and Mag. Natural History*, 1933, 11, 201.

² *Ann. and Mag. Natural History*, 1933, 12, 138.

³ *Proc. 21st Ind. Sci. Cong.*, 1934.

⁴ *Curr. Sci.*, 1934, 3, 208.

⁵ *Records of the Indian Museum*, 1934, 36, 427.

Note.—Mr. M. S. Mani agrees with Mr. M. C. Cherman's findings and accepts his results as correct.

A Central Nutrition Board for India.

YOUR editorial in the April number of *Current Science* is much to be welcomed. Several times during the last three years and especially in connection with some University extension lectures delivered at Calcutta in 1932 and lately in connection

with the symposium on Vitamins, held under the auspices of the Indian Science Congress at Calcutta, I had occasion to stress the need for the establishment of a Central Nutrition Board for India. It is encouraging to note that some nutritional investigations are being carried on in India in different laboratories. While it is desirable in the interest of science that there should be some individuality about the researches that are being conducted at different centres, the necessity for a co-ordinating central organisation would appear to be paramount. Such an organisation may be entrusted with the task of (1) co-ordinating the nutritional work of different laboratories, (2) suggesting investigations of practical importance in relation to the varying climates, soils, habits, traditions, availability of food-stuffs, etc., in different parts of the country, and, especially, in relation to the purchasing power of different classes of people, and (3) making the results available to the general public in simple non-technical language.

This board should work in close co-operation with the Imperial Agricultural Council and with the chief medical organisations of the country. It would be a great thing if your editorial can stimulate thought in this direction and lead to the establishment of a committee to go into the proposal in detail.

B. C. GUHA.

P. 109, Lake Road, Calcutta,
May 1, 1935.

The Distribution of a Simple Epidemic Disease.*

By Prof. J. A. Strang,
University of Lucknow.

THE population N being divided into groups v_0, v_1, \dots, v_n in which v_n means the number of persons who have experienced (or are experiencing) an n th attack of illness, it is shown that the numbers v_n are determined by the equations

$$N = v_0 + v_1 + v_2 + \dots + v_n + \dots$$

$$\frac{dv_0}{dt} = -p_0 v_0$$

$$\frac{dv_1}{dt} = p_0 v_0 - p_1 v_1$$

.....

$$\frac{dv_n}{dt} = p_{n-1} v_{n-1} - p_n v_n$$

where p_n is the probability that an individual of the group v_n will experience another attack within unit time.

Modifications are suggested for the cases in which

- (i) only a finite number of attacks is experienced by each individual, either because the k th attack is always fatal, or because the k th attack confers immunity;
- (ii) migration occurs during the epidemic;
- (iii) births are included in the reckoning, affecting v_0 , or v_0 and v_1 , according as

* A resume of the lecture delivered under the auspices of the Faculty of Sciences, Lucknow University, Feb. 1935.