

**Sitophilus rugicollis (Casey) in Hawaii (Col., Cucurlionidae)**

BY O. H. SWEZEY

(Presented at the meeting of May 3, 1928)

Among some specimens recently handed to me by Mr. Bryan for determination, was one specimen of *Sitophilus rugicollis* (Casey), which was in a collection handed in by one of the students in Entomology at the University of Hawaii. He had collected this weevil in a house. It is the first record of its occurrence in Honolulu.

The species was described in 1892 on a single specimen from Florida, and has not been seen there since, according to Cotton (Proc. Ent. Soc. Washington, 26, p. 141, 1924). In this note by Cotton, he explains the synonymy of *S. shoreae* (Marshall), described from India in 1920 (Bull. Ent. Research, XI, p. 276, Pl. VII, Fig. 4, 1920). Marshall states that it attacks the seeds of *Shorea robusta* and *Dipterocarpus turbinatus*. It is known in various parts of India, and also in Mauritius.

Whether this single specimen is a stray that has come in in freight in some way, or whether it is established here in seeds of some tree is not yet known.

**Parthenogenesis in a Phasgonurid, *Xiphidiopsis lita*, in Hawaii (Orthoptera)**

BY O. H. SWEZEY

(Presented at the meeting of Nov. 1, 1928)

This immigrant to Hawaii was first observed by Mr. C. E. Pemberton in July, 1919, at Hilo, Hawaii. It came to lights at the Hilo Hotel. In a year or two it increased in numbers so that it appeared quite abundant, as many as a hundred could be observed in a single evening at the porch lights of the Hilo Hotel in August, 1921, and it began to be found at other places on the island of Hawaii, till it finally became generally dispersed. The first finding of it in Kona was in 1924.

In September, 1923, it was first observed in Honolulu, probably having come from Hilo on an Inter-Island steamer at night time.

It gradually spread on Oahu, till now it has been recovered from extreme parts of the island.

The species was described by Mr. Morgan Hebard in "Occasional Papers" of the Bishop Museum, Vol. VII, No. 14, p. 345, pl. XXVI, figs. 12, 13, 1922. It is not yet known from whence it came to Hawaii. Mr. Hebard remarks in regard to this insect, "Without males of this insect we are unable to make as full a comparison as could be desired." The absence of males was noted from the first observations on the insect in Hawaii. Even when it had increased so that 100 could be counted in a single evening at lights at the Hilo Hotel, they were all females, as could be readily seen by the long ovipositor. Thinking that perhaps males were not attracted to lights, and that they might be found in the vicinity, search was made on different occasions in the Hotel gardens and surrounding regions, but always failing to find any male specimens. Even to this day none have yet been found, and the entomologists have vied with one another in the endeavor to be the first to catch a male. At one time a male was reported by Brother Matthias Newell in Hilo, but his specimen was later identified as the common *Conocephalus saltator* (Sauss.).

It was early suspected that this insect was predacious, and experiments and observations were made to demonstrate it. Record of some observations in this respect are in Proc. Haw. Ent. Soc., VI, pp. 226 and 229, 1926, where the following insects are recorded as eaten by an adult female in confinement: corn aphid, *Cerataphis fici*, tineid moths and small noctuid caterpillars. Oviposition and the egg are described in Proc. Haw. Ent. Soc., VI, p. 229, 1926.

In February, 1928, a nymph was confined in glass jar and fed with drosophilid flies until it matured. In due time (March 3) six eggs were found. The female died March 6, and was found to contain a mass of 43 eggs. The 6 eggs that were found on March 3, had not hatched yet on March 31, but embryos were developing in them and the compound eyes could be seen through the egg shell, which demonstrates that reproduction can take place by parthogenesis, and, since males have never been found, it is likely that that is the prevailing method of reproduction of *Xiphidiopsis lita* in Hawaii.