


Smith, J. W., Jr., H. W. Browning, and F. D. Bennett. 1987. Allorrhoga pyralophagus (Hym.:Braconidae), a gregarious external parasite imported into Texas, USA for biological control of the stalkborer Eureuna loftini (Lep.:Pyralidae) on sugar cane. Entomophaga 32: 477-482.

ADDITIONS TO THE PHORID FAUNA
(DIPTERA: PHORIDAE)
OF NORTH AMERICA NORTH OF MEXICO

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ABSTRACT

The phorid genus Melaloncha Brues and the species Beckerina setifrons Borgmeier, Coniceromyia latimana (Malloch), Megaselia lanceata Borgmeier, Megaselia luteicauda (Borgmeier), and Melaloncha nigricorpus Borgmeier are reported for the first time from North America north of Mexico. Megaselia secusta Beyer is synonymized with M. lanceata [NEW SYNONYM]. New locality records are given for Dokrniophora di-varicata (Aldrich). Alterations to existing keys are suggested that will allow identification of these taxa.

RESUMEN

Se reporta por primera vez en Norte America al norte de Mexico, el genero phorid Melaloncha Brues y las especies Beckerina setifrons Borgmeier, Coniceromyia latimana (Malloch), Megaselia lanceata Borgmeier, Megaselia luteicauda (Borgmeier), y Melaloncha nigricorpus Borgmeier. Megaselia secusta es sinonimo de M. lanceata.
I recently identified over 7000 specimens of phorid flies from the Florida State Collection of Arthropods, Gainesville (FSCA), the Mississippi Entomological Museum, Mississippi State (MEMM), the Snow Entomological Museum, University of Kansas, Lawrence (SEMK), and the collection of Texas A & M University, College Station (TAMC). The following distribution records are significant because they represent species not previously reported, or only recently reported, from North America north of Mexico. Most of the species reported here from the southeastern United States were known previously only from the West Indies and were identified with the aid of Borgmeier's (1969a) study of the Phorinae of Dominica. Some of the specimens are deposited in the New York State Museum, Albany (NYSM).

Beckerina setifrons Borgmeier


Borgmeier (1969b) described this species from a female collected on a beach in Cuba. It can be distinguished from other species of Beckerina by the two to four pairs of setulae lateral to the supra-antennal bristles on the anterior edge of the frons, the presence of wing vein R2+3, the yellow halteres, and the single hair seam on the hind tibia. It keys easily in Borgmeier's (1971) improved key to the world species of Beckerina.

Beckerina setifrons and B. aliens Malloch are the only known North American species in the genus that have a dorsal hair seam on the hind tibia. The type (and only known specimen) of the latter species apparently has been lost (Borgmeier 1963). Nevertheless, Malloch (1924b) made no mention of supernumerary bristles lateral to the supra antennal in B. aliens. Therefore, it seems that these bristles are the best character for distinguishing the two species.

Males of B. setifrons possess a small, circular, raised area, about 0.05 mm in diameter, on the notopleuron just posterior to the lateral edge of the postpronotal lobe. A similar structure in males of B. tuteola Malloch is generally darker and bears a stout central peg. No such structure exists in males of B. orphnepholoides Malloch. These areas are morphologically distinct from the notopleural cleft found in males of Woodiphora, some Megaselia, and both sexes of Gymnophora (Disney 1989).

