

risk involved in importing machinery, the first of its kind, deter many from investing in machinery. If Government should put up a small factory for demonstrating the advantages to be derived by the use of machinery in jaggery making, the above mentioned difficulties would, I think, be solved to a very great extent. I am fully aware of the disadvantages of Government undertaking a work of the nature. Under Government control, the working charges of the factory will surely be high, making the net advantage appear very slight over that derived from the ordinary method. The main feature that has to be kept in view appears to be to conduct the experiment on lines which would ensure success in the undertaking. Success in the working should be ensured, as otherwise the effects on the industry at the very commencement would be disastrous.

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**“Anaikombu” in Paddy.—A Rejoinder.**

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The short note on “a new rice pest”-contributed by Mr. K. Sankar is really of great interest to an Economic Entomologist. Although the Entomological Section of the Agricultural College and Research Institute, Coimbatore, was well acquainted with the existence of the disease know as “Anaikombu” or “Thandeethu” in the Tamil and as “Kodu” in the Telugu districts, its exact cause was, on account of the want of plentiful genuine material, but imperfectly known. The Entomological section is certainly very much indebted to Mr. Sankar for the fine specimens of attacked plants he sent by post and for the interesting account he furnished of his personal observations in the field. Original observations of this kind are extremely valuable and will, I am sure, be eagerly welcomed by the Editor. There are, however, certain inaccuracies in the description of the pest which may be brought to the notice of the readers of this journal. Our knowledge of the life history of this pest, I confess, is not yet complete; yet sufficient details have been

gathered from a thorough examination of diseased plants to enable one to grasp the broad outlines.

The small pinkish fly—very much like a mosquito in appearance—that is the true cause of the “silver shoots” in paddy is one of the gall-making flies, scientifically called the *Cecidomyiadi*. It was actually reared out from affected plants in the Insectary. Tiny young maggots of this fly were found in the interior of tender shoots feeding on the succulent tissues of the growing tip. It is not known where the eggs are laid and how the maggots reach the tissues of the young shoots. The destruction of the growing tip seems to result in checking the normal growth of the shoot and in inducing the abnormal development of one of the internodes of the stalk so as to form the elongate hollow tube, known as “Anaikombu.” These “silver shoots” are thus in fact only galls of a peculiar kind. The small, thickset, pinkish maggot is usually found at the lower end of the hollow shoot. When full grown, it turns into a bright pink naked pupa within the hollow “tusk.” The pupa has the rudiments of the eyes, wings and legs clearly sculptured out and possesses at the head end a set of 4 spines which enable it to bore its way out of the gall when the fly is ready to emerge.

Two Chalcid wasps are parasitic on this pest in the field, of which only one, the small black chalcid mentioned by the writer, is really important. This wasp seems to be able somehow to lay its eggs on the maggot inside the gall from outside. The grubs hatching from the eggs feed on the tissues of the maggot until at last only the thin skin is left. When mature, they construct tiny silken cocoons packed close together within the empty skin of the maggot, from which later on the wasps emerge and make their escape by biting a little hole at the top of the hollow shoot.

I trust, the reader will now be in a position to see where Mr. Sankar has gone wrong. It is evident he has mistaken the

bloated body of the maggot filled with the tiny parasite cocoons for the pupal case and has not recognised the true pupa which is naked and unprotected by any cocoon. His theory about "the vital organs of the parasitised maggot being reserved till the pupal case is finished" would seem to be quite unnecessary. Again the small holes noted by him at the top of the silver shoot are made not by the fly but by the small chalcid parasites.

Mr. Sankar further states that "the fly lays eggs singly on plants." So far the eggs of this fly have not been observed by anyone in India and, in case he had actually noticed them, he would be actively helping the progress of Science if he would let the Entomological Section know where they are laid and what they look like. If he will, during the next outbreak of this pest, send specimens of the eggs preserved in spirit, they will be thankfully received.

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### **Honorary Visitors.**

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We print below the names of 17 Honorary Visitors to the College, recently appointed by Government for a term of 3 years. Only four of these have been Honorary Visitors before and we hope that the newly appointed gentlemen will visit the College much oftener than several of their predecessors. Honorary Visitors are a non-official, influential body of landlords and they can, on one hand, give the benefit of their actual experiences of life to the College authorities lest the latter become too academical and, on the other hand, benefit themselves to a certain extent by a direct observation of what is being done here and benefit the country at large by dispersing the ideas gathered here over a