oscutellum bronzy; front and middle femora nearly black with very slight metallic lustre; trochanters and femero-tibial joints yellow; tips of all tibiæ yellow; all tarsi yellow; mesopleura brilliant metallic blue; metapleura shining metallic green.

Male.—Length, 0.8mm, expanse of wings, 1.9mm, greatest width of forewings, 0.35mm; differs from female in its more somber color, the general effect being brown rather than metallic although the mesonotum and head are somewhat lustrous; the antennæ are cylindrical, the segments well separated subcylindrical and furnished with short, finely distributed hair. The general color of the legs is darker; the bands at the joints being narrow and darker; hind tarsi dusky, middle and front tarsi yellow except last joint.

Described from one male and one female reared from *Siphonophora avenæ* by F. M. Webster, at Lafayette, Ind.

This species comes rather close to *Encyrtus clavellatus* Dalman reared in Europe from Cecidomyid galls on willow, but is specifically distinct.

AN AUSTRALIAN HYMENOPTEROUS PARASITE OF THE FLUTED SCALE.

By C. V. Riley.

We have just received from Mr. F. S. Crawford, of Adelaide, the first Hymenopterous parasite of Icerya yet found in Australia. It is

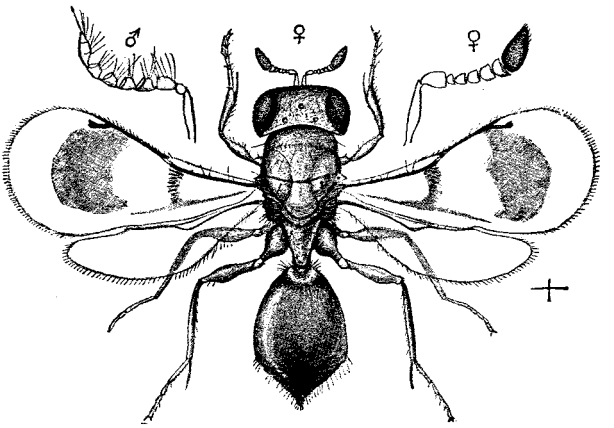

Fig. 54.—*Ophelosia crawfordi*, enlarged (original).

a very interesting form belonging to a new genus, and as it will doubtless become an important factor in the life-chances of Icerya, and it will be convenient to refer to it definitely by name, we take this occasion to characterize it. Its nearest relative is *Dilophogaster californica* Howard, which breeds rapidly in California and is a noted enemy of the Black Scale (*Lecanium oleæ*). So valuable a species is this last that Professor Comstock found that on some trees 75 per cent of the scales were destroyed by it, while in no case was the scale found without its attendant destroyer. Moreover, Mr. Coquillett writes us that in 1889,

at Orange, Cal., fully 80 per cent. of the black scales were killed by this parasite.

From these facts it seems probable that the discovery of the new insect will prove important and we have initiated efforts to secure living specimens from Australia. The few facts which Mr. Crawford gives concerning it we quote from his letter of November 24, 1889:

"I received some three months ago some Icerya from a place some 50 miles South of Adelaide, the owner of the orchard not having seen anything of the kind before and wanting to know what they were. These I placed as usual in a bottle loosely stoppered with with cotton wool. With the Icerya was a Chrysopa larva, which for some weeks was feeding on the eggs. One day on examining it I discovered several hymenopters (Proctotrupidæ?), the female yellowish brown, the male almost black. On examination I found that many might have escaped through the cotton stopping being insecure, but I suppose that I have bred about thirty since. It is strange that this is the only instance of a Hymenopterous parasite of the Icerya yet discovered in South Australia. I send you a few of these under separate cover. I presume the small black insect is the male. * * *

Since the following description was drawn up we have received a report* by Mr. Henry Tryon, assistant curator of the Queensland Museum at Brisbane, in which he describes, without name, a Chalcidid parasite of Icerya which he says is very common about Brisbane, and which he believes is responsible for the rarity of Icerya in that vicinity. A careful perusal of his description leads us to believe that he had our insect before him; but as he has proposed no name ours will hold. It is very encouraging to learn that the species is so abundant.

OPHELOSIA, n. g.

