

Identity of the Nutgrass Armyworm in Hawaii

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The caterpillars which of recent years we have been calling the nutgrass armyworm, are the larvae of a noctuid moth which has been going under the name *Spodoptera mauritia* (Boisd.). This species is recorded by Meyrick in Fauna Hawaiiensis, Vol. I, p. 152, 1899, without description, merely citing localities where collected by Perkins and Blackburn. A few of the specimens determined by Meyrick are in the Bishop Museum collection, and our pest agrees exactly with them. The name *Spodoptera mauritia* has therefore been widely used in reports and Hawaiian entomological literature without anyone questioning the identity of the species.

In studying the pests of Guam in 1936, an armyworm occurring in the rice seedling plots appeared to be very similar to our nutgrass armyworm. Its moth too, and its egg-laying habits were similar. On my return to Honolulu, and comparing specimens, it was found that there were two distinct species involved. On careful study the Guam species was found to agree with descriptions and figures of *Spodoptera mauritia* (Boisd.) in literature available (Hampson, Catalogue of Lepidoptera Phalaenae in the British Museum, VIII, p. 256, fig. 66, 1909; Hampson, Fauna of British India, Moths, Vol. II, p. 248, fig. 140, 1894). Thus the necessity arose of finding some other name for our nutgrass armyworm.

Some of the distinctions between the two species are the fringe of long hair on the fore tibia of the Guam species, a longer and larger fringe than in the Hawaii specimens; the orbicular spot on forewing is small and circular in the Guam species, larger, oval and oblique in the Hawaii form; there are differences in the lines on the forewing, though there is a general resemblance in color and pattern.

The particular characters mentioned seem to agree very well with figures of *Laphygma frugiperda* in U.S.D.A. Technical Bulletin 34, 1928, on "The Fall Armyworm". To make sure in this regard, specimens of the Hawaii species were sent to the Division of Insect Identification of the U. S. Bureau of Entomology and Plant Quarantine. There they were studied by Mr. J. F. Gates Clarke, who reported that there was superficial resemblance to *Laphygma frugiperda*, but there were distinct genitalia characters indicating it to be a different species, requiring further study.

Recently on looking up the species of *Laphygma* in Hampson's Catalogue of Moths of the British Museum, I find that he records *Laphygma exempta* (Walker) from Hawaii, mentioning several localities where collected by Perkins. It turns out that these are the

same localities of Meyrick's records for *Spodoptera mauritia* in Hawaii. The inference is apparent that Hampson has redetermined as *Laphygma exempta* the specimens which Meyrick recorded as *Spodoptera mauritia*, without so stating. Now comparing our material with Hampson's description and figure, I find them in agreement, and so it is apparent that our nutgrass armyworm should henceforth be known as *Laphygma exempta* (Walker).

According to Hampson, *L. exempta* is widely distributed in Africa, and in India, Ceylon, Singapore and Queensland, Australia. He also gives the distribution of *Spodoptera mauritia* as covering about the same range, and in addition: Mauritius, Java, Philippines, New Guinea, Tahiti and Marquesas. He gives no records of either species in America. His records of *Laphygma frugiperda* are all American, ranging all the way from Canada to Argentina, including the West Indies.