MATERIAL EXAMINED. FLORIDA: Gadsden County, Quincy, D. E. Hardy, 10.VII.1939 (1 ♂, SEMK); Liberty County, Torreya State Park, H. V. Weems, Jr., 5.VII.1965 (1 ♀, FSCA); H. V. Weems, Jr. and C. R. Artaud, 30.IV-5.V.1973 (1 ♂, FSCA); Highlands County, Archbold Biological Station, H. V. Weems, Jr. and F. E. Lohrer (1 ♂, FSCA); Alachua County, Gainesville, Doyle Conner Building, H. V. Weems and C. R. Artaud, 6.XI.71 (1 ♀, NYSM), 15.XI.1971 (1 ♂, FSCA); 12.XII.1971 (1 ♂, FSCA); west of Gainesville, Pierce's homestead, W. H. Pierce, 20.XI.1973 (1 ♂, FSCA), 1.XI.1975 (2 ♂, NYSM), 2.XI.1975 (2 ♂, FSCA; 1 ♂, NYSM), 3.XI.1975 (3 ♂, FSCA; 3 ♂, NYSM), 10.XI.1975 (1 ♂, FSCA; 1 ♀, NYSM), 11.XI.1975 (2 ♂, FSCA; 1 ♂, 1 ♀, NYSM), 15.XI.1975 (1 ♂, FSCA; 1 ♀, NYSM), 26.XI.1.XII.1975 (1 ♂, FSCA; 1 ♂, NYSM), 24-28.XII.1975 (1 ♂, 1 ♀, FSCA; 2 ♂, NYSM), 31.XII.1975 (6 ♂, FSCA; 6 ♂, NYSM), 4.I.1.76 (2 ♂, FSCA; 1 ♂, 1 ♀, NYSM).
Coniceromyia latimana (Malloch)

Coniceromyia latimana Malloch, 1924a: 73.
Coniceromyia latimana (Malloch) [Schmitz, 1927: 66].

This species was known previously only from the West Indies. It is the only known North American species of Coniceromyia with a bare anepisternum. Males are recognized easily by the especially broad first tarsomere and dark apical tarsomere of the foreleg (see Borgmeier 1969a, Fig. 11).


Dochniphora divaricata (Aldrich)

Dochniphora divaricata Aldrich, 1896: 437.
Dochniphora divaricata (Aldrich) [Borgmeier, 1961: 111].

This species was originally described from specimens collected on St. Vincent in the Lesser Antilles, and Borgmeier (1968) reported it from Argentina and Brazil. Khalaf (1971) first reported it in North America from several coastal sites in Mississippi. Males are readily distinguished from other North American Dochniphora by the configuration of the "stimulatory patches" (Barnes 1990) on the posterobasal surface of the hind femur (see Borgmeier 1969a, Fig. 3). Females are confused easily with those of D. perplexa (Malloch).


Megaselia lanceata Borgmeier

Parametopina lanceolata Schmitz, 1928: 40 (preocc. Brues, 1924: 220 [Aphiochaeta]).
Megaselia lanceata Borgmeier 1962: 338 (replacement name).
Megaselia seclusa Beyer, 1966: 190. NEW SYNONYM.

I recently identified a single male specimen from a locality in Kansas as Megaselia lanceata, a species previously known only from Mexico. This distinctive species has an extremely short, thick costa and lacks wing vein R_{2+3}. Subsequently, a series of 9 females collected at exactly the same locality at about the same time came to my attention. Although the costa is more slender, and the specimens match Beyer's (1966) description of M. seclusa, which was based on a single female from Arizona, these female specimens are otherwise nearly identical with the male. In the only similar species for which the female is known, M. tumidula Borgmeier (1962), the costa of the male is considerably thicker than that of the female. I therefore conclude that M. lanceata is sexually dimorphic, and M. seclusa is in fact the female of this species, and therefore this name is a synonym of the former. Attempts to locate and borrow holotypes of these nominal species to check my conclusions yielded no results.
Megaselia lanceata can be distinguished from all other species listed in Borgmeier's (1964) key to Megaselia Group III by the lack of wing vein R2+3.

**Material Examined.** Kansas: Douglas County, Lawrence, University of Kansas, Coll. #8, Malaise Trap, L. R. Ertle, 30.VI.1965 (1 ♀, SEMK), 1.VII.1965 (1 ♀, SEMK), 2.VI.1965 (1 ♀, NYSM; 1 ♀, SEMK), 6.VII.1965 (1 ♀, NYSM; 1 ♀, SEMK), 7.VII.1965 (1 ♀, NYSM; 1 ♀, SEMK), 22.VII.1965 (1 ♂, SEMK); University of Kansas Natural History Reserve, Malaise Trap #1, L. R. Ertle, 27.V.1965 (1 ♀, SEMK). Texas: Zavala County, Nueces River, 4 miles east of La Pryor, Byers and Thorndike, 9.IX.1972 (1 ♂, NYSM); Brazos County, College Station, pan trap, R. Wharton and M. Hricir, 19-26.III.1982 (1 ♂, TAMC).

