

A NEW SPECIES OF *JURINELLA* (DIPTERA: TACHINIDAE) FROM THE
DOMINICAN REPUBLIC WITH A KEY TO GENERA OF THE TRIBE
TACHININI FROM THE CARIBBEAN

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Abstract.—*Jurinella baoruco*, n. sp., (Diptera: Tachinidae) is described and illustrated from the Sierra de Baoruco, Dominican Republic. A key to the genera of Tachinini from the Caribbean is presented. Two **new generic synonyms** are proposed: *Hystriciella* Townsend, 1915 and *Parajurinina* Townsend, 1928 both = *Jurinella* Brauer & Bergenstamm, 1889, resulting in *Jurinella pilosa* (Drury), **new combination** and *Jurinella obesa* (Townsend), **new combination**.

Key Words: Diptera, Tachinidae, Tachinini, *Jurinella*, Caribbean, taxonomy

Jurinella Brauer & Bergenstamm is a New World genus of Tachinini that ranges from southwestern United States to southern Brazil and northern Argentina. All of the described species are included in Guimarães (1971) who listed 53 species in *Jurinella*, and one each in the genera *Hystriciella* Townsend and *Parajurinina* Townsend, which I consider to be congeneric. During collecting in the Dominican Republic I obtained specimens of a striking new species that is described herein (my material deposited at the Department of Entomology, Smithsonian Institution, Washington, DC, cited below as USNM). Additional specimens were made available from material collected during several expeditions by colleagues from the Carnegie Museum of Natural History, Pittsburgh, PA (cited below as CMNH). Paratypes are also deposited at the Canadian National Collection, Agriculture Canada, Ottawa (cited below as CNC).

Members of the tribe Tachinini are moderate to large tachinids that have the prosternum bare, the first postsutural supra-alar bristle at least as long and stout as the first postsutural dorsocentral bristle, and the hind margin of the hind coxa setose, usually over the entire hind margin (but if sparse, present at least on the posterolateral corner). Tachinines are a very diverse tribe in Central and South America, particularly at middle and high elevations, that includes several hundred species. However, the fauna of the Caribbean islands is surprisingly depauperate, with fewer than a dozen recorded species. This undoubtedly reflects lack of collection to some extent, but in my experience in the Dominican Republic tachinines are truly scarce. Since there are a small number of Caribbean genera and most species in the region are poorly known, it seems worthwhile to present a generic key at this time to facilitate their identification. I have included the

islands from which the genera are known based on literature records and material present in the USNM collection. In all likelihood, some of the genera will be found on additional islands. Taxa from essentially continental islands, especially Trinidad, are not included. *Adejeania armata* (Wiedemann) was described from a specimen supposedly from Cuba, but this is believed to be erroneously labeled (D. M. Wood, personal communication, cited in Woodley 1993) and no further *Adejeania* Townsend have been seen from the Caribbean, so the genus is excluded from the key.

KEY TO GENERA OF TACHININI FROM THE
CARIBBEAN ISLANDS

- 1. Eyes densely pilose; abdominal tergites 3 and 4 with a dense medial patch of discal setae; large palpi present (Cuba, Dominican Republic, Jamaica) *Jurinella* Brauer & Bergenstamm
- Eyes appearing bare, any setae present very small, sparse, and inconspicuous; abdominal tergites with or more usually without medial discal setae; palpi present or absent 2
- 2. Lower part of parafacial with two large, bristle-like setae that are very much larger than surrounding hairs; palpus filiform, very reduced, or absent 3
- Lower part of parafacial without large, bristle-like setae; palpus large, expanded apically, club-shaped 5
- 3. Palpi completely absent (Cuba, Dominican Republic, Puerto Rico) *Deopalpus* Townsend
- Palpi present although they may be very small 4
- 4. Palpi filiform, about as long as length of antennal pedicel + first flagellomere combined (Dominican Republic) *Peleteria* Robineau-Desvoidy
- Palpi short cylindrical, much reduced, much shorter than length of first antennal flagellomere (Puerto Rico) *Neosarromyia* Townsend
- 5. Abdomen with a row of marginal setae on tergites 3 and 4 that is displaced anteriorly at midline enclosing a small patch of bristles between it and posterior margin of tergite; large yellow and black flies (Dominican Republic; Woodley 1993) *Paradejeania* Brauer & Bergenstamm

