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THREE NEW SPECIES OF PIPUNCULIDÆ  
(DIPTERA) FROM PANAMA

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THREE NEW SPECIES OF PIPUNCULIDÆ (DIPTERA)  
FROM PANAMA<sup>1</sup>

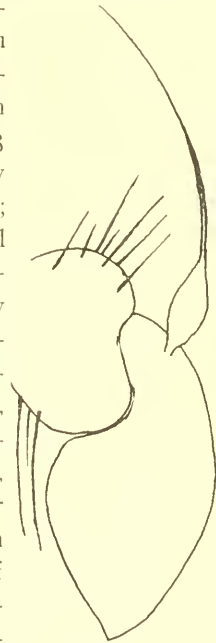
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The new species herein described were collected by Mr. August Busck, while a member of the Smithsonian Biological Survey of the Panama Canal Zone.

**PIPUNCULUS INTERRUPTUS**, new species

*Male*.—Eyes confluent for a longer distance than length of frons; frons gray dusted; face slightly narrowing from upper part to end of upper fourth, then parallel-sided to mouth margin, gray dusted; occiput gray dusted, not much swollen, rather broader above than below; antennæ black, third joint brownish, second with numerous hairs on dorsal surface and 2-3 on ventral, third joint not acuminate, obtusely pointed, arista brown, elongate dilated at base; proboscis brown; palpi yellow, brown at tip and somewhat spatulate. Mesonotum black, sub-opaque, brown-gray dusted, especially anteriorly and laterally; humeri black; pleuræ black, sub-opaque, gray dusted; scutellum sub-opaque, marginal hairs weak. Abdomen velvety opaque black, all segments with narrow, interrupted, white pollinose hind-marginal fasciæ; basal fringe black, all segments with distinct, black, lateral, rather long hairs; fifth segment one-third longer than fourth; hypopygium viewed from above one-half as long as fifth segment, left side slightly the longer, depression central, large and distinct, ventral processes yellowish with short pale hairs. Legs black, apices of fore coxæ, extreme apices of femora and bases of tibiæ yellow; all femora with ventral, short, black thorns, mid



P. INTERRUPTUS, ♂.

<sup>1</sup> This paper is the fourteenth dealing with the results of the Smithsonian Biological Survey of the Panama Canal Zone.

pair with long black hairs posteriorly, posterior femora not shining ventrally but glossy posteriorly; all tibiæ with two dorsal rows of short black bristles, antero-ventral surface of fore pair with short golden pilosity, hind tibiæ thickened on apical half, the two dorsal rows of short bristles widening for a short distance and then closing together, leaving an oval flat surface at middle of tibiæ, the hairs on anterior surface of dilated portion are noticeably longer than is usual in this genus being as long as diameter of tibiæ; three or four long hairs are present on last joint of tarsi, the claws are yellow with fuscous apices. Wings as in *acuticornis*. Halteres brownish yellow, knob black.

*Female*.—Eyes separated by an almost parallel-sided stripe, which is opaque brown on upper two-thirds and silvered on lower third; face silvered, becoming gradually slightly broader as it descends; antennæ slightly more rounded than in male and third joint brown. Ovipositor of moderate length, reaching to slightly beyond apex of third dorsal segment, viewed laterally, the attenuated apical portion longer than the black globose base. Legs rather darker than in male and armed in somewhat similar manner, though the long hairs on the hind tibiæ are not so conspicuous and the terminal tarsal hairs are much shorter. Otherwise as male. Length  $2\frac{1}{2}$  mm.

*Locality*.—Two males and one female. Taboga Island, Panama, Feb. 22-23, 1912 (August Busck).

*Type*.—Cat. No. 15119, U. S. Nat. Mus.

Very distinct from any described American species in color and armature of legs as well as in abdominal markings.

