

## The genus *Myrsidea* Waterston (Phthiraptera: Menoponidae) from tyrant-flycatchers (Passeriformes: Tyrannidae), with descriptions of 13 new species

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### Abstract

The two species of previously named *Myrsidea* from tyrant-flycatchers are redescribed. Thirteen new species are described and illustrated. The new species and their type hosts are: *Myrsidea pitangi* ex *Pitangus sulphuratus* (L.), *Myrsidea seversoni* ex *Tyrannus verticalis* Say, *Myrsidea melancholici* ex *Tyrannus melancholicus* Vieillot, *Myrsidea barbati* ex *Myiobius barbatus* (J. F. Gmelin), *Myrsidea flaviventris* ex *Tolmomyias flaviventris* (Wied), *Myrsidea similis* ex *Myiozetetes similis* (Spix), *Myrsidea elaeinae* ex *Elaenia flavogaster* (Thunberg), *Myrsidea contopi* ex *Contopus cinereus* (Spix), *Myrsidea oleaginei* ex *Mionectes oleagineus* (M. H. K. Lichtenstein), *Myrsidea neocinereae* ex *Serpophaga cinerea* (Tschudi), *Myrsidea cayanensis* ex *Myiozetetes cayanensis* (L.), *Myrsidea olivacei* ex *Mionectes olivaceus* Lawrence, and *Myrsidea spadicei* ex *Attila spadiceus* (J. F. Gmelin). Keys are provided for the identification of females and males of the 15 *Myrsidea* species known from the Tyrannidae.

**Key words:** chewing lice, *Myrsidea*, Phthiraptera, Menoponidae, tyrant-flycatchers, Tyrannidae, new species

### Introduction

There are over 200 recognized species of *Myrsidea* Waterston from the Passeriformes (Price et al. 2003, Hellenthal and Price 2003, Dalglish and Price 2004, 2005), with much smaller numbers from the Piciformes: Ramphastidae (Price et al. 2004) and the Apodiformes: Trochilidae (Dalglish and Price 2003). To date, only two species of this genus are recognized from the passerine family Tyrannidae as defined by Dickinson (2003). We have examined a large number of lice from tyrannids, including hosts of the two previ-

ously described species, and of 13 new species. Here we describe, illustrate, and provide keys for these 15 species. In this treatment, we divide these species into three groups based on the degree of development of the tergal and sternal chaetotaxy of both sexes and of the female abdominal tergal shape, with two, eight, and five species in each respective group.

In the following descriptions, all measurements are in millimeters. Abbreviations are TW, temple width; HL, head length; PW, prothorax width; PSL, prosternal plate length; MW, metathorax width; MSL, metasternal plate length; AWIV, abdomen width at segment IV; ANW, female anus width; TL, total length; and GL, male genitalia length. Tergal setal counts include the postspiracular setae and all setae between them. Host classification below that of order follows Dickinson (2003).

The distribution of the holotypes and paratypes of each new species is indicated by an acronym for the following collections: the National Museum of Natural History, Smithsonian Institution, Washington, D.C. (NMNH); the K. C. Emerson Museum, Oklahoma State University, Stillwater (OSU); The Natural History Museum, London (TNHM); and the collection of the third author (RCD). Except when otherwise indicated, new louse species are named after the type host.

### Genus *Myrsidea* Waterston

*Myrsidea* Waterston 1915:12. Type species: *Myrsidea victrix* Waterston by original designation.

A thorough characterization of this genus may be found in Clay (1966). We provide here only the diagnostic characters that are of significance in defining the genus as it pertains to the tyrannid lice.

Head (Fig. 5) evenly rounded anteriorly; lacking lateral slit or notch; with long inner occipital setae, minute outer; without ventral sclerotized processes; gula usually with 4–5 setae on each side, less often 3 or 6, with heavier longer posterior seta; hypopharyngeal sclerites well developed.