- Abdomen with marginal setae on tergites 3 and 4 variable in number but not displaced anteriorly at midline 6
- 6. Abdominal tergite 3 with a row of numerous median marginal setae; large robust flies with very shiny reddish-brown abdomen lacking tomentum (Cuba, Jamaica; Sabrosky 1969) *Juriniopsis* Townsend
- Abdominal tergite 3 usually with a single pair of median marginal setae, rarely none; moderate to large flies but less robust with abdomen variably colored but usually with at least some tomentum (widespread in Greater and Lesser Antilles) *Archytas* Jaennicke

Genus *Jurinella* Brauer & Bergenstamm

Jurinella Brauer & Bergenstamm, 1889:

132. Type species, *Jurinia caeruleonigra* Macquart, by monotypy.

Hystriciella Townsend, 1915: 95. Type species, *Hystriciella aurifrons* Townsend [holotype examined, USNM](= *Musca pilosa* Drury), by original designation. **New synonymy.**

Parajurinia Townsend, 1928: 153. Type species, *Parajurinia obesa* Townsend [syntype examined, USNM], by original designation. **New synonymy.**

Remarks.—The following new combinations result from these new generic synonyms: *Jurinella pilosa* (Drury), **new combination** and *Jurinella obesa* (Townsend), **new combination.**

Jurinella baoruco Woodley, new species
(Figs. 1–4)

Diagnosis.—*Jurinella baoruco* differs from all other described *Jurinella* from the Caribbean by having a pale, shiny, reddish-brown abdomen (Fig. 1); brownish-yellow legs; and pale calypters.

Description.—*Male*: Head with ground color yellowish to brownish but nearly entirely obscured by golden yellow tomentum, ground color only visible on frontal vitta and extremely narrowly along ptilinal suture, parafrontals and ocellar tubercle apparently darker; major setae of frons and vertex, vibrissae and a few setae above

