

Fruit Fly Parasites Collected in Queensland by N. L. H. Krauss in 1949
(Hymenoptera: Braconidae)

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Amongst the fruit fly parasites sent in from Queensland, Australia, by N. L. H. Krauss, there have been found several which apparently represent undescribed species, in addition to others that are already well-known. The new species are described herewith.

Opus deeralensis n. sp.

Female. Length of body about 4.5 mm.; smooth and shining, finely clothed with silvery hairs; ochraceous, sparsely punctuate with microscopically fine setiferous punctuations, face closely beset; eyes, ocelli, ovipositor sheath, antennae (except the lower side of scape, apex of pedicel and base of 1st segment of flagellum, which are brown), and tips of mandibles and tarsi black or blackish.

Head transverse, nearly twice as wide as long, wide between the eyes, which are short oval and convex, ocelli near the middle of the vertex arranged in the form of an equilateral triangle and with a depression on the outer face which is margined, distance from lateral member to margin of eye three times that between centers of lateral members; antennae longer than the body, inserted not too close together (not much further removed from eye than from each other), the sockets deep with elevated rim, 45-segmented, scape and pedicel stout, the flagellum filamentous; face wider than long, more or less convex, clypeus distinct, anterior margin very obtusely angulate, hind margin curved to semicircular form; cheeks fairly wide, separated from face by clypeocular groove; mandibles stout, curved and apically toothed, base not nearly as wide as distance to eye along clypeocular line; maxillary palpi apparently 5-segmented, long, labial 3, short.

Thorax robust, half again as long as deep or wide and width equalling that of head, sides of the pronotum deeply sulcate, the groove costate on posterior face; mesothoracic scutum convex, with deep foveolate parapsidal furrows extending posteriorly from anterior lateral angles, converging and ultimately uniting at the head of a short median longitudinal groove which runs to the posterior margin; transverse prescutellar sulcus median and only two-thirds width of scutellum, costate and divided into four deep fossae, scutellum triangular, slightly convex on top, declivous at sides; metanotum depressed; propodeum convex, declivous behind, irregularly areolate, sculpture coarse for the most part, sides rather hairy along with the mesopleura, the latter with a costate groove anteriorly and a fairly large pitted fossa posteriorly at about middle depth; stigmata oval and small.

Abdomen ovate, somewhat compressed apically, the sides anteriorly collapsed, 1st tergite longitudinally striate, also longitudinally bicarinate medially, sides strongly margined as well, separated from following tergites, which are generally smooth and polished (anterior part 2nd faintly striate), by a deep sulcus; 1st and 2nd tergites with appressed silvery hairs, following ones with a transverse line of hairs close to posterior border; ovipositor exerted and like the antennae, longer than the entire body. Legs rather slender although the femora, especially the hind femora, are rather stout. Hind tibiae and tarsi blackish. Wings infumate, veins fuscous black, radius in anterior wing arising at middle of stigma, which is lanceolate; 2nd abscissa of radial vein twice as long as 1st and nearly as long as 1st cubital cross-vein, which is interstitial with the recurrent nervure; 2nd cubital cell wider than high, i.e., longer in the horizontal direction than in the vertical, although the 2nd abscissa of the cubital is half again as long as the 2nd abscissa of the radius and about equal in length to the 1st abscissa if not a little longer. Post-nervellus present in hind wings.

Male similar to the female except in the sexual characters.

Described from numerous specimens reared from *Dacus* (*Strumeta*) *laticaudus* Hardy¹ pupae ex *Planchonella*, Deeral, Australia. N. L. H. Krauss, collector. Type in collection Hawaiian Entomological Society.

What appears to be the same species was reared from fruit fly pupae ex *Endiandra tooram* and *Acmena macrocarpa* collected in the same locality.

Opius perkinsi n. sp.

Female. Length of body about 3.25 mm.; smooth and shining, finely clothed with silvery hairs; color of body ochraceous, fore and mid legs yellowish, abdomen and hind legs brownish, head also, the color deepening above and behind until almost ebony black on the vertex, post-genae, temples and occiput; eyes, ocelli, antennae, sheaths of the ovipositor also black.

Head transverse, width three times length, wide between the eyes, which are convex, bulging, and well in front; ocelli near the middle of the vertex, the members arranged in the form of an equilateral triangle, the anterior and lateral members an equal distance apart but the distance from the latter to the border of the eye is twice as great; antennae longer than the body, inserted not too close together on the front of the head where the same merges into the face, the sockets deep with elevated rims which laterally approach the inner border of the eye, 39-segmented, scape and pedicel stout, the flagellum filamentous; face a little wider than long, slightly convex although depressed at the sides beneath the antennal sockets; clypeus distinct, the fossae deep; cheeks rather wide; mandibles stout, curved and apically toothed and black at tips, distance from base to margin of eye along clypeocular line not exceeding basal width; maxillary palpi 5-segmented, long, labial 3-segmented, short.

Thorax robust, nearly as deep as long but not quite as wide, wider than head, however; sides of the pronotum deeply sulcate; mesothoracic scutum without complete parapsidal furrows, same indicated by short, deep and wide fossae extending inward from the anterior-lateral corner and a deep pit on the median line near the posterior border; transverse prescutellar sulcus wide and deep and divided by costae into four pits; scutellum triangular, slightly convex on the disc, declivous at the sides; metanotum with a median knob to the raised anterior margin, excavated behind to form a deep groove or sulcus which is costate or ribbed; propodeum convex, declivous behind and at the sides, indistinctly areolate, on the disc a median longitudinal carina, however, extends backward from the anterior margin to middle where it bifurcates to form a triangular areola with apex directed cephalad, sides of the propodeum along with the mesopleura bearing extensive patches of silvery hairs; latter with a wide costate furrow anteriorly and a rather large shallow pit posteriorly at about middle depth; stigmata small and oval.