Thorax (Fig. 5) with pronotum lacking central setae; with 3 short setae at each lateral angle and 6 longer posterior marginal setae. Mesonotum well defined, with 2 minute medioanterior setae adjacent to postnotum and 2 minute setae at posterior margin. Metanotum without central setae, but with 6 short setae around periphery. Prosternal plate well developed, elongate, with 2 short anterior setae; mesothorax with notum, pleura, and sternum fused to form strongly sclerotized ring; metasternal plate prominent, diamond shaped, usually with 6 setae, much less often 5, 7, or 8; venter of femur III with setal brush.

Abdomen with undivided tergites, without anterior setae except for very small seta at corner of each side of tergite I (not included in tergal count); sternite I small, usually without setae; sternite II enlarged, with aster of heavy setae at each posterior corner. Female anus oval, without inner setae; subgenital plate of fused sternites VII–IX, usually with

lightly serrated posterior margin. Male subgenital plate of fused sternites VIII–IX; genitalia of characteristic shape (Fig. 6), with spinous sac having distinctively shaped associated sclerite.

Sexual dimorphism is limited to males having smaller dimensions, sparser abdominal chaetotaxy, and differences of the posterior abdomen. Some females may have enlargement of anterior abdominal tergites. Male tergites are unmodified, with pattern of postspiracular setal lengths much as for female. Characters listed above for the genus will not be repeated in the species descriptions.

### ***magnidens* species group**

The two species of this group, representing the only previously described species of *Myrsidea* from the Tyrannidae, are characterized as having both sexes with a much larger number of abdominal tergal and/or sternal setae than any other known species from this family. The females have only a modest enlargement of the anterior abdominal tergites (Figs. 1, 3). Although the host identities of both species are uncertain, this group is morphologically distinctive from other *Myrsidea* species with known host associations with the Tyrannidae.

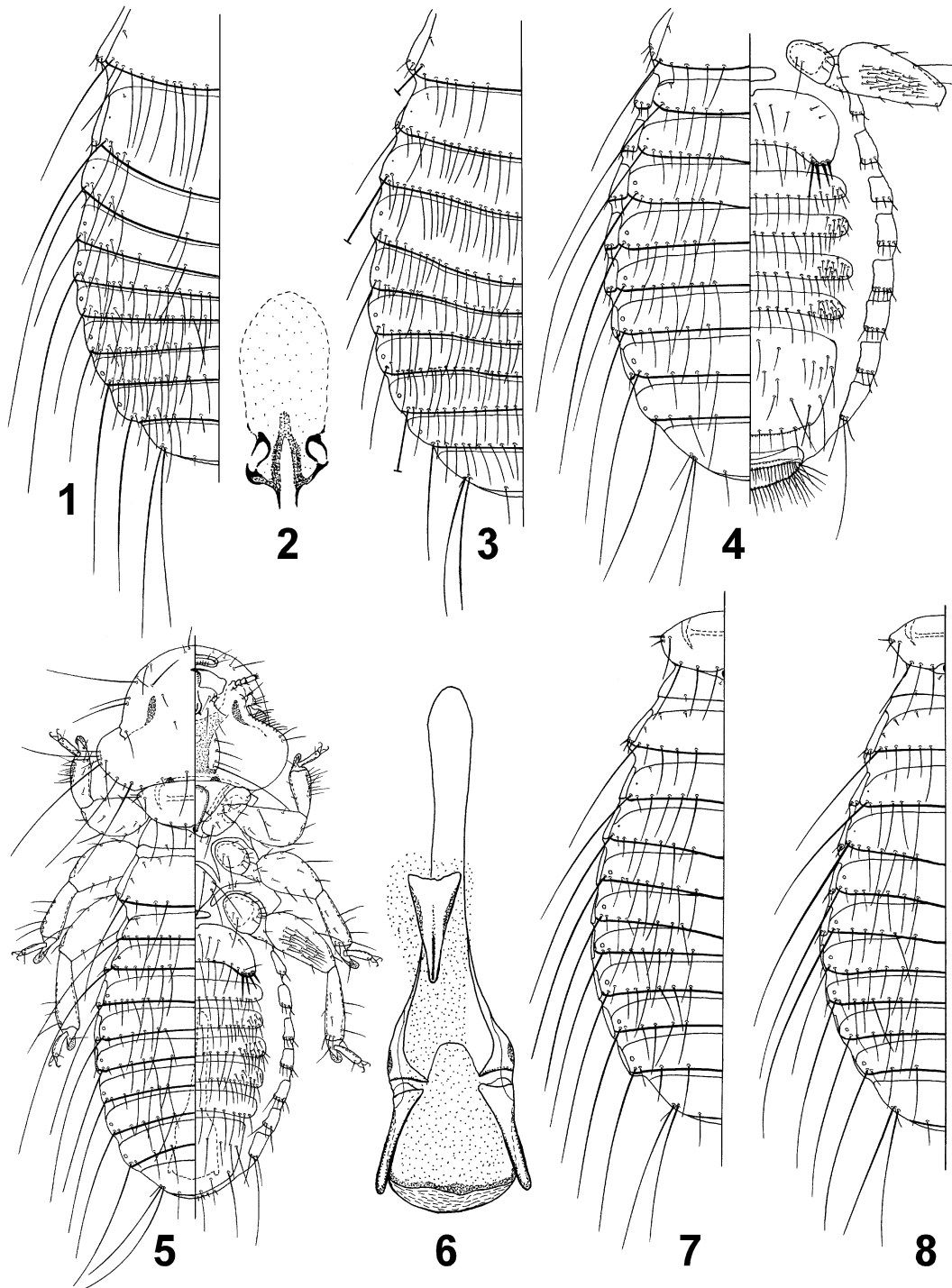
### ***Myrsidea magnidens* Stafford (Figs. 1–2)**