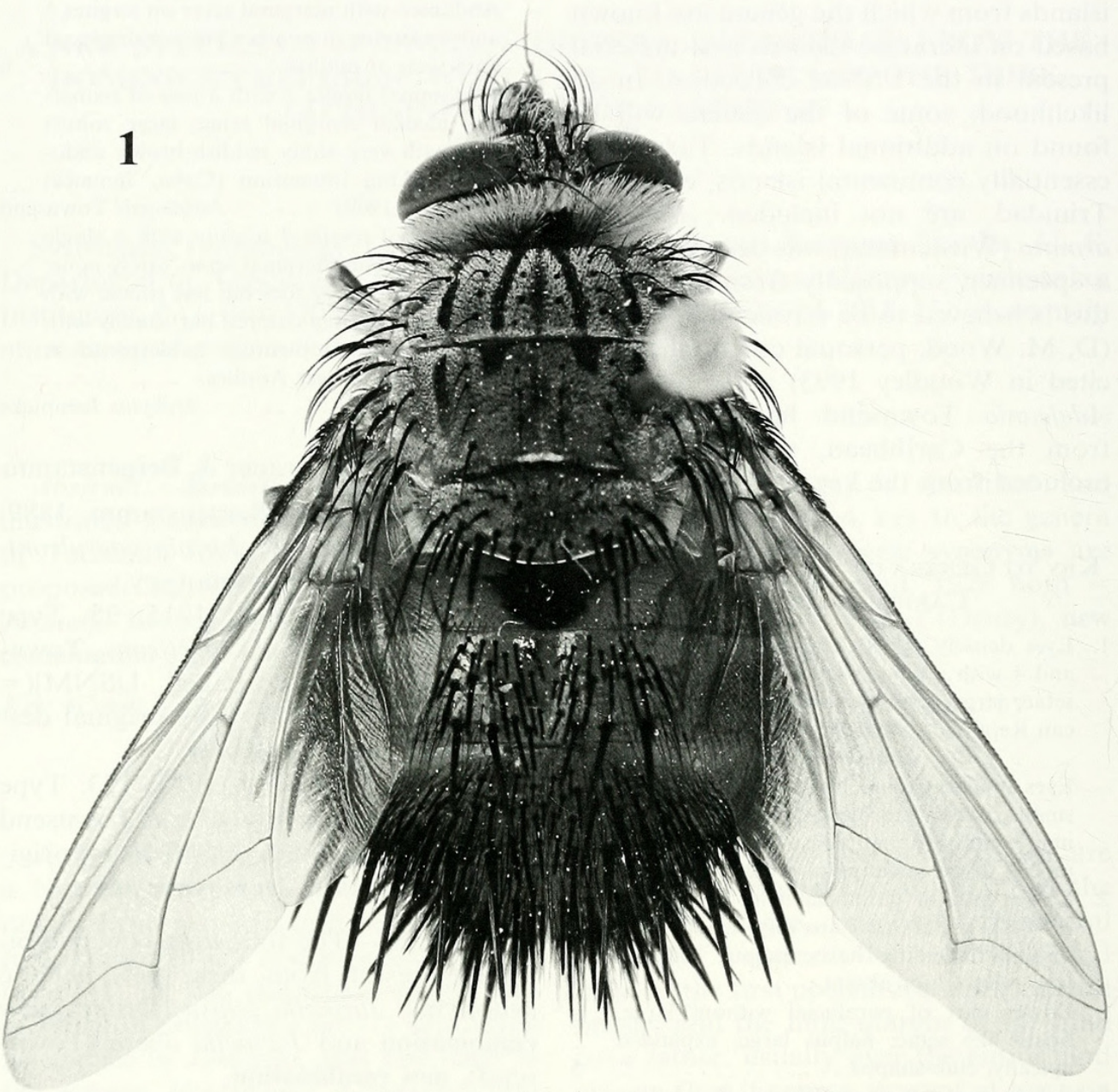


Fig. 1. Dorsal habitus of male of *Jurinella baoruco*.

and below them, and upper setae of postocular row black, all other setulae and larger setae golden yellow; parafacials setulose; frons at vertex 0.26–0.32 head width; without proclinate orbital setae; antenna orange yellow, sometimes parts of basal flagellomere irregularly darker, arista brown; first two aristomeres subequal in length, each about 3 times longer than its diameter; scape and pedicel with black setae; palpus dark yellow, laterally flattened, inner surface bare, with short black setae mostly confined to dorsal side, a small

group of larger, yellow setae present subapically on ventral side; proboscis brownish yellow, prementum 0.76–0.88 height of eye, labella with yellowish hairs.

Thorax predominantly yellowish brown, scutum, lower parts of pleura, subscutellum and mediotergite darker; scutum with dense, yellowish-gray tomentum; scutum with 4 dark vittae best visible in posterior view, each ending just anterior to suture, then submedial pair extending postsuturally from suture about one-third of distance to scutellum,