*Megaselia luteicuadu* (Borgmeier)

*Aphiochaeta luteicuadu* Borgmeier, 1925: 145.

*Megaselia luteicuadu* (Borgmeier) [Borgmeier, 1962: 293].

This species was previously known only from Argentina, Brazil, Costa Rica, and Dominica. Females are readily recognized by the brown abdominal tergites 1-3, which contrast sharply with yellow and membranous segments 4-6. Males key to couplet 6, *Megaselia relicta* Borgmeier, in Borgmeier's (1964) key to North American Group I *Megaselia*. However, they differ from males of that species by their yellow halteres and the contrast between dark abdominal tergites 1-3 and lighter tergites 4-6, which is less striking than in the female.


*Melanoncha nigricorpus* Borgmeier

*Melanoncha nigricorpus* Borgmeier, 1934: 183.

A single specimen from Texas keys to *Melanoncha piliapex* Borgmeier in Borgmeier's (1971) key to females of this genus, and it matches well with Borgmeier's (1938) original description of that species. However, the ovipositor of the specimen from Texas is not parallel sided in dorsal view, but rather attenuated toward the apex due to lateral compression. The ovipositor of *M. piliapex* is dorsoventrally flattened at the apex. To settle the question of the specimen's true identity, I borrowed the types of *M. piliapex*, its synonym, *M. simillima* Borgmeier, and some related species for comparison. I
discovered that the sixth coupledt of Borgmeier's (1971) key is incorrect, and the second branch should read, "Ovipositor bare or with very fine, short, erect pubescence." The specimen from Texas will then key to couplet 'i', and the species is identified as M. nigricorpus Borgmeier, which is also known from Bolivia and Brazil. It fits the original description and matches the holotype of M. nigricorpus, except that it is smaller (only 1.48 mm long to the apex of the sixth tergite, as opposed to 2.40 mm for M. nigricorpus), and its antennae and palpi are yellow instead of orange.

In Peterson's (1987) key to the genera of Nearctic Phoridae, Melaloncha piliapex will key to couplet 52, which in turn leads to the second branch of couplet 76 of Brown's (1988) additions to that key. That branch indicates that the keyed specimen belongs to the genus Styletta, but more recent findings show that the Holarctic species should be transferred to a new genus, which at the present time does not bear a published name (Brown, in press). The single known Nearctic species, camponotus Brown, possesses two pairs of supra-antennal bristles, a brown flagellomere 1, a frontal ratio of about 1.6, a short costa (only 0.29 to 0.36 of wing length), and a mean costal sector ratio (humeral crossvein to R₁;R₁ to R₄₊₋₅) of 2.7. M. piliapex differs by the lack of supra-antennals and the presence of a yellow flagellomere 1, a narrow frons (about twice as long as wide), a long costa (0.52 of wing length), and a small costal sector ratio of 1.2.

**Material Examined.** Texas: Cameron County, L. D. Beamer, "8-3-28" (1 ♀, SEMK); Bolivia: Mapiri, Saramplon, 700 meters (1 ♀, holotype, Museu de Zoologia, Universidade de São Paulo [MZSP]).

**Acknowledgment**

I am grateful to Brian V. Brown, University of Alberta, for improvements contributed to this manuscript and to Robert W. Brooks (SEMK), Edward G. Riley (TAMC), Terence Leo Schiefer (MEMM), Howard V. Weems, Jr., (FSCA), and Francesca C. do Val (MZSP) for loans of specimens. This paper is contribution number 661 of the New York State Science Service.

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