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Review of the Tachinid Genus *Juriniopsis* Townsend (Diptera)

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The genus *Juriniopsis* was described by Townsend in 1916 for a single species, then new, *Juriniopsis floridensis*. Two other species were added by Curran and Brooks in 1928 and 1949, respectively, of which the latter, *Juriniopsis aurifrons*, is redescribed in this paper. Two additional species are described herein, bringing the number to five and extending the range of the genus into Cuba and as far south as central Peru.

GENUS *JURINIOPSIS* TOWNSEND

Juriniopsis TOWNSEND, 1916, Insec. Inscit. Mens., vol. 4, p. 73.

This genus is composed of large, robust flies having the general aspect of *Archytas* Jaennicke: the eyes are bare, ocellars generally absent, or very small; parafacials haired and with several bristly hairs below; propleura pilose; second abdominal segment with five to eight pairs of marginal spines, the third with a complete row; no discals on intermediate segments. Front tarsi of female usually much widened. A few species of *Archytas* will agree with this diagnosis, but in these the genitalia are of a different type. The abdomen of all the known species is rusty reddish to castaneous when viewed under magnification; without magnification all but one have very strong metallic reflections and the abdomen appears to be metallic blackish.

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Juriniopsis floridensis Townsend

Juriniopsis floridensis TOWNSEND, 1916, Insec. Inscit. Mens., vol. 4, p. 73.

Jurinia hystrix WILLISTON (not Fabricius), 1886, Trans. Amer. Ent. Soc.,
vol. 13, p. 299.

Jurinia metallica CURRAN, 1928, Canadian Ent., vol. 60, p. 204, fig. 1.

?*Jurinia adusta* WULP, 1888, Biologia Centrali-Americana, Diptera, vol. 2,
p. 28.

In the description of *metallica* in the Canadian Entomologist the species recently described by Brooks as *aurifrons* was also included in the records. The chief characters separating the two species are the width of the front and the greatly broadened front tarsi in the female of *floridensis*.

Juriniopsis floridensis occurs from New England to Florida and possibly into Mexico.

Juriniopsis nitidiventris Curran

Juriniopsis nitidiventris CURRAN, 1928, Canadian Ent., vol. 60, p. 205,
figs. 2, 3.

This species was described from a single male from Mexico, in the United States National Museum. I have not seen additional material.

Juriniopsis aurifrons Brooks

Juriniopsis aurifrons BROOKS, 1949, Canadian Ent., vol. 81, p. 21.

Blackish, the abdomen castaneous and with metallic reflections; thorax with ashy or cinereous yellow pollen; parafrontals rusty reddish in ground color; front tarsi of female scarcely dilated. Length, 13 to 17 mm.

MALE: Head yellow in ground color, the parafrontals ferruginous; pollen whitish, with very slight brassy reflection; that of the front more

ochraceous or brownish yellow, the front very seldom with the ground color showing through. Front as wide as the greatest width of one eye; the frontal row of bristles is doubled, the secondary row composed of weaker bristles; hair sparse, black, rather short; ocellars usually absent, sometimes weak; vertical bristles cruciate. Occipital pile very pale yellowish; the black occipital cilia extend to the lower fifth of the eyes; on the back of the cheeks there is a row of black fine bristles. Cheeks three-fourths as wide as either eye, with scattered black bristly hairs above and yellow hair below. Parafacials moderately wide, of almost equal width, with a double irregular row of black hairs, and below with several fine black bristles situated in a more or less regular row. Palpi yellow, rather strongly broadened on the apical fourth, with black hairs and bristles. Third antennal segment a little longer than the second, the upper edge convex, the lower edge more or less straight, although it may be slightly convex on the apical half; second segment of the arista about three times as long as wide, the arista tapering from the basal half. The antennae are usually reddish in color, with the third segment brown, although it may be reddish on the lower border; the basal segments may sometimes be light brownish.

Thorax black or brown, the broad lateral margins of the mesonotum and posterior border, the sternum, and the scutellum reddish; pollen cinereous yellow, sometimes slightly brassy; posterior half or less of the mesonotum without pollen. Acrosticals 3-3; dorsocentrals 3-4; intralars 3; three sternopleurals. Scutellum with three or four pairs of marginal bristles and with one or two pairs of submarginals; a pair of stout apical spines and sometimes a secondary pair between them, the disc covered with moderately stout, rather short spines.

Legs ferruginous or dark reddish, sometimes brown, the tibiae usually red but sometimes mostly reddish brown; tarsi black; hair and bristles all black. Pulvilli pale yellowish, the claws reddish, with black apex.