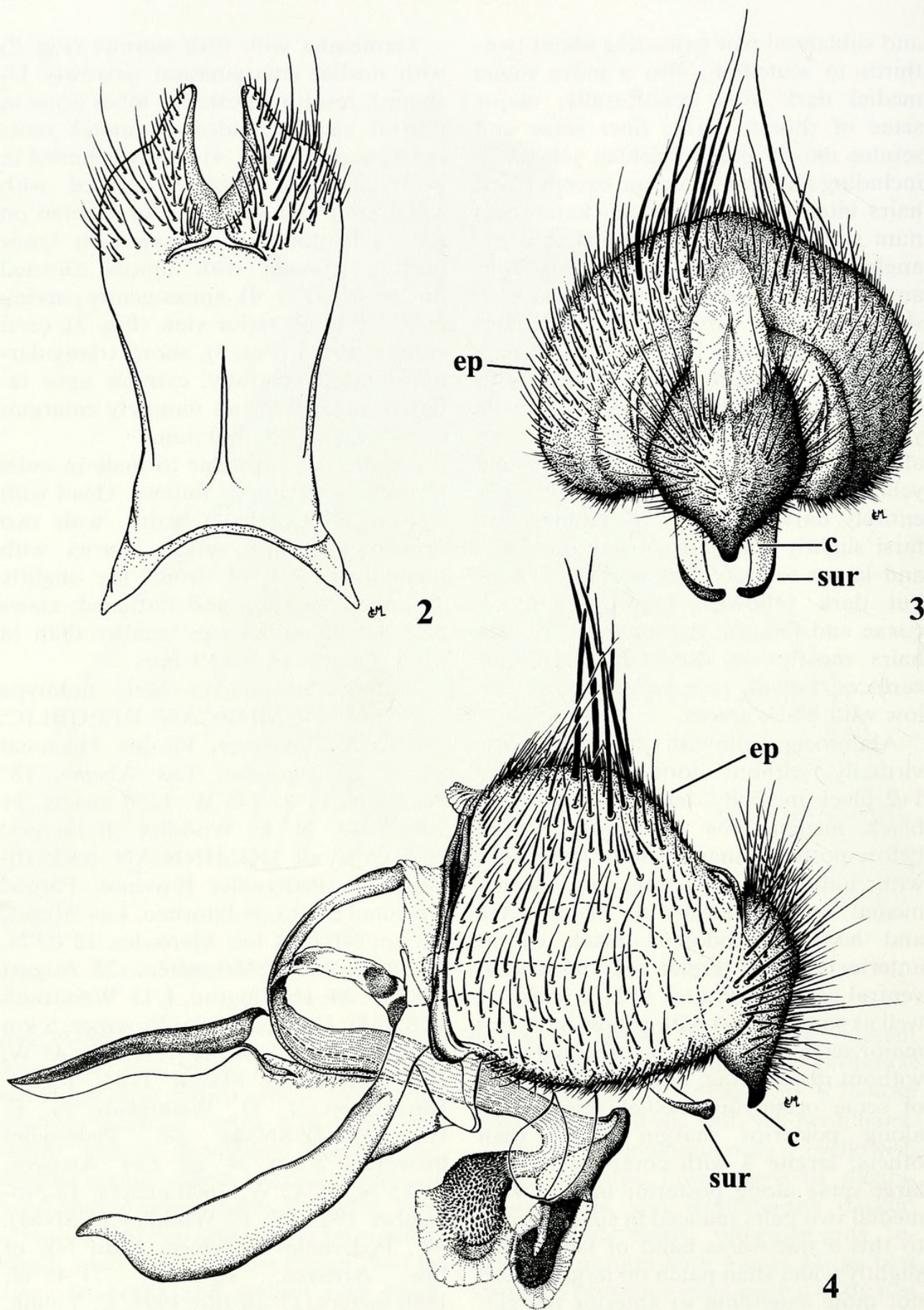
and sublateral pair extending about two-thirds to scutellum; also a more vague medial dark vitta presuturally; major setae of thorax black, finer setae and setulae mostly pale to golden yellowish, including all setae of meron, except black hairs intermixed on scutum; katepisternum with three setae arranged in a triangle with lower seta equidistant from anterior and posterior setae; wings with slight brownish infuscation, tegula and basicosta yellow, veins yellowish to pale brownish; all wing setae black; both calypters pale, whitish with some pale yellowish-brown infuscation, all hairs along fringe pale; halter with stem yellowish, knob whitish yellow; legs entirely dark yellowish with tibiae and tarsi slightly darker than femora; hairs and larger setae of legs primarily black but dark yellowish hairs present on coxae and femora, the latter with black hairs mostly on dorsal and anterior surfaces; pulvilli pale yellow, claws yellow with black apices.

Abdomen yellowish brown, shiny, virtually without tomentum, tergites 1+2 black medially, tergite 3 with small black medial area sometimes ending before posterior margin, some specimens with indistinct darkening on narrow medial area of tergite 4; major setae and hairs of abdomen black except anterior areas of tergite 1+2 and medio-ventral areas of tergites 1+2, 3, and 4 as well as sternites 1–4 with yellow hairs but major setae of sternites black; tergite 1+2 without major setae; tergite 3 with patch of setae occupying medial third, setae along posterior margin larger than others; tergite 4 with complete row of large setae along posterior margin with medial two pairs reduced in size, anterior to this a transverse band of large setae slightly wider than patch on tergite 3 and not quite extending to anterior margin; tergite 5 except for narrow area along anterior margin completely covered with larger setae.

Terminalia with fifth sternite (Fig. 2) with medial emargination narrowly U-shaped, resulting posterior lobes acute in ventral view, rounded in lateral view; epandrium (Figs. 3–4) evenly rounded in posterior view, mostly covered with small setae but with 5–7 large setae on each side dorsally; surstyli with lower portion arcuate with apices directed posteriorly (Fig. 4), apices gently curving medially in posterior view (Fig. 3); cerci entirely fused (Fig. 3), short, triangularly-produced ventrally, extreme apex reflexed anteriorly and minutely emarginate; Length 13.5–16.0 mm.

Female: Very similar to male in most respects, differing as follows: Head with frons 0.29–0.32 head width, with two proclinate orbital setae. Thorax with tarsomeres 2–4 of front leg slightly expanded laterally and flattened; claws and pulvilli of all legs smaller than in male. Length 13.7–15.1 mm.

