THE SPHEGOID WASPS OF THE MARQUESAS ISLANDS*

By

FRANCIS X. WILLIAMS

EXPERIMENT STATION, HAWAIIAN SUGAR PLANTERS' ASSOCIATION

INTRODUCTION

Six named species of sphegoid wasps have been recorded from the Marquesas Islands, *Sceliphron caementarium* (Drury), *Pison hospes* Smith, *Pison tahitense* Saussure, Pison *iridipenne* Smith, *Pison argentatum* Shuckard subspecies *ignavum* Turner, and *Pison impunctatum* Turner. To this list the expedition of the Pacific Entomological Survey now adds a seventh species, namely, *Tachysphex fanuiensis* Cheesman. All of these species are found elsewhere, although *Tachysphex fanuiensis* seems to have a rather limited distribution in the South Pacific.

This meager and commonplace sphegoid fauna differs from that of the Society Islands only in lacking the eighth species, *Oxybelus utoroae* Cheesman[40] from Raiatea. It is comparable also to the sphegoid fauna of Samoa with its nine species, of which four appear to be endemic.[41] The Sphegoidea of the more extensive though equally oceanic Hawaiian islands comprise 42 known species—with a few additional varieties—of which 29 or 30 are found nowhere else in the world, whereas the remaining 12 or 13 species are recent to very recent immigrants, 3 of them, *Dolichurus stantoni* (Ashmead), *Larra luzonensis* Rohwer, and *Notogonidea subtessellata* (Smith) have been purposely introduced from the Philippine Islands. The sphegoid fauna of Fiji, which is continental, is apparently very limited, and I can find but seven species listed therefrom.[42]

Among the immigrant sphegoid wasps the genus *Pison,* a group that is best represented in the Australian and Oriental regions, is dominant in each of these several archipelagoes. Wasps of this genus and some others, as *Sceliphron* and *Trypoxylon,* employ mud for building their cells, which they occasionally affix to such transportable objects as boards and furniture. Indeed, *Sceliphron* has been known to build its nests on ships in port. These several wasps store their cell-nests, without too much discrimination as

[40] Cheesman, L. E., A contribution towards the insect fauna of French Oceania, pt. 2: Ann. Mag. Nat. Hist., 10th ser., vol. 1, pp. 171-179, 4 figs., 1928.

[41] Perkins, R. C. L., and Cheesman, L. E., Trypoxylonidae: Insects of Samoa, pt. 5, Hymenoptera. fasc. 1, pp. 26-28, 1928.
Williams, F. X., Larridae: Insects of Samoa, pt. 5, Hymenoptera, fasc. 1, pp. 33-39, 1928.

[42] Turner, R. E., The Hymenoptera of Fiji: Ent. Soc. London, Trans., Sphegidae, pp. 337-338, 1918-1919.
Williams, F. X., Tachysphex vitiensis, new species: Studies in tropical wasps—their hosts and associates, Bull. Experiment Sta., Hawaiian Sugar Planters' Assoc., Ent. ser., no. 19, pp. 166-168, 1928.

* Pacific Entomological Survey Publication I, article 15, issued November 25, 1932.

to species, with spiders, arthropods that are always available even within the artificial environment of seaports. It is easy to see, then, how wasps such as these may be carried about through commerce.

FAMILY SPHEGIDAE

Sceliphron caementarium (Drury).

Sphex caementaria Drury: Illus. Nat. Hist. I, p. 105, 1770.

Hivaoa: Atuona, July 16, 1929, 1 female; same locality, near sea level, July 22, 1929, 1 male; Tahauku, July 10, 1929, 1 male; Mumford and Adamson.

Fatuhiva: Omoa [Oomoa] Valley, near sea level, August 22 and September 26, 1930, 4 females, LeBronnec.

Uahuka: Haave [Haavei] Valley, sea level, March 19, 1931, 1 female; Hanaehi Valley, seashore, March 10, 1931; LeBronnec and H. Tauraa.