Wings cinereous hyaline, the veins reddish; anterior cross vein brown, narrowly bordered with brown; base of the wing very broadly brown, although the immediate base may be reddish. Squamae brownish, the borders slightly darker, the base of the upper lobe sometimes paler. Halteres reddish, with brown knob.

Abdomen castaneous, sometimes moderately dark, the second segment with a moderately broad median vitta connected with a broader black spot on the first segment. Hair of the abdomen rather short, black; appressed on the basal segments, erect on the middle of the segments and on the fourth segment; second segment with three to five

pairs of stout, median spines on the hind margin, the third segment with a complete row; fourth segment with spines on the basal three-fourths or slightly less, the anterior spines longer than those towards the rear margin. Fourth abdominal segment slightly depressed apically in the middle but not distinctly emarginate. Sternites with numerous spines on most of their surface. Genitalia reddish, the posterior forceps shaped almost as in *Juriniopsis floridensis*. They are almost as illustrated for that species in the Canadian Entomologist (1928, vol. 60, pl. 17, fig. 1).

FEMALE: Front conspicuously wider than one eye, the secondary row of bristles stout but less regular than in the male. The front tarsi are not at all or very slightly broadened, differing quite markedly from those of *floridensis*.

MATERIAL: Six males and three females, Richfield, Utah, August, 1930 (J. A. Rowe); three males and female, Grand Canyon, Arizona, September 9, 10, 1916; female, Grand Canyon, August 26, 1934; female, Rose Peak, Arizona, August 10, 1937 (R. P. Allen); male, Mesa Verde, Colorado, August 24, 1934 (F. E. Lutz), in the American Museum of Natural History; male and three females, Hell's Canyon, New Mexico, September 10, 1916 (C. H. T. Townsend); female, Indian Spring, New Mexico, September 7, 1916; male and female, Lakeside, Arizona, September 2, 1924 (J. H. O'Dell), in the United States National Museum.

Juriniopsis peruanus, new species

Castaneous but appearing blackish to the naked eye, the thorax with grayish pollen; front of male distinctly narrower than one eye, of female, about as wide as eye; front tarsi of female strongly widened. Length, 14 to 16 mm.

MALE: Head yellow in ground color, the parafrontals and upper half of the occiput blackish; pollen whitish, with very slight brassy tinge, that on the front cinereous or brownish cinereous. Front about four-fifths as wide as one eye; five or six upper pairs of frontals reclinate, the lower ones convergent, two or three pairs of frontals in a secondary row; hair black, moderately short, and rather sparse; ocellars absent. Occipital pollen conspicuously whitish, the pile white, with very slight yellow tinge; the black occipital cilia extend downward almost to the lower edge of the eye where they are continued by a row of black bristles on the posterior of the cheek, the cheek with sparse, black, bristly, short hair. Cheeks slightly less than two-thirds of the eye height. Parafacials broad, slightly narrowing below, with an incomplete row of fine bristly hairs, the lower two or three stronger, and an additional

group of hairs towards the side near the lower edge of the eyes. Oral margin about as prominent as the antennal base. Palpi long, strongly broadened on the apical third, with black hair and bristles. Antennae brownish, the incisures reddish, the base of the third segment also more or less reddish beneath; third segment brown, rather straight below, the upper edge convex on the apical half, strongly so towards the apex. Second segment of the arista four times as long as wide, the arista thickened to beyond the middle, thence tapering to the tip.

Thorax black, the sides of the mesonotum and posterior border rather narrowly dark reddish, the scutellum reddish. Pollen cinereous, sometimes with slight yellowish tinge, the posterior third or more of the thorax and the scutellum without pollen. Acrosticals 3-3; dorso-centrals 3-4; intra-alars 3; three sternopleurals. Scutellum with four pairs of marginal bristles and one or two submarginals towards the side, also with a pair of strong apical spines and a slightly weaker pair between and slightly above them.

Legs dark reddish, the femora more or less darkened apically, the tibiae darkened basally and with a black dorsal stripe; tarsi black, the pulvilli yellow. Claws mostly red or almost all brownish.

Wings cinereous hyaline, the veins reddish; anterior cross vein brown and bordered with brown; broad base of the wings brownish. Squamae brown, the upper lobe somewhat paler than the lower. Halteres reddish, the base of the knobs brown.

Abdomen black, castaneous when seen under high power, with a black stripe that may extend from the first segment to the end of the third, but may be absent on the third and narrow on the second segment. Second segment with five or six pairs of median marginal spines, the third with a complete row; fourth segment with spines on the apical two-thirds, those in front longer than the posterior ones. Hair black, moderately sparse, erect on the fourth segment and the middle of the preceding segments, appressed elsewhere. Sternites with bristles on almost the whole surface. Genitalia reddish, the posterior forceps black and shaped almost as in *Juriniopsis nitidiventris* Curran as shown in Canadian Entomologist (1928, vol. 60, pl. 17, fig. 2).