Closely resembles in habitus *Dilophogaster* Howard (See Ann. Rept. Dept. Agr., 1880, p. 368, where it is described as *Tomocera*, subsequently changed to *Dilophogaster* on account of the preoccupation of *Tomocera* in *Thysanura*), with which it agrees in many characters, but from which it is sharply defined. The antennal peculiarities are identical in the two forms, viz: The simple, clavate, 10-jointed female antennæ, and the compressed, serrate, hairy, 9-jointed male form. The wings in *Ophelosia* differ markedly, as follows: The sub-marginal vein is not curved downward; the marginal is more than twice as long as stigmal; just below the bend of the sub-marginal in the female is a broad patch of very stout bristles arising from the wing surface. The petiole of the abdomen is nearly as long as the width of the metascutum; the fimbriæ of the callus are very dense, but short. The tufts of hair at base of abdomen are sparse. The hind tibiæ are furnished at tip with a long, slender, slightly-curved spine, nearly as long as first tarsal joint, while in *Dilophogaster* it is entirely unarmed.

O. CRAWFORDI, n. sp.

Female.—Length, 2^{mm}; expanse, 4^{mm}. General color honey-yellow, somewhat darker dorsally than ventrally. Head: face and vertex strongly transverse-rugose; ocelli concolorous; eyes darker; antennæ with club more dusky and with joints 2–6 of flagellum paler than the rest. Thorax: pronotum and mesonotum plainly shagreened, with sparse, appressed concolorous pile; mesoscutellum faintly striate; lateral parts of mesoscutum strongly rugose, the centre faintly so; the four mesoscutellar piliferous tubercles as also the hairs, black, a small spot behind each tegula and the lateral parts of the mesoscutum black or blackish; fimbria of metascutum white;

*This report will be reviewed at length in the next number of INSECT LIFE.

wings with a narrow curved transverse dusky band reaching from the bend of the submarginal vein to hind border of wing including the patch of wing bristles; also with a large nearly circular dusky shade below stigma and reaching nearly across wing; legs uniformly honey-yellow with the coxæ sometimes brownish above. Abdomen with basal joint dark brown, and more or less brown at sides and near tip.

Male.—Slightly smaller; sculpture identical throughout. Pile very inconspicuous, dark. General color black, shining; all legs honey-yellow; the upper sides of the hind femora and tibæ somewhat darkened; hind coxæ black; front and middle coxæ honey-yellow at tip; antennæ with the scape honey-yellow, and the funicle brownish; wings perfectly hyaline.

Described from four female and two male specimens reared by F. S. Crawford, at Adelaide, from specimens of *Icerya purchasi* received from S. Australia, 50 miles south of Adelaide.

EXTRACTS FROM CORRESPONDENCE.

The Orchid Isosoma in America.

A friend of mine, by occupation a florist, has applied to me for information concerning an insect pest affecting the genus of orchids known as *Cattleya*, more especially *C. trianæ*, *eldorado*, and *gigas*. Said insect belongs to a group I have studied but very little, and as the matter is of general interest I appeal to you.

During the resting season of these plants the pseudo-bulb will sometimes be observed to suddenly start into activity, increasing rapidly in size and becoming swollen spherically. On examination this enlargement is found to contain a cavity in which are several (3 to 8) insects. Those which I have had an opportunity of studying were in the last stages of development; I inclose examples in the light-colored pupa stage, the dark-colored stage preparatory to transformation, and the adult. They make their escape by gnawing a hole from the cavity sufficiently large to allow their egress. The size of the cavity is dependent on the number and state of development of its inhabitants. The larvæ have been described to me as "little white grubs." All the adults that I have seen have had clear wings, but my friend states that is unusual; he has generally found them with dark wings, apparently identical. (I expected to find a Cynips, but is not this a Chalcid?) He thinks the pest is imported with the plants (which mostly come from New Granada), and finds comfortable quarters and a field for activity in greenhouses; he has found them in plants recently imported, together with unmistakable signs of their former presence.

Their depredations are followed by disastrous results. Of course no flowers are to be expected from the bulb attacked, and this abnormal growth taking place during the resting season so saps the vitality of the plant that it behaves as if it were attacked by slow consumption, the leaves lose their vigor and consistence, wither, fade, and gradually die in from one to two years after being seriously attacked.

Any information you can give me concerning this pest, its name, life history, habits, remedies, etc., will be very gratefully received. Will send you sketches of its work if desired.—[Albert P. Morse, South Natick, Mass.

REPLY.—Your letter of November 29, together with specimens of the Chalcidid reared from the pseudo-bulb of *Cattleya*, has been received. These specimens form a very desirable addition to the collection of the National Museum, for the reason that we already possessed the swellings from which they issue, and which were given us a few years since in France. Prof. J. O. Westwood, in the Transactions of the Entomological Society of London for 1882, figures and describes what is probably the same species under the name of *Isosoma orchidearum*. The specimens which you send us