*Myrsidea magnidens* Stafford 1943: 41. Type host: *Pitangus sulphuratus rufipennis* (Lafresnaye), Great Kiskadee.

**Female.** Metanotum and dorsal abdomen as in Fig. 1. Metanotum with 22 marginal setae. Tergite I enlarged, posteriorly rounded, II–III with modest medioposterior convexity, and IV–VIII unmodified. Tergal setae: I, 14; II, 15; III, 18; IV–VI, 31–34; VII, 28; VIII, 17. Postspiracular setae very long on II, IV, and VII–VIII, somewhat shorter on I, and much shorter on III and V–VI. Sternal setae: II, each aster with 5 setae, 43 other setae; III, 40; IV–V, 61–64; VI, 55; VII, 29; VIII–IX of subgenital plate, 28. Anus with 44 dorsal fringe setae, 38 ventral. Dimensions: TW, 0.52; HL, 0.33; PW, 0.34; PSL & MSL, obscured; MW, 0.53; AWIV, 0.63; ANW, 0.25; TL, 1.57.

**Male.** Metanotum with 19 marginal setae. Tergal setae: I, 27; II–VII, 31–39; VIII, 25. Sternal setae: II, each aster with 4–5 setae, 45 other setae; III, 27; IV–V, 52–53; VI, 65; VII, 41; VIII, 28. Genital sac sclerite very small, 0.06 long, shaped as in Fig 2. Dimensions: TW, 0.47; HL, 0.31; PW, 0.33; PSL, 0.11; MW, 0.49; MSL, 0.15; AWIV, 0.49; GL, 0.43; TL, 1.29.

**Material.** Male holotype, female allotype of *M. magnidens*, ex *P. sulphuratus rufipennis*, VENEZUELA.



**FIGURES 1–8.** 1–2, *Myrsidea magnidens*. 1, Female metanotum and dorsal abdomen. 2, Male genital sac sclerite. 3, *M. stenodesma* female metanotum and dorsal abdomen. 4–6, *M. pitangi*. 4, Female metanotum and dorsoventral abdomen. 5, Entire dorsoventral male. 6, Male genitalia. 7, *M. seversoni* female dorsal thorax and abdomen. 8, *M. melancholici* female dorsal thorax and abdomen.

**Remarks.** Stafford (1943) described *Myrsidea magnidens* from a series of two females and two males, retaining the holotype and allotype in his personal collection and placing the other pair in the Caracas collection. The eight figures accompanying this description are poor, small, and lacking in detail, but they were sufficient to alert us to the necessity of obtaining and studying the types to define the species properly. We originally thought it most likely that the series we had from *P. sulphuratus* (L.) from Trinidad and Costa Rica represented *Myrsidea magnidens*. However, differences in the number of tergal and sternal setae, as well as the unique male genital sac sclerite and other features for *Myrsidea magnidens*, made it obvious that we were dealing with two distinctly different species.

