

SCALE INSECTS (HEMIPTERA: COCCOIDEA) FROM THE
MARQUESAS*

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INTRODUCTION

The collecting of scale insects is something of a specialized task and it is hardly to be expected that the general collector engaged in a reconnaissance or even in presumably intensive collecting will obtain any large proportion of the species actually present in any particular area. Too many of the species are minute in size, inconspicuous in coloring, concealed beneath bark, or live beneath the soil, and their discovery is too much a matter of prolonged and patient searching to permit any but the specialist to devote the necessary time to the work of uncovering them. For this reason, only the more conspicuous forms and those occurring on cultivated plants are ordinarily obtained. These are almost certain to be the common introduced and cosmopolitan species. Such is the case with the material collected by members of the Pacific Entomological Survey in the Marquesas. One species, which is here described as new, is possibly indigenous to these islands. One species is definitely known only from the South Seas region, but is probably of wider range, and the others are all forms of at least tropicopolitan distribution. In view of the lack of information concerning the scale insect fauna of the Marquesas these common forms may, however, merit recording.

FAMILY PSEUDOCOCCIDAE

Genus PSEUDOCOCCUS Westwood

Pseudococcus swezeyi Ehrhorn (fig. 1).

Pseudococcus pandani (Cockerell): Doane and Hadden, *Canad. Ent.*, vol. 41, p. 297, 1909. (Probably a misidentification.)

Pseudococcus swezeyi Ehrhorn: *Hawaiian Ent. Soc., Proc.*, vol. 3, p. 240, 1916.

Unfortunately, the description of *P. swezeyi* will not permit the identification of the species, since it omits most of the features of any significance. Therefore, figures are here presented and certain notes are offered.

A typical species of *Pseudococcus*, with eight-segmented antennae, 17 pairs of cerarii and no tooth on the claw. Cerarii each with but two conical setae, except for those

* Pacific Entomological Survey, Publication 8, article 9. Issued May 29, 1935.

of the head region which may have three, and each with several slender auxiliary setae. Anal lobe cerarius (fig. 1, *c*) with the conical setae large and stout, one being slightly larger than the other, and set in a quite large, definitely sclerotized area in which are numerous triangular pores that are somewhat concentrated about the conical setae but are not arranged in a crowded mass. Penultimate cerarius likewise set in a sclerotized area of circular form, the conical setae somewhat smaller than those of the anal cerarii and unequal in size, the pores arranged much as in the anal cerarii. Remaining cerarii with the setae smaller and with but a slight indication of sclerotization, with several slender auxiliary setae and a small cluster of pores. Ventral side of the anal lobe (fig. 1, *f*) with a definite, sclerotic area.