FEMALE: The front about as wide as one eye; the pollen may be entirely cinereous, and moderately thin so that the black or brown color is quite conspicuous, although the whole front is pollinose in most views. There are two pairs of strong orbitals, and the secondary row of frontals is composed of one to three bristles. The front tarsi have the three intermediate segments broadened to about twice the normal width.

Types: Holotype, male, Verugga Canyon, Peru, April 16, 1913; allotype, female, and nine female paratypes, Chosica, Peru, February (C. H. T. Townsend). The types are in the United States National Museum; paratypes, in the American Museum of Natural History.

It is almost impossible to distinguish the females of this species from those of *floridensis*. The females, however, are generally much darker in appearance, and, although the ground color of the abdomen is not much different under magnification, the metallic black reflections, or sometimes rather brownish reflections, are much deeper than in almost any specimen of *floridensis*. The male may be readily distinguished by the shape of the genitalia which is very different from that in *floridensis* and *aurifrons*. This series of specimens had been placed in the genus *Juriniopsis* by Townsend and had been studied to some extent by Aldrich, who made notes on the fact that the bristling on the fourth abdominal segment was much less than in related species, at least in the male. There is apparently some variation in the extent to which the fourth segment is bristled, and, while it is probable that there is less bristling in *peruanus* than in *floridensis*, it should be noted that sometimes the bristles in *floridensis* do not extend much more than two-thirds of the distance to the base of the segment.

Juriniopsis insularis, new species

Black, the abdomen shining rusty reddish; parafrontals and median facial vitta shining rusty reddish. Length, 13 mm.

FEMALE: Head ferruginous in ground color; parafrontals polished, the orbits and narrow inner margins with brassy yellow pollen; pollen of the occiput, cheeks, and parafacials brassy yellow, that on the facial ridges and the middle of the face white, the white pollen on the ridges and the middle portion of the face are separated by a stripe of brown pollen which narrows above; anterior oral margin with pale golden yellow pollen. The back of the cheeks and a stripe below the eyes brown pollinose, the latter broad stripe connected with a narrow one that extends along the outer edge of the facial ridges and broadens below, opposite the vibrissae. Front about two-thirds as wide as one eye, with a single row of frontal bristles and two pairs of orbitals; ocellars absent; hair of the front sparse, black, rather short. The occipital pile is reddish yellow, somewhat golden; the black occipital cilia extend to the lower fifth of the eye. Cheeks less than half as wide as the eye height, with sparse, black, bristly hairs. Parafacials moderately wide, of almost equal width, outwardly with a row or double row of fine hairs and below with five or six bristly hairs towards the inner edge. Palpi brown-

ish red, with black bristles, rather strongly broadened on the apical fourth. Antennae brown, the third segment about as long as the second, slightly convex on the upper surface beyond the basal fourth, more strongly convex apically, the apex rather sharply rounded below; second segment of the arista about four times as long as wide.

Thorax dark castaneous in color, without magnification appearing black, the disc somewhat darker than the sides of the mesonotum. The pleura are clothed with thin brownish or reddish brown pollen, the mesonotum without pollen. Acrosticals 3-3; dorsocentrals 3-4; three intra-alars, the anterior one weak; three sternopleurals.

Legs reddish, the femora broadly darker apically, the front tibiae darkened anteriorly and to some extent apically; tarsi black, the intermediate segments of the front pair strongly broadened. Hair and bristles of the legs wholly black; pulvilli yellowish.

Wings cinereous hyaline, the veins pale reddish; anterior cross vein lightly clouded with brown; base of the wings broadly brown. Squamae brown.

Abdomen light rusty reddish, clothed with black hair, and without any trace of median dark stripe on the second abdominal segment. Second abdominal segment with six to eight pairs of stout marginal spines in the middle, the third segment with a complete row of stout spines; fourth segment with stout spines on the apical three-fourths or slightly less, and with moderately abundant, long, coarse, black hairs, the hair on the middle of the second and third segments erect and moderately long, that on the sides of these segments appressed and somewhat shorter. Sternites clothed with spines on their apical half.

HOLOTYPE: Female, Habana, Cuba (Pozos), in the American Museum of Natural History.

This species is very easily distinguished from all others in the genus because of the bright reddish abdomen, the shining parafrontals, and the broad shining stripe on the middle of the face.