Carriker (1955:1–3), in his characteristic bluntness, though in language normally reserved for private correspondence, described the Stafford (1943) specimens and publication as follows: “Unfortunately I found the slides in a sad state. Apparently the flood which had severely damaged the offices of the Department of Hygiene in Caracas had also taken its toll of the box of slides. Many of the labels had become loosened due to the wetting and were scattered about so that it was a long, tedious task to replace them on the proper slides...Out of 17 species which were identified by Stafford, and of which specimens are still in the collection, only two are correctly named, while the hosts of quite a number were in error, including two of the new species...There is no excuse for the publication of such utterly useless rubbish, since it only adds more confusion to that in which the unfortunate Mallophaga have been swamped for so long, and from which they are now emerging, thanks to the tireless work of a number of our modern workers on this fascinating group of insects.” The marginal quality of Stafford’s original taxonomy, together with the history of these type specimens, raises considerable doubt as to the accuracy of their host identification. It should be noted that Stafford did not collect the specimens or identify the hosts and that he never published another paper on chewing lice.

***Myrsidea stenodesma* (Carriker) (Fig. 3)**

*Menopon stenodesmum* Carriker 1903: 184. Type host: *Empidonax atriceps* Salvin, Black-capped Flycatcher.

**Female.** Metanotum and dorsal abdomen as in Fig. 3. Metanotum with 15 marginal setae. Tergites I–III enlarged, with II–VI having slight medioposterior convexity and VII–VIII unmodified. Tergal setae: I, 30; II, 40; III, 33; IV–V, 35–36; VI, 39; VII, 30; VIII, 20. Postspiracular setae with some missing or broken, but those on II and VII–VIII apparently very long, much shorter than on I and III–VI. Sternal setae: II, each aster with 4 setae, other setae obscured; III, 28; IV–V, 32–34; VI, 27; VII, 14; VIII–IX of subgenital plate, 21. Anus with 31 dorsal fringe setae, 34 ventral. Dimensions: TW, 0.45; HL & PW, 0.30; PSL, 0.10; MW, 0.45; MSL, 0.15; AWIV, 0.60; ANW, 0.19; TL, 1.50.

**Male.** Metanotum with obscured marginal setae. Tergal setae: I, 28; II–VI, 35–37; VII, 32; VIII, 24. Sternal setae: II, each aster with 4 setae, 33 other setae; III–VI, 30–35; VII, 18; VIII, obscured. Genital sac sclerite obscured. Dimensions: TW, 0.42; HL & PW, 0.28; PSL, 0.10; MW, 0.35; MSL, 0.14; AWIV, 0.44; GL, 0.41; TL, 1.26.

**Material.** Female holotype, male allotype of *Menopon stenodesmum*, ex *E. atriceps*, COSTA RICA.

**Remarks.** Even with the extremely poor condition of the two type specimens that Carriker (1903) used for the description of this species, the large number of tergal and/or sternal setae for both sexes readily separates it from all other tyrannid *Myrsidea* except for *M. magnidens*. Both sexes of *M. stenodesma*, with smaller dimensions and fewer abdominal sternal setae, are easily separated from *M. magnidens*. Carriker (1903) provided a description for the female and figured only that sex, with no mention of the male specimen in his type series; hence, that female is the holotype. Strangely, the male specimen carries the NMNH holotype number on the back of the slide. Since both sexes provide the same excellent separation from other tyrannid *Myrsidea*, the sex of the holotype is of little significance.

By modern standards, Carriker was not a very good technician, even taking into consideration the primitive facilities available to him. Many specimens in his collection were attributed to the wrong host. Lice, especially menoponids, readily move from one host to another as dead birds cool when placed together in a collecting bag. Cross-contamination also may have occurred on the preparation table. In the absence of additional louse specimens, Carriker's host determinations are best treated with caution. It is ironic, given the scathing rebuke of Stafford (1943) in Carriker (1955), that Carriker's own methods appear to be suspect.

