

specimens from Old Point Comfort were found on the beach of Chesapeake Bay swept ashore by the waves.

A NEW SCELIONID FROM QUEENSLAND, AUSTRALIA, PARASITIC ON ACRIDIID EGGS, WITH DIAGNOSIS OF AUSTRALIAN SPECIES¹:

(Hymenoptera; Proctotrypoidea.)

By A. A. GIRAULT.

FAMILY SCELIONIDAE.

SUBFAMILY SCELIONINAE.

Genus SCELIO Latreille.

1. *Scelio ovi*, new species.

Normal position.

Female.—Length, 4 mm. more or less.

The same in all respects to *Scelio australis* Froggatt, but the scape, pedicel, and sometimes the first funicle joint of the antenna are reddish-brown like the legs instead of being black: also the venation differs in that the stigmal vein of *australis* is somewhat shorter, straight but at its extreme tip bent: this vein in *ovi*, however, is longer, its whole length slightly convexly curved, the convexity distad; the blunted end of the vein in *australis* points proximo-caudad; in *ovi*, the extreme end of the vein has a slight blunted appearance which is turned slightly distad. The wing venation also differs in that there is a distinct stigmal spot in *australis*, round and covering the basal half of the stigmal vein and the apex of the marginal, while in *ovi* the spot is elongate, does not involve the marginal vein, though originating at the base of the stigmal, but follows the latter on each side for a half, two-thirds, or sometimes, its whole length; it is thus less clear cut than in *australis*. The sculpture of both species is practically the same; ventrad, the proximal half of the second (first body) segment of the abdomen is punctate; the striations of the same segment dorsad are coarser than that of the following segments; the metathorax at the mesial region is sulcate, the sulci with transverse divisions; laterad, in the dorsal aspect it is densely punctate and covered with whitish pubescence. This refers to both species. The antennæ are 12-jointed. The coxæ are darker, the mandibles bidentate, the teeth acute; the proximal funicle joint is always suffused with brownish (*ovi*).

¹ Contribution No. 1 from the Entomological Laboratory of the Sugar Experiment Stations of Queensland, Mackay.

From the species *choetocetes* Froggatt, *ori* differs in having the proximal funicle joint of the antenna red, the wings darker and all the abdominal segments in the dorsal aspect longitudinally striate; also probably in venation, but the description does not allow comparison.

From 15 specimens, 2-3 inch objective, 1-inch optic, Bausch & Lomb.

Male.—The same, but differing in abdominal and antennal characters. Thus, the abdomen is blunt at extreme apex; the antennæ are 10-jointed, less compressed fusiform, but the middle of the flagellum widest; the first funicle joint is not so long and the following joints not so wide; the scape and pedicel are nearly black, the first three funicle joints with more brownish but still dark, the remaining joints reddish-brown like the legs. Antennæ with very fine, close white pubescence. Joint 3 of funicle widest, cup-shaped, the second joint intermediate in length between the first and third.

From two specimens, the same magnification.

Described from 15 female and 2 male specimens reared from an acridiid egg-mass found in alluvial soil in a cane field adjoining the Mulgrave River at Nelson (Cairns), North Queensland, April 8 to 10, 1912; also 2 females captured on the surface of the ground along a bare strip in a paddock or meadow near acridiid egg-masses; the same general locality, dark compact soil, April 19, 1912. The first eggs mentioned were most likely those of *Locusta danica* Linnaeus, which has been very numerous at Nelson the past several months, but *Locusta australis* has also been mixed in with it to a certain extent.

Subsequently the following specimens were found in my collections: Five females captured from the surface of the ground along a road, April 29, 1912; a female June 10, 1912, at light in the evening at a private residence; a pair taken by sweeping in a forest at Nelson, February 16, 1912; a female similarly captured, January 29, 1912; three males captured with a female of *australis* from the ground in a meadow, Nelson, June, 6, 1912; and a female from the ground among the young of *danica*, May 6, 1912.

Habitat: Australia—North Queensland, East Coast (Cairns District).

Types: No. Hy / 989, Queensland Museum, Brisbane, 2 males 2 females, tag mounted.

Cotypes: Catalogue No. 15250, U. S. National Museum, Washington, D. C., 4 females remounted on tags from alcohol.

2. *Scelio australis* Froggatt.

Scelio australis Froggatt, 1910, Farmer's Bulletin No. 29, Department of Agriculture, New South Wales, Sydney, pp. 34-35, figures 1, 1a.

This species was described from the Herbert River, Queensland, from specimens reared from the eggs of *Locusta australis*. In a forest near Nelson, North Queensland, I captured a male and a female specimen of this species by sweeping grass, April 19, 1912. Its original description does not give all the necessary specific characters which I have noted in foregoing. Thus, for this genus, in order to describe species recognizably it is necessary to give not only the sculpturing in detail, but also the degree of wing fumation, the shape of the stigmal spot, the details of the venation and those of coloration. A variation in the coloring of the antenna seems to be correlated with a variation in the venation. Of itself, I think one would hesitate to consider a species of this genus distinct did it differ from another only in the fact that the first two or three antennal joints were of a different color, since a variation of this kind would be expected to occur with many of the species.

I describe the male herewith:

Like the female, but differing in the following characters: The antennæ are as in the male of *ovi*, but differ in coloration in that they are brown at base, only the first two funicle joints and the pedicel being darker brownish and the tip of the scape blackish; they are alike structurally. One male specimen, captured later, was only two-thirds the size of the others. Later, I found *australis* common at Nelson, usually accompanying *ovi*. The following specimens were captured: Two females, four males from surface of the ground in a meadow, May 18, 1912; a female June 6 in the same place; three females on the ground along a road, April 29, 1912; two females May 6, on the ground mingled with young *danica* and finally two females from the ground, along the grassy borders of a tram-line at Nelson, mingled with the young of *danica*, May 18, 1912.