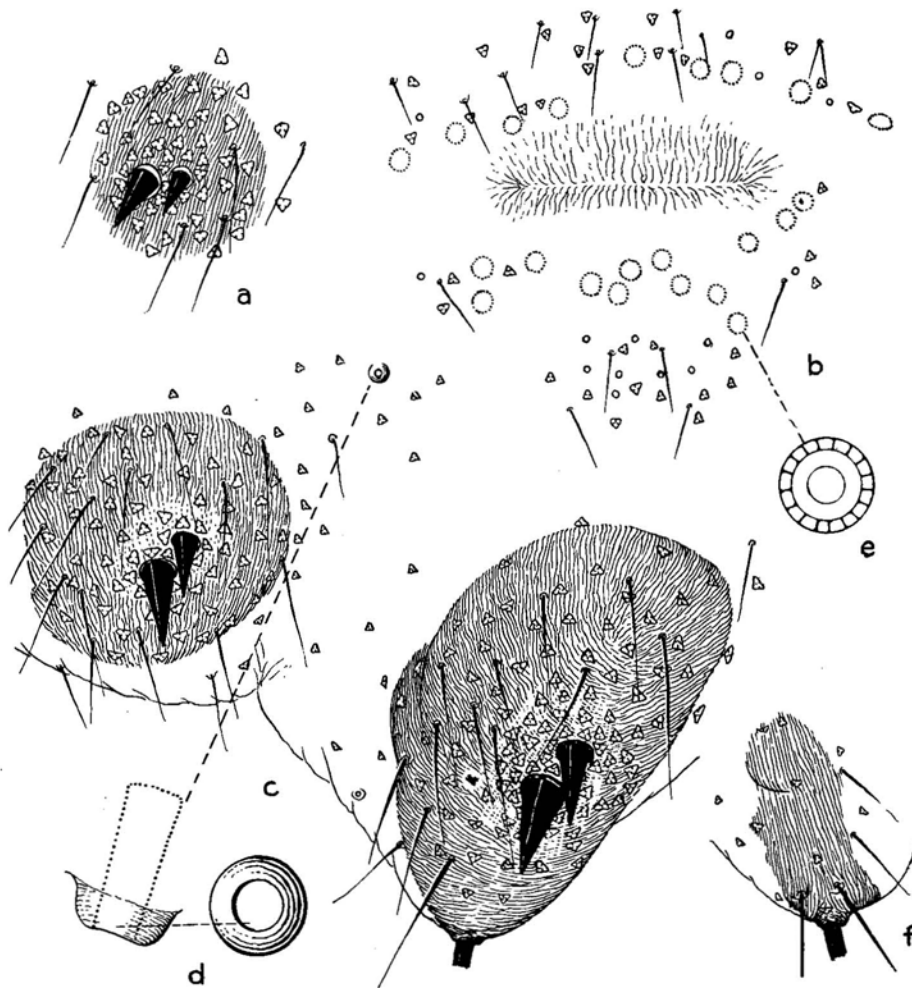


FIGURE 1.—*Pseudococcus swzeyi* Ehrhorn: *a*, cerarius, third from the posterior end of the body; *b*, peri-vulvar area; *c*, anal lobe and penultimate cerarii; *d*, large tubular duct; *e*, multilocular disc pore; *f*, sclerotized area on ventral side of anal lobe.

Tubular ducts of two sizes present. The larger ducts (fig. 1, *d*) each of which has a quite large, raised collar about the mouth, are very few, being confined to one dorsally and one ventrally associated with, but slightly removed from, each of a majority of the cerarii. Much smaller ducts, without a raised rim about the mouth, are present in small numbers on the ventral side in the genital region. Triangular pores presenting no distinctive features in their distribution. Multilocular disc pores (fig. 1, *e*) very few, confined strictly to the area about the vulva (fig. 1, *b*).

Anal ring presenting no distinctive features. Legs of ordinary form, without pores on any of the segments.

Hivaoa: Avaoa Valley, altitude 1,350 feet, January 4, 1932, on *Piper latifolium*, 1 female, LeBronnec; Temetiu Ridge, altitude 3,900 feet, January 14, 1932, on *Metrosideros collina*, LeBronnec; Matauuna, altitude 3,900 feet, March 3, 1930, 1 female, "in humus", Mumford and Adamson. In addition, 1 female from coconut or *Pandanus*, Tahiti, which is part of the material recorded by Doane and Hadden, and 1 female from Hawaii, apparently determined by Ehrhorn, are at hand.

This identification is based upon the single specimen from Hawaii. The species is probably one of the common mealy bugs of the South Seas region and may very well have been described under other names. It is probably not *P. pandani* (Cockerell), which was taken in quarantine at San Francisco on *Pandanus* from "Washington Island, Mendana or Marquesas group," since this species is said to have the "margin with stout cottony tufts as in *P. citri*," while in *P. swezeyi* the tufts in the caudal region are undoubtedly much more conspicuous.

This species is very similar to *P. longispinus* (Targioni), but differs especially in not having the pores of the anal and penultimate cerarii arranged in a crowded and somewhat depressed mass about the conical setae. The result of this difference is that in life the caudal tassels are probably much shorter than in *P. longispinus*. It also somewhat resembles *P. gahani* Green and *P. comstocki* (Kuwana), but differs in having the multilocular disc pores confined to the region of the vulva, while in these other species they occur on practically all the ventral abdominal segments.

***Pseudococcus citri* (Risso).**

Hivaoa: Atuona, May 4, 1929, on *Psidium guajava*; Avaoa [Avao] Valley, January 4, 1932, on *Glochidion ramiflorum* and *Psidium guajava*; Mumford and Adamson.

These specimens appear to be typical of this widely distributed and familiar species.

Pseudococcus bromeliae (Bouché).

Hivaoa: Atuona, May 4, 1929, on fruits of "Corrosole;" Vaitoepo, Papuaei [Papuei] Valley, July 29, 1929, on fruits of *Inocarpus edulis*; Mumford and Adamson.

This frequently described and widely distributed tropical and subtropical species needs no special note.

Genus **FERRISIA** Fullaway**Ferrisia virgata** (Cockerell).

Uahuka: Vitiake, February 24, 1931, on *Melochia velutina*, LeBronnec and Tauraa.

Hivaoa: Atuona, May 13, 1929, on tomato, April 25, 1929, on maize, April 4, 1929, on *Ceiba pentandra*; Mumford and Adamson.

Tahuata: Kiinui Valley, November 14, 1930, on *Siegesbeckia orientalis*, LeBronnec and Tauraa.

Mohotani: February 4, 1931, on *Melochia velutina*, LeBronnec and Tauraa.
A species of world-wide distribution in the tropics and subtropics.