### *pitangi* species group

Both sexes of the eight species of this group are recognized by a consistently reduced number of abdominal tergal and/or sternal setae and the female lacking highly modified anterior abdominal tergites.

### *Myrsidea pitangi* Price, Hellenthal and Dalglish, new species (Figs. 4–6)

**Type host.** *Pitangus sulphuratus* (L.), Great Kiskadee.

**Female.** Metanotum and abdomen as in Fig. 4. Metanotum with 10–11 marginal setae. Tergites II–III with slight medioposterior convexity. Tergal setae: I, 12–13; II, 16–19; III–IV, 17–19; V, 17–18; VI, 14–15; VII, 10–11; VIII, 8–9. Postspiracular setae very long on I–VIII, but slightly shorter on III and V than on adjacent segments. Sternal setae: II, each aster with 4, rarely 5, setae, 22–29 other setae; III, 25–31; IV, 45–51; V, 55–65; VI,

45–51; VII, 13–15; VIII–IX of subgenital plate, 20–24. Anus with 42–46 dorsal fringe setae, 35–39 ventral. Dimensions: TW, 0.55–0.58; HL, 0.35–0.38; PW, 0.35–0.37; PSL, 0.14; MW, 0.53–0.55; MSL, 0.17–0.19; AWIV, 0.73–0.79; ANW, 0.28–0.29; TL, 1.76–1.90.

**Male.** As in Fig. 5. Metanotum with 8 marginal setae. Tergal setae: I, 10–13; II, 13–14; III, 15–18; IV–V, 13–15; VI, 12–14; VII, 10–12; VIII, 8. Sternal setae: II, each aster with 4 setae, 21–26 other setae; III, 22–29; IV, 36–42; V, 40–49; VI, 34–42; VII, 15–16; VIII, 7. Genitalia as in Fig. 6, with evenly tapered large elongate triangular sac sclerite about 0.10 long. Dimensions: TW, 0.51–0.53; HL, 0.34–0.36; PW, 0.32–0.34; PSL, 0.11–0.13; MW, 0.43–0.48; MSL, 0.14–0.15; AWIV, 0.54–0.57; GL, 0.51; TL, 1.46–1.54.

**Type material.** Holotype female (TNHM), ex *P. sulphuratus*, **TRINIDAD:** Tumpuna Rd., 25 Aug 1960, TRVL 4725, Brit. Mus. 1974-636. Paratypes (OSU): 3 females, 2 males, ex *P. sulphuratus*, **COSTA RICA:** Guanacaste, Zapote, Bijagua, Canas, 20 Jul 1985, M. A. Marin 280.

**Remarks.** This species is readily separable from others of this species group by the large dimensions of both sexes coupled with the lengths of the postspiracular setae and the large number of sternal setae on IV–VI.

#### *Myrsidea seversoni* Price, Hellenthal and Dalglish, new species (Fig. 7)

**Type host.** *Tyrannus verticalis* Say, Western Kingbird.

**Female.** Dorsal thorax and abdomen as in Fig. 7. Metanotum with 10, much less often 9 or 11, marginal setae. Tergites II–IV with slight medioposterior convexity. Tergal setae: I, 10–12; II–V, 14–20; VI, 15–17; VII, 9–13; VIII, 8, rarely 9. Postspiracular setae very long and of similar length on I–VIII. Sternal setae: II, each aster with 4–5 setae, 22–32 other setae; III, 22–27; IV, 51–60; V, 56–68; VI, 43–49; VII, 15–20; VIII–IX of subgenital plate, 23–29. Anus with 35–42 setae in each fringe. Dimensions: TW, 0.54–0.56; HL, 0.36–0.39; PW, 0.33–0.35; PSL, 0.13–0.14; MW, 0.51–0.53; MSL, 0.16–0.18; AWIV, 0.67–0.72; ANW, 0.24–0.26; TL, 1.78–1.87.

**Male.** Unavailable.

**Type material.** Holotype female (OSU), ex *T. verticalis*, Stillwater, Oklahoma, U.S.A., 5 Jun 1948, K. C. Emerson. Paratypes (OSU, TNHM): 19 females, same data as holotype.