#### PIPUNCULUS ACUTICORNIS, new species

*Male*.—Eyes confluent for at most as long as length of frons; frons silvered, most distinctly on lower portion, slightly raised in center; face silvered, parallel-sided, as broad as frons at above antennæ; occiput silvered, as broad at ocelli as at lower margin of eyes; antennæ black, third joint yellow, elongate acuminate, arista yellow at base of swollen portion, the remainder brown; proboscis and palpi yellow. Mesonotum black, shining, gray-brown dusted, especially anteriorly; humeri yellow; a few extremely short hairs represent the normal discal rows and the humeral hairs are also weak; pleuræ black, shining, grayish dusted, anterior spiracle yellow; scutellum shining black, slightly brown dusted. Abdomen sub-opaque brown, all segments with distinct hind-marginal grayish fasciæ, the one on basal segment complete, those on other segments indistinctly inter-

rupted centrally; fifth segment half as long again as fourth; basal fringe black, strong but not numerous; only the fifth segment with very weak dorsal hairs, the others bare; hypopygium shorter than fifth segment viewed from above, black, shining, slightly brown dusted, longest on right side, depression on left, shallow, a slight apical tuberculate production on right side, ventral processes not protruding, yellow. Legs yellow, only coxæ, except apices of fore pair and terminal joints of tarsi brown; posterior femora glossy ventrally, all femora with distinct but short ventral thorns; all tibiae with two dorsal and two or three anterior and posterior longitudinal rows of short black bristles; last tarsal joint on all legs with several long black apical hairs; claws yellow, brown at apices. Wings slightly infuscated, stigma brown, reaching to end of auxiliary vein; second costal division one and one-half times as long as third, both together slightly longer than fourth; small cross vein at just beyond end of auxiliary vein and at three-sevenths from base of discal cell; outer cross vein slightly bent, as far as its own length from end of fifth vein; last portion of sixth vein one-third as long as last portion of fifth. Halteres yellow. Length,  $2\frac{1}{2}$  mm.

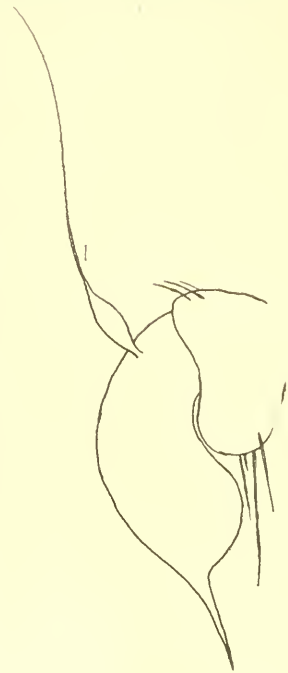
*Locality*.—One male Taboga Island, Panama, Feb. 22, 1912 (August Busck).

*Type*.—Cat. No. 15120, U. S. Nat. Mus.

Recognizable from any described American species by the color and shape of the antennæ, as well as the color of the legs and the peculiar hypopygium.

#### PIPUNCULUS BUSCKI, new species

*Male*.—Eyes confluent for a considerably longer distance than the length of frons; frons hardly silvered, only slightly so in center; face grayish-brown, as broad below antennæ as frons at above antennæ, then narrowing slightly and continuing almost parallel-sided to mouth margin; occiput silvered below, opaque and very narrow above; antennæ black, second joint with 2-3 distinct hairs on under



P. ACUTICORNIS, ♂.

surface, third rounded at apex and not much larger than second joint, arista black, swollen at base, not reaching as high as upper angle of frons; palpi pale. Mesonotum opaque brown; humeri brown; pleuræ slightly shining especially on lower portion; scutellum sub-opaque, bare. Abdomen opaque black-brown, only the posterior margins of segments narrowly paler, and low down on lateral margins each segment broadly pale brown; ventral surface opaque black-



*P. BUSCKI*, ♂.

brown; basal fringe short, sparse, black; hypopygium brown, viewed from above as long as last segment of abdomen, a distinct depression on right side, ventral processes slightly shining and with a group of short pale hairs on the center. Legs dull brown, apices of coxæ, basis of tibiæ and middle three joints of tarsi paler; femoral bristles very weak. Wings distinctly fuscous except at base and along hind margin; stigma darker than general body of wing; veins dark brown; second costal division one and one-half times as long as third; second and third together longer than fourth; small cross vein slightly beyond end of auxiliary vein and at middle of discal cell; outer cross vein at nearly its own length from end of fifth vein; last portion of sixth vein slightly shorter than last portion of fifth. Halteres black-brown. Length,  $1\frac{1}{2}$  mm.

*Locality*.—One male. Taboga Island, Panama, Feb. 20, 1912 (August Busck).

*Type*.—Cat. No. 15121, U. S. Nat. Mus.

The exceptionally dark color of the wings and legs of this species separates it from any described American species.