Material examined.—Male holotype (USNM): DOMINICAN REPUBLIC: Pedernales Province, Parque Nacional Sierra de Baoruco, Las Abejas, 18° 09.011'N, 71°37.342'W, 1150 meters, 11 July 2004, N. E. Woodley. Paratypes: 26♂, 5♀, all DOMINICAN REPUBLIC: 1♀, Pedernales Province, Parque Nacional Sierra de Baoruco, Las Abejas, 7.3 km NNE of Las Mercedes, 18°09'N, 71°38'W, 1100–1150 meters, 23 August 1983, F. M. Harrington, J. D. Weintraub (USNM); 1♀, Pedernales Province, 5 km N of Los Arroyos, 18°15'N, 71°45'W, 1600 meters, 28 March 1984, F. M. Harrington, J. D. Weintraub, N. E. Woodley (USNM); 3♂, Pedernales Province, 5 km N of Los Arroyos, 18°15'N, 71°45'W, 1600 meters, 13 November 1985, N. E. Woodley (USNM); 1♂, Pedernales Province, 5 km NE of Los Arroyos, 18°15'N, 71°45'W, 1680 meters, 17–18 July 1991, C. Young, J. E. Rawlings, S. Thompson (CMNH); 16♂, Independencia Province, near summit of Sierra de Baoruco, 3.5 km S of El



Figs. 2-4. Male terminalia of *Jurinella baoruco*. 2, Fifth abdominal sternite, ventral view. 3, Male terminalia, posterior view. 4, Male terminalia, left lateral view. Abbreviations: c, cerci; ep, epandrium; sur, surstylus.

Aguacate, 18°17'N, 71°42'W, 2210 meters, 30 September 1991, montane meadow, C. Young, S. Thompson, R. Davidson, J. Rawlins (10 in CMNH, 4 in USNM, 2 in CNC); 5♂, Independencia Province, north slope Sierra de Baoruco, 3 km ESE of El Aguacate, 18°18'N, 71°42'W, 1980 meters, pine woodland, 28–29 September 1991, J. Rawlins, R. Davidson, C. Young, S. Thompson (4 in CMNH, 1 in USNM); 1♀, Independencia Province, Sierra de Baoruco, Loma del Toro, 18°17'16"N, 71°42'46"W, 2310 meters, meadow in pine woods, 7–8 November 2002, W. A. Zanol, C. W. Young, C. Staresinic, J. Rawlins (CMNH); 1♀, Independencia Province, Sierra de Baoruco, Loma del Toro, 5.3 km SW of El Aguacate, 18°17'16"N, 71°42'46"W, 2316 meters, *Pinus-Garrya* montane forest, 29–30 March 2004, C. Young, R. Davidson, J. Rawlins (CMNH); 1♂, 1♀, Independencia Province, Sierra de Baoruco, north slope, 13.5 km SE of Puerto Escondido, 18°12'24"N, 71°30'54"W, 1807 meters, broadleaf-*Pinus* dense woodland, J. Rawlins, V. Verdecia, C. Young, C. Nunez, W. Zanol (CMNH).

Etymology.—The species name, a noun in apposition, is from Sierra de Baoruco, the mountain range from which all known specimens have been collected.

Remarks.—*Jurinella baoruco* is one of the minority species in the genus that has a reddish-brown abdomen. Its general appearance resembles that of *Dumerillia rubida* Robineau-Desvoidy from Brazil. *Dumerillia* Robineau-Desvoidy is a monotypic genus that differs little from *Jurinella*, mainly in having smaller patches of discal setae on abdominal tergites 3 and 4, and males which have proclinate orbital setae. It is quite possible that *Jurinella* will be synonymized with *Dumerillia* when the generic concepts within this group of tachinine genera can be studied in detail.

Jurinella baoruco differs from other described Caribbean species of this genus by having the paler coloration noted above. Both *Jurinella pilosa* (Drury) and *J. epileuca* (Walker) have darker abdomens and legs, dark brown to black. I have seen a single specimen (CMNH) of *Jurinella* from the Sierra de Martín García, Dominican Republic, that resembles *J. baoruco*, but it differs by being notably smaller and having more uniformly pale hairs on the thoracic scutum. It likely represents an additional undescribed species.

Jurinella baoruco has to date only been collected from the Sierra de Baoruco, formed when the southern paleo-island collided with the northern paleo-island to form modern Hispaniola (Keith et al. 2003 and references therein). *Paradejeania xenisma* Woodley (1993) was also originally known from the Sierra de Baoruco, but I have recently collected specimens near La Ciénaga in the Cordillera Central, La Vega Province. It seems likely that *J. baoruco* will eventually be found to have a wider distribution since these insects are strong fliers.

The males of *J. baoruco* I collected near Los Arroyos in 1985 were frequenting flowers on roadside shrubs 2–3 meters above the ground.

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