Abdomen ovate, somewhat compressed apically, the sides anteriorly collapsed; first tergite widening outwardly so that the apical width is more than twice the basal; two laterally placed longitudinal carinae rim a deep basal excavation and extend posteriorly on the disc nearly the whole length of the tergite, sides of which are also margined; the first tergite is separated from the following tergites by a deep furrow which is interrupted in the middle by a knob-like projection from the 2nd tergite; the following tergites all have a transverse line of hairs near their posterior borders. Ovipositor exerted, nearly as long as the abdomen. Legs rather slender, the femora and tibiae, however, somewhat enlarged. Wings hyaline, veins fuscous, radius of anterior wing arising at the middle of the stigma, which is just a little wider than the 1st abscissa of the radial vein is long, 2nd abscissa three times as long as the 1st and exceeding in length the first cubital cross-vein, which is broken before joining the recurrent nervure, so that the first cubital cell is pedicellate and the 2nd is 5-sided. Nervulus in front wing is only slightly post-furcal; nervus parallelus joins the median below the middle. Hind wing is without post-nervellus.

Male is similar to the female in all except secondary sexual characters.

Described from three female and two male specimens (type, allotype and paratypes) reared from *Dacus laticaudus* Hardy pupae ex *Plancho-*

¹ *Dacus laticaudus* is described on page 87 of this issue of the "Proceedings."

nella collected at Deeral, Australia, 1949; Krauss collector. Types in the Hawaiian Entomological Society collection.

***Opius froggatti* n. sp.**

Female. Length of body about 3 mm.; smooth and shining, finely clothed with silvery hairs; color yellowish brown or light ochre throughout, sparsely punctuate with microscopically fine setiferous punctuations, face closely beset; eyes, ocellar space, flagellum of antennae and part of pedicel, sheath of ovipositor and tips of mandibles as well as those of fore and mid tarsi black or blackish, hind tarsi fuscous.

Head transverse, twice as wide as long, wide between the eyes which are convex and on the front of the head as much as on the side; ocelli near the middle of the vertex, arranged in the form of an equilateral triangle with a depression on outer face, distance to border of eye two to three times that between ocelli; antennae longer than the body, inserted on the front of the head, not too close together at base (much further apart than to border of eye), the sockets deep with elevated rim, 30-segmented, the scape and pedicel stout, the flagellum filamentous; face a little wider than long, convex with median longitudinal ridge between antennal sockets and clypeus, which is prominent and well-marked; cheeks fairly wide; mandibles stout, curved and apically toothed, base as wide as distance to border of eye along clypeocular line; maxillary palpi 5-segmented, long, labial 3-segmented, short.

Thorax robust, nearly as deep as long, width less, but no less than that of head; sides of the pronotum deeply sulcate; mesothoracic scutum without parapsidal furrows, which are represented by faint lines beginning in a deep fossa at the anterior-lateral angle and converging as they extend posteriorly to meet at a deep circular median pit before the posterior margin; transverse prescutellar sulcus divided by costae into eight pits; scutellum triangular, convex on the disc, declivous at the sides; metanotum transverse, elevated medially, depressed laterally; propodeum convex, declivous behind and at the sides, divided by a median longitudinal carina which bifurcates in front and behind, the branches joining lateral carinae so that the disc and sides are more or less enclosed areas; metapleura with a deep, costate, vertical sulcus anteriorly and a large circular, shallow pit posteriorly below middle depth.

Abdomen ovate, somewhat compressed apically, the sides anteriorly collapsed; first tergite strongly bicarinate medially with lateral wings and extreme sides also margined; median area longitudinally striate; following tergites separated from the first by a deep sulcus, which is interrupted medially by an elevation or ridge, the different segments hardly indicated by intersegmental furrows or lines but some of the posterior ones bear a transverse line of fine hairs; ovipositor exerted and only about two-thirds the length of the abdomen; legs fairly slender. Wings hyaline, veins fuscous, radius in anterior wing arising before the middle of the stigma, which is lanceolate; first abscissa extremely short, less than a tenth the length of the second, which is nearly twice as long as the first cubital cross-vein. The latter is broken at two-thirds its length; first cubital cell is therefore long-petiolate. The second cubital is many times longer than wide. Discoidal cell is 5-sided. The nervulus is interstitial; nervus parallelus joins median at about middle. No post-nervellus in hind wing.

Male similar except in secondary sexual characters.

Described from numerous specimens reared from *Dacus laticaudus* Hardy pupae ex *Planchonella* collected at Deeral, Australia, 1949, Krauss collector. Type, allotype and paratype in the Hawaiian Entomological Society collection.

What is considered a form of *Opius longicaudatus* (Ashm.) was also obtained in numbers ex *Planchonella*-infesting *Dacus* at Deeral, and from *Solanum*-infesting pupae on the Atherton tableland; and an opiine indistinguishable from *O. fijiensis* Full. was reared in large numbers ex pupae of *Planchonella*- and *Acmena*-infesting fruit flies collected at Deeral.

There is also a single specimen in the collection, reared from pupae obtained from *Solanum auriculatum* on the Atherton tableland in August 1949, which resembles *O. persulcatus* (Silv.).