**Remarks.** Though we have only females available for this description, the uniformly very long postspiracular setae on I–VIII, in combination with the number of tergal and sternal setae and the large dimensions, readily separate *Myrsidea seversoni* from others of this species group.

**Etymology.** This species is named for David W. Severson, University of Notre Dame, in recognition of his many contributions to our understanding of the role of mosquitoes in disease transmission.

***Myrsidea melancholici* Price, Hellenthal and Dalglish, new species (Fig. 8)**

**Type host.** *Tyrannus melancholicus* Vieillot, Tropical Kingbird.

**Female.** Dorsal thorax and abdomen as in Fig. 8. Metanotum with 9–11 marginal setae. Tergites II–IV with slight medioposterior convexity. Tergal setae: I, 10–12; II, 14–16; III, 12–15; IV–VI, 14–18; VII, 9–11; VIII, 8. Postspiracular seta on V shorter than very long postspiracular setae on other segments. Sternal setae: II, each aster with 4–5 setae, 26–29 other setae; III, 21–30; IV, 53–70; V, 64–74; VI, 49–58; VII, 15–23; VIII–IX of subgenital plate, 20–25. Anus with 36–41 setae in each fringe. Dimensions: TW, 0.53–0.55; HL, 0.38–0.39; PW, 0.34–0.35; PSL, 0.12–0.14; MW, 0.51–0.53; MSL, 0.17–0.18; AWIV, 0.66–0.73; ANW, 0.25–0.26; TL, 1.66–1.82.

**Male.** Metanotum with 6–8 marginal setae. Tergal setae: I, 8–9; II, 12–14; III–IV, 12–18; V, 11–15; VI, 9–18; VII, 11–12; VIII, 8. Sternal setae: II, each aster with 4, less often 5, setae, 21–26 other setae; III, 17–25; IV, 43–58; V, 55–64; VI, 41–52; VII, 16–25; VIII, 7–9. Genital sac sclerite as in Fig. 12. Dimensions: TW, 0.48–0.49; HL, 0.33–0.35; PW, 0.30–0.31; PSL, 0.11–0.12; MW, 0.42–0.43; MSL, 0.14–0.15; AWIV, 0.53–0.55; GL, 0.49–0.52; TL, 1.44–1.47.

**Type material.** Holotype female (NMNH), ex *T. melancholicus*, **TRINIDAD:** Fort Read, 2 Jul 1954, T. H. G. Aitken, Lot 54-12322. Paratypes (NMNH, TNHM, RCD), all ex *T. melancholicus*: **TRINIDAD:** 1 female, Bush Bush Forest, Nariva Swamp, 28 May 1963, G. Aitken, TRVL 6634; 1 male, Sangre Grande, 24 Dec 1957, W. G. Downs, TRVL 6; **COSTA RICA:** 1 female, 6 males, Las Cruces Biological Station, Cota Brus, 18–21 Apr 1992, R. L. Fisher 146.