Immature stages and spider prey, from Atuona, Hivaoa, July 16, 1929; Teavamatahi, Uahuka, 730 feet, March 19, 1931, LeBronnec and H. Tauraa; Omoa [Oomoa] Valley, Fatuhiva, 650 feet, September 16, 1930, LeBronnec; Hanaehi Valley, Uahuka, seashore, March 10, 1931, LeBronnec and H. Tauraa (wasp grubs); Atuona, Hivaoa, February 12, 1928, Mumford and Adamson (spiders).

This large and common American mud-dauber is widely distributed in North America and Central America and occurs also in the Society Islands, Hawaii, Madeira, Cuba, and Barbados. It has not been reported from Samoa or Fiji.

FAMILY LARRIDAE

Tachyspex fanuiensis Cheesman (fig. 43).

Tachyspex fanuiensis Cheesman: Ann. Mag. Nat. Hist., 10th ser., vol. 1, pp. 172-175, 1928.

Hivaoa: Hanaheka [Tanaeka] Valley, altitude 1,450 feet, June 4, 1929, 6 males, Mumford and Adamson.

Recorded by Cheesman from the Tuamotus, Fakarava; Society Islands, Tahiti, Raiatea, and Borabora.

A finely sculptured black wasp about 6 to 10 mm. long.

Miss Cheesman observed this *Tachysphex* in the Society Islands, where it was preying upon *Blatella notulata* (Stål), a small cockroach, described from Tahiti in 1861, that is active in the daytime. From a burrow of the wasp Miss Cheesman secured two dead cockroaches, upon one of which was fastened the wasp's egg.

Wasps of the genus *Tachysphex* usually prey upon saltatorial Orthoptera, but a European species, *Tachysphex lativalvis* Thomson, and its variety *gib-*

bosa Kohl, are also known to store their nests with cockroaches of the genus *Ectobius*. Recently Mr. H. Hacker of the Queensland Museum, Brisbane, very kindly sent the writer a large, rather coarsely sculptured *Tachysphex* labeled "Brisbane, 5/1/1914, H. Hacker" and "caught on the wing with a cockroach in mandibles." Hence this interesting departure from the usual type of prey in the genus is rather widespread, though rare.

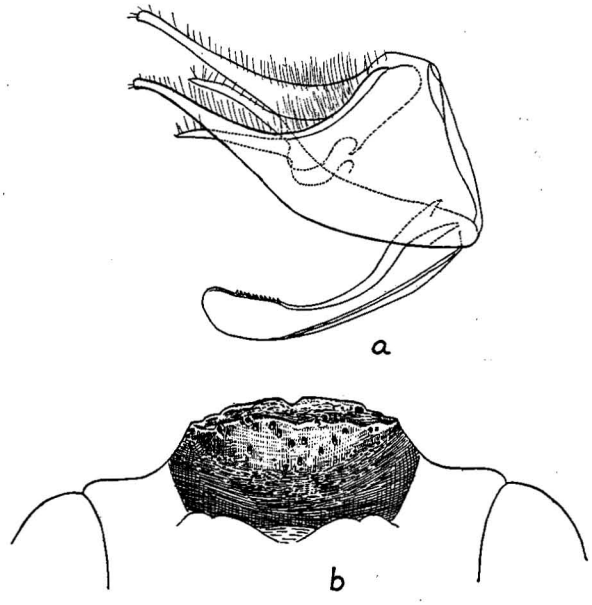

FIGURE 43. *Tachysphex fanuiensis* Cheesman: *a*, male armature, slightly inclined from lateral view, from Tahiti, Society Islands: *b*, clypeus of female from Moorea, Society Islands.

FAMILY TRYPOXYLONIDAE

Pison hospes Smith.

Pison hospes Smith: Linn. Soc. Zool., Jour., vol. 14, p. 676, 1879.

Hivaoa: Tahauku, near shore, July 10, 1929, 2 males, Mumford and Adamson.

Tahuata: Hanamiai Valley, altitude 500 to 1,000 feet, May 28, 1930, 1 female; Pahukea Ridge, altitude 1,100 feet, July 25, 1930, 1 female; Hanateio Valley, altitude 1,000 feet, July 23, 1930, 1 female; LeBronnec and H. Tauraa.