FAMILY COCCIDAE

Genus **SAISSETIA** Deplanches

The three species of this genus recorded below are common forms of wide distribution in the tropics and need no special comment.

Saissetia hemisphaerica (Targioni).

Hivaoa: Mount Ootua, altitude 2,490 feet, May 8, 1929, on *Canthium barbatum*, Mumford and Adamson.

Saissetia nigra (Nietner).

Hivaoa: Atuona, May 4, 1929, on *Hibiscus* species; Hanamate, altitude 450 feet, May 11, 1929, on *Sapindus saponaria*; Punaei, May 11, 1929, on *Premna tahitensis*; Hanamenu, June 3, 1929, on undetermined host; Mumford and Adamson.

Saissetia oleae (Bernard).

Eiao: Vaituha, October 2, 1929, on *Abutilon graveolens*, Adamson.

Hivaoa: Hanamenu, June 3, 1929, on undetermined host, Mumford and Adamson.

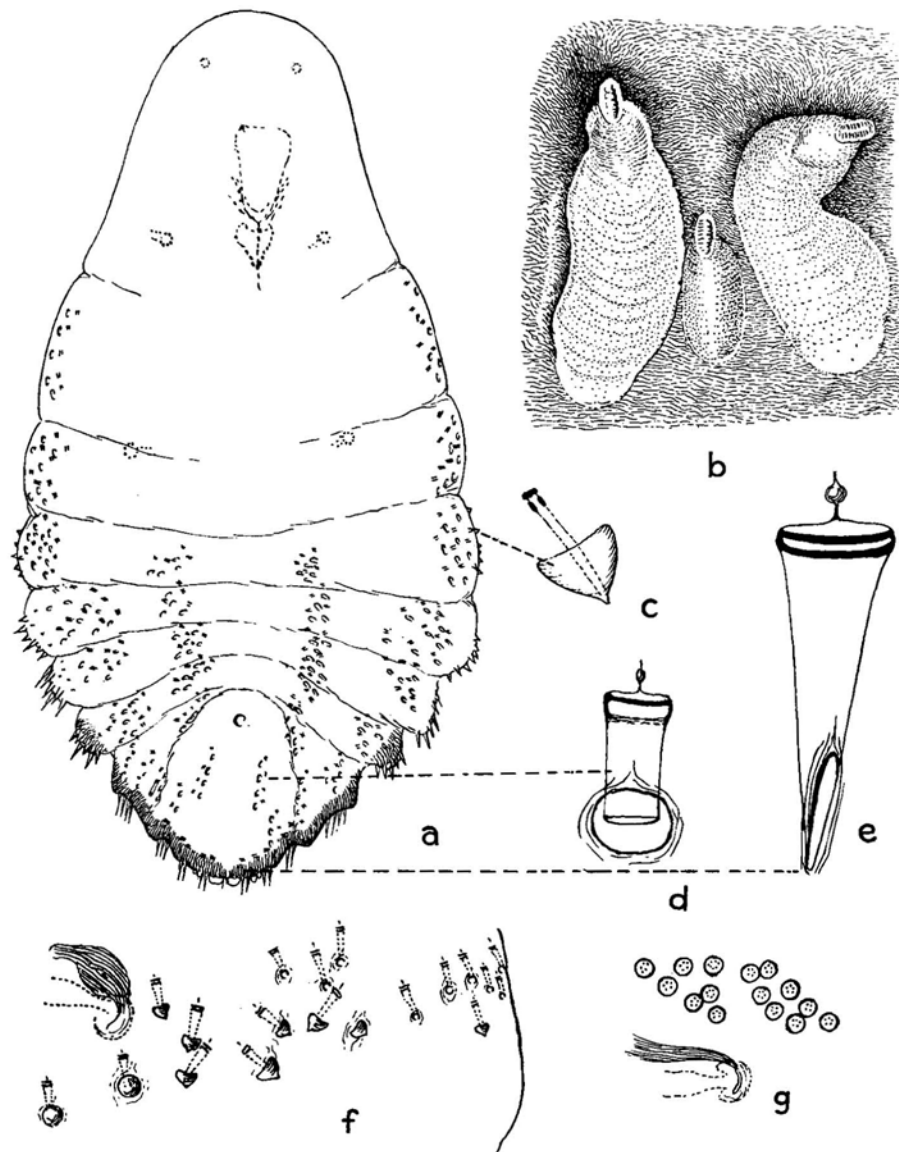


FIGURE 2.—*Lepidosaphes marginata* new species: *a*, general appearance of adult female; *b*, habit of scales; *c*, gland tubercle; *d*, dorsal tubular duct; *e*, tubular duct of pygidial margin; *f*, area near posterior spiracle; *g*, area near anterior spiracle.

Genus LEPIDOSAPHES Shimer

Lepidosaphes marginata, new species (figs. 2, 3).