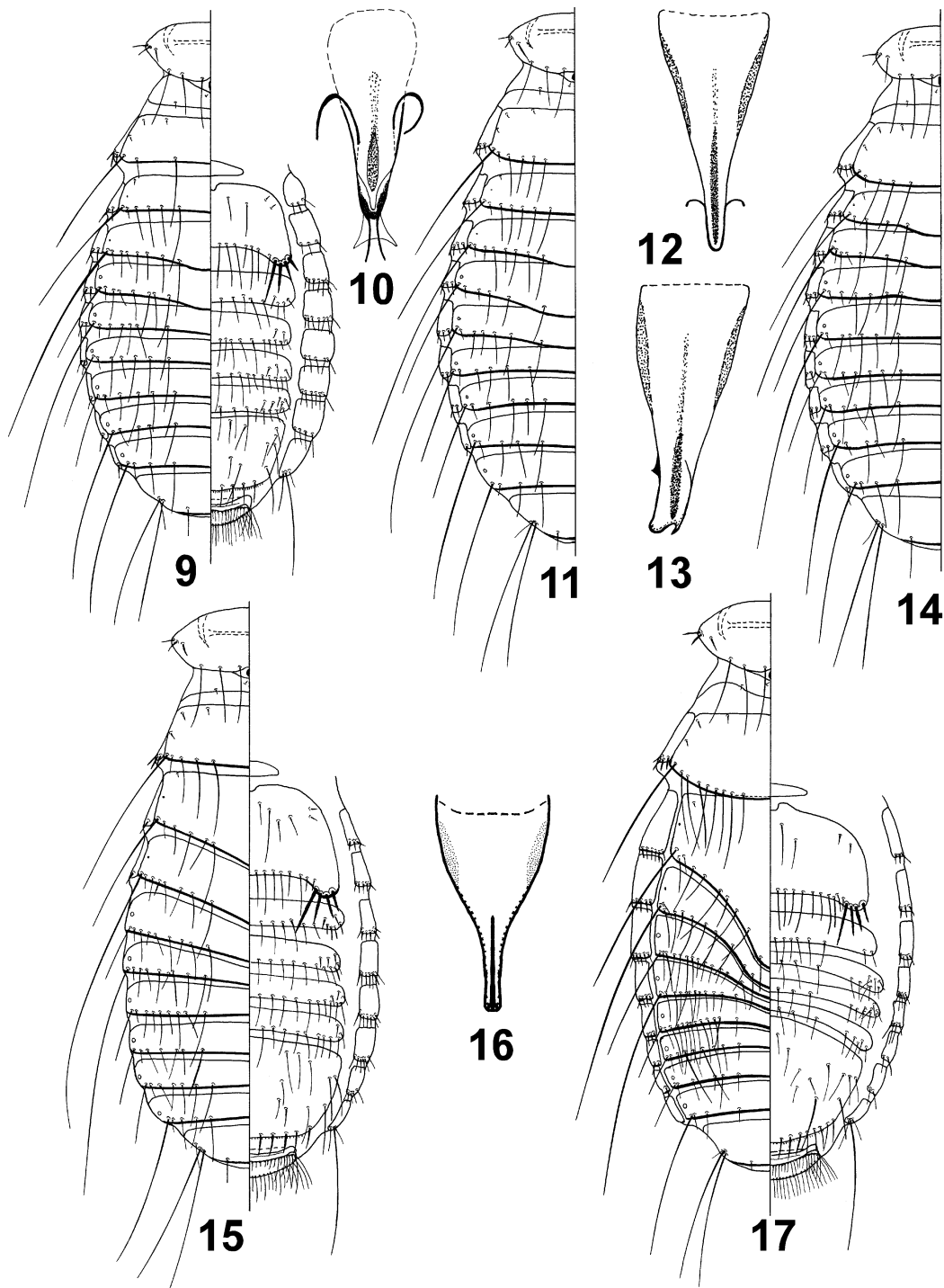
**Remarks.** Although this species is very close to *Myrsidea seversoni*, females are separable from the latter by the postspiracular seta on V being distinctly shorter than the ones on IV and VI. The absence of males for *M. seversoni* makes differentiation for that sex impossible, other than inferring that the postspiracular setae will eventually prove to be similar for both sexes.

***Myrsidea barbati* Price, Hellenthal and Dalglish, new species (Figs. 9–10)**

**Type host.** *Myiobius barbatus* (J. F. Gmelin), Sulphur-rumped Flycatcher.

**Female.** Dorsal thorax and dorsoventral abdomen as in Fig. 9. Metanotum with 6–8 marginal setae. Tergites II–III with slight medioposterior convexity. Tergal setae: I, 10–14; II–III, 13–17; IV–V, 13–16; VI, 11–14; VII, 9–12; VIII, 8–10. Postspiracular setae on III and V–VI much shorter than very long postspiracular setae on other segments. Sternal setae: II, each aster with 4 setae, 20–27 other setae; III, 18–23; IV, 24–29; V, 28–33; VI, 24–32; VII, 11–15; VIII–IX of subgenital plate, 15–20. Anus with 25–31 setae in dorsal fringe, 24–29 in ventral. Dimensions: TW, 0.45–0.48; HL, 0.28–0.31; PW, 0.26–0.29; PSL, 0.10–0.11; MW, 0.39–0.43; MSL, 0.14–0.16; AWIV, 0.51–0.57; ANW, 0.17–0.19; TL, 1.37–1.46.