In the original description of *australis*, Froggatt (loc. cit. p. 34, ¶ 7) seems to have made a mistake in this statement: "the thoracic segments, which are well defined, are thickly marked with fine parallel striæ on the undersurface; these striæ are shorter, as there is a smooth shining patch at the junction of each segment." The abdomen was doubtless in mind, since the ventral thorax is like the dorsal, the abdomen striate in my specimens, while both the figure of Froggatt and his statements to me in a letter bear this out.

3. *Scelio froggatti* Crawford.

This species was described in the Proceedings of the United States National Museum (Washington, D. C., U. S. A.), vol. 41, 1911, from Childers, Queensland. On December 24, 1911, while sweeping along the floor of a forest on the coast of North Queens-

land, opposite Double Island (10 or more miles north of Cairns) I captured a male *Scelio* which is undoubtedly this species. It is both like *ovi* and *australis*, but the striation along the dorsal and ventral aspects of the abdominal segments is rugulose, the striae curved and interlacing around punctures and hence shorter and not nearly parallel; the antennae in this specimen are wholly honey-yellow, but otherwise like those of the males of *ovi*. The strong striae converging toward the mouth are conspicuous; the proximal tarsal joint in the posterior legs is decidedly shorter than with either *ovi* or *australis*, and the size is smaller (at least with this specimen). The parapsidal furrows distinguishable, as distinct as in the other species noted (*ovi* and *australis*).

There are six species of the genus now known from Australia, all parasitic upon acridiid eggs. I give herewith a diagnosis of them, constructed from the literature and the foregoing specimens. The three species occurring in Queensland are distinct from the three known from New South Wales and this is expected from the difference in latitude.

KEY TO THE FEMALES OF THE AUSTRALIAN SPECIES OF *SCELIO* LATREILLE.

Black, the legs reddish brown or yellow, the fore wings infuscated.

I. Head smooth, polished, with a few scattered, fine punctures or a few converging striae.

Scape, pedicel, and at least first two or three joints of funicle fulvous; segments 1 and 2 of abdomen longitudinally striate, segment 3 finely reticulate, segment 4 with similar sculpture at base, the succeeding segments hardly sculptured; ventral segment 3 of abdomen with punctures on each side of meson and segment 4 with the same punctures but covering a smaller space. Face without striae

pulchellus Crawford

Scape, pedicel, proximal and apical funicle joints fulvous; abdominal segments all finely, longitudinally striate, but the fifth segment with a median smooth area and ventrad the segments all having the middle of each smooth; face with some striae; abdomen dark brown.....*fulgidus* Crawford

II. Head rough, rugose or rugoso-punctate for a large part, especially at the vertex.

(1) Abdomen wholly longitudinally striate or rugulose, dorsad and ventrad, except maybe medially and at the incisions of the segments.

Abdomen longitudinally striate; parapsidal furrows distinct.

Antennæ wholly black.

Stigmal vein straight but bent at its extreme tip, the blunted end pointing proximo-caudad. Stigmal spot distinct, round, covering basal half of stigmal vein and apex of marginal.....*australis* Froggatt

Antennæ black with the scape, pedicel, and, usually, the first funicle joint reddish-brown.

Stigmal vein slightly, convexly curved along its whole length, the tip very slightly turned distad.

Stigmal spot elongate, not involving the marginal vein.....*ovi* Girault

Abdomen longitudinally rugulose.

Antennæ wholly dark brown; parapsidal furrows more or less obliterated.....*froggatti* Crawford

(2) Abdomen only partly longitudinally striate, some of the segments finely punctate in the dorsal aspect.

Segments 3, 4, and 5 of the abdomen covered with fine, close, shallow punctures, giving them a shagreened appearance; fore wings lighter than usual; scape and pedicel of antennæ reddish brown. Beneath, abdomen finely longitudinally striate.....*chortoicetes* Froggatt

SUMMARY OF THE HOSTS OF SCELIO LATREILLE IN AUSTRALIA.

| Species. | Host. | Authority. |
|-----------------------------------|--|---|
| <i>australis</i> Froggatt..... | <i>Locusta australis</i> Brunner, v. W..... | Froggatt, <i>l. c.</i> , p. 35. |
| <i>chortoicetes</i> Froggatt..... | <i>Chortoicetes terminifera</i> Walker..... | Froggatt, <i>l. c.</i> , p. 36 |
| <i>froggatti</i> Crawford..... | <i>Gastrinagus musicus</i> Fabricius. ¹ | Froggatt, <i>in litt.</i> , May 6 1912. |
| <i>fulgidus</i> Crawford..... | <i>Chortoicetes terminifera</i> Walker..... (given as <i>Pachylytus australis</i>) | Crawford, <i>l. c.</i> |
| <i>ovi</i> Girault..... | <i>Locusta danica</i> Linnæus..... | See above. |
| <i>pulchellus</i> Crawford..... | <i>Chortoicetes pusilla</i> Walker..... | Crawford, <i>l. c.</i> |

¹ From what I can gather this appears to be a synonym of *Locusta danica* Linn. In the original description of the parasite, Crawford gave by mistake (as Mr. Froggatt informed me by letter) *Chortoicetes terminifera* as the host.

Though so far removed from the scene of actions of other species of the genus, yet the habits are the same in Australia as in North America, for instance.

I have to thank Mr. Walter W. Froggatt, Government Entomologist, New South Wales, for his kindness in furnishing me with Crawford's description of the parasite.