Scale of the female (fig. 2, *b*) about 2 mm long, flat and of much the same width throughout, of a light straw color with silvery margins. Scale of the male similar in color, relatively more convex.

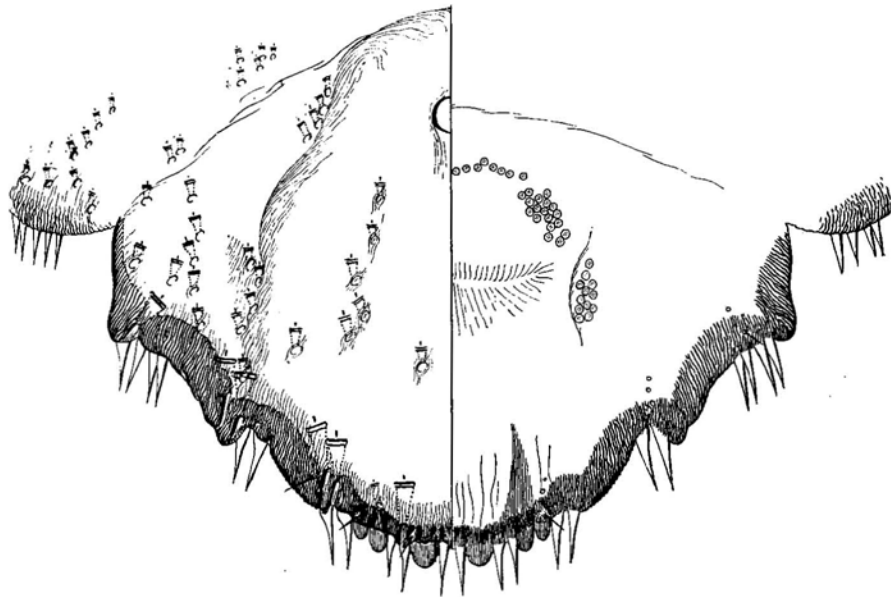


FIGURE 3.—*Lepidosaphes marginata* new species: pygidium of adult female.

Female, on the slide, about 1 mm long, of the typical form and characters of the genus, distinguishable most conspicuously by the dark, sclerotized margin of the pygidium (fig. 3), and the next preceding abdominal segment. Pygidium with the normal arrangement of lobes, gland spines, and large marginal tubular ducts. Ducts of the dorsum of the pygidium few, definitely smaller than those of the margin (compare fig. 2 *d, e*) but not minute. Circumgenital pores in the usual five groups, the median and anterior lateral groups tending to fuse. Pre-pygidial segments with a lateral zone of ducts which tend to be slightly smaller than those of the dorsum of the pygidium, these extending to the metathorax, and the four pre-pygidial abdominal segments each with a cluster of similar ducts on each side of the meson. All the abdominal segments anterior to the pygidium beset laterally with gland spines, those of the first three segments tending to be very small and conical and occurring chiefly on the ventral side. Posterior spiracle (fig. 2, *f*) with a series of small, tubercle-like gland spines and minute tubular ducts leading to the lateral margin of the body. Anterior spiracle with an irregular cluster of accompanying disc pores. Antennae presenting no distinctive features. Margins of the abdominal segments entirely without sclerotized spurs. Cephalic region without sclerotized points or peculiar developments.

Nymphal female resembling the adult in possessing the sclerotized margin of the pygidium.

Hivaoa: Matauuna [Matuuna], altitude 3,700 feet, March 3, 1930; Mount Ootua, summit, altitude 3,050 feet, February 13, 1929, on *Reynoldsia (tahitensis?)*; Matauuna [Matuuna], altitude 3,000 feet, March 2, 1930, on *Cheirophyllum platyphyllum*, Mumford and Adamson. It causes a distinct pitting of the leaves. Type from the first-named host and locality.

It is difficult to select out of the many described species assigned to *Lepidosaphes* any which very closely resembles this, although it is a very typical member of the genus in the strictest sense. The heavily sclerotized pygidial margin is a conspicuous recognition character. Whether the species is peculiar to the Marquesan Islands remains to be determined; it is not impossible that it has already been recorded under some other name, many of the species of the genus being quite unrecognizable from the existing descriptions.

Genus ASPIDIOTUS Bouché

Aspidiotus lataniae Signoret.

Hivaoa: Punaei, May 2, 1928, on undetermined host, Mumford and Adamson. A familiar and widely distributed tropical and subtropical species which is generally recorded as *Aspidiotus cydoniae* Comstock.

Aspidiotus destructor Signoret.

Tahuata: Hanatetena Valley, June 1, 1930, on coconut, LeBronnec and Tauraa. The common pest of coconut throughout the eastern tropics.