Fatuhiva: Teatapu, altitude 1,400 feet, August 19, 1930, 1 female, LeBronnec.

Previously recorded from Cocos-Keeling, Singapore, Australia, Fiji, Samoa, Society Islands, Hawaii.

Pison tahitense Saussure.

Pison tahitense Saussure: Reise Novara, Zool., 2, pt. 1, pp. 65-66, 1867. (*Pison rechingeri* Kohl, 1908.)

Hivaoa: Aimoa, altitude 1,660 feet, March 7, 1929, 1 male, Mumford and Adamson.

Fatuhiva: Omoa [Oomoa] Valley, near sea level, September 22, 1930, 1 female, LeBronnec.

Previously recorded from Fiji, Samoa, Society Islands, Ellice Islands, Australia(?).

Pison iridipenne Smith.

Pison iridipenne Smith: Linn. Soc. Zool., Jour., vol. 14, p. 676, 1879.

Hivaoa: Atuona Valley, altitude 100 feet, February 25, 1929, 1 female, Mumford and Adamson.

Tahuata: Kiinui Valley, altitude 1,100 feet, June 16, 1930, 1 female, LeBronnec and H. Tauraa.

Nukuhiva: Teivipakeka, altitude 2,400 feet, October 16, 1929, 1 female, Mumford and Adamson.

Uahuka: Hane Valley, seashore, March 10, 1931, 1 female, LeBronnec and H. Tauraa.

Uapou: Hakahetau, December 31, 1929, 1 female, R. R. Whitten.

Previously recorded from Australia, Fiji, Samoa, Society Islands, Tuamotus, Hawaii.

I have not seen males of this species from the Marquesas, but all those that I have examined from Hawaii (four males in the collection of the Experiment Station, Hawaiian Sugar Planters' Association, and one male from Bernice P. Bishop Museum), as well as two males from Tahiti, Society Islands, in the collection of the Pacific Entomological Survey, show the usual large transverse tubercle on the third abdominal sternite, as well as a quite small tubercle on the fourth abdominal sternite.

Pison ignavum Turner.

Pison ignavum Turner: Zool. Soc. London, Proc., pp. 511-512, 1908.

Hivaoa: Atuona, March 9, 1930, 1 male; Atuona Valley, March 9, 1930, 7 females; Mumford and Adamson.

Tahuata: Hanamiai Valley, altitude 500 to 1,000 feet, May 28, 1930, 1 female; Vaitahu Village, May 29, 1930, 1 female; Hanatetena Valley, altitude 400 feet, July 28, 1930, 1 female; LeBronnec and H. Tauraa.

Fatuhiva: Omoa [Oomoa] Valley, near sea level, September 26, 1930, 1 female, LeBronnec.

Nukuhiva: Tovii [Toovii], altitude 2,500 feet, August 4, 1931, 2 females, LeBronnec and H. Tauraa.

A female with spider prey (Attidae) taken at Atuona Village, Hivaoa, August 4, 1929, and another on April 6, 1930, Mumford and Adamson.

Previously recorded from Australia, Fiji, Samoa, Society Islands.

Although originally described as an independent species, it has more lately been regarded as a subspecies of *P. argentatum.* It is quite specifically distinct from *P. argentatum* from Hawaii in having the clypeus in the female slightly bilobed—by reason of its median marginal depression—, in the coarser puncturation and propodial striae, and in being less sericeous than *P. argentatum.*

Its nesting habits are about as in *P. argentatum.*

Pison impunctatum Turner.

Pison impunctatum Turner: Ann. Mag. Nat. Hist., 8th ser., vol. 9, pp. 200-201, 1912 (female, New Guinea).

This species was not taken by the Pacific Entomological Survey. It was secured in 1925 on Hivaoa and Fatuhiva on the St. George Expedition.[43]

Recorded also from New Guinea and the Society Islands.

Allied to *P. iridipenne.*

[43] Cheesman, L. E., A contribution towards the insect fauna of French Oceania, pt. 2: Ann. Mag. Nat. Hist., 10th ser., vol. 1, p. 176, 1928.