**FIGURES 9–17.** 9–10, *Myrsidea barbati*. 9, Female dorsal thorax and dorsoventral abdomen. 10, Male genital sac sclerite. 11–12, *M. similis*. 11, Female dorsal thorax and abdomen. 12, Male genital sac sclerite. 13–14, *M. contopi*. 13, Male genital sac sclerite. 14, Female dorsal thorax and abdomen. 15–16, *M. oleaginei*. 15, Female dorsal thorax and dorsoventral abdomen. 16, Male genital sac sclerite. 17, *M. neocinereae* female dorsal thorax and dorsoventral abdomen.

**Male.** Metanotum with 6 marginal setae. Tergal setae: I, 9–11; II–VI, 13–17; VII, 12–15; VIII, 10–12. Sternal setae: II, each aster with 4 setae, 23–28 other setae; III, 16–20; IV, 20–26; V–VI, 22–28; VII, 14–17; VIII, 6, rarely 5. Genital sac sclerite about 0.07 long, as in Fig. 10. Dimensions: TW, 0.41–0.43; HL, 0.27–0.29; PW, 0.24–0.28; PSL, 0.09–0.10; MW, 0.35–0.37; MSL, 0.12–0.14; AWIV, 0.43–0.45; GL, 0.41–0.46; TL, 1.13–1.22.

**Type material.** Holotype female (NMNH), ex *M. barbatus*, **COSTA RICA:** San Jose Prov., Tinamaste, 12 km SW San Isidro de El General, 1 Feb 2000, Fisher & J.S. 3088. Paratypes (NMNH, TNHM, RCD), all ex *M. barbatus*: **COSTA RICA:** 1 female, 2 males, same as holotype; 2 males, same except 3085; 1 male, Monte Anvio Lodge, 13 km N Portero Grande Puntarenas, 20 Mar 1995, Fisher & J.S. 2097; **VENEZUELA:** 3 females, Edo. Bolivar, 60 km E Sta. Elena, Jan 1987, R. C. Dalglish; **NE PERU:** 1 female, Explor Napa Camp, Rio Napa, SE Iquitos, 14 Jun 1989, R. C. Dalglish et al 9407; **BELIZE:** 1 female, 1 male, Aguacate, 4 May 1979, C. Lyal & A. Hutson; 1 female, 1 male, same except 5 May 1979; 1 female, 1 male, Toledo Distr., Jimmy Cub, 24 May 1979, C. Lyal & A. Hutson.

**Remarks.** The male of *Myrsidea barbati* is readily separated from males of others of this group by its highly distinctive genital sac sclerite (Fig. 10). The female is recognized by its small number of setae on the metanotal margin, in conjunction with not >33 setae on sternites V–VI, not >32 setae in each anal fringe, and the narrow anus <0.20 wide. The small dimensions and the relative lengths of the postspiracular setae for both sexes will also separate this species from a number of the others.

### *Myrsidea flaviventris* Price, Hellenthal and Dalglish, new species

**Type host.** *Tolmomyias flaviventris* (Wied), Yellow-breasted Flycatcher.

**Female.** Dorsal thorax and dorsoventral abdomen much as in Fig. 9. Metanotum with 6–9 marginal setae. Tergites II–III with slight medioposterior convexity. Tergal setae: I, 11–12; II, 13–15; III–IV, 14–17; V–VI, 14–15; VII, 9–13; VIII, 8. Postspiracular setae on III and V–VI much shorter than very long postspiracular setae on other segments. Sternal setae: II, each aster with 4 setae, 24–25 other setae; III, 23–25; IV, 31–35; V, 38–40; VI, 35–37; VII, 13–16; VIII–IX of subgenital plate, 19–20. Anus with 35–42 setae in dorsal fringe, 34–36 in ventral. Dimensions: TW, 0.46; HL, 0.31–0.33; PW, 0.27–0.29; PSL, 0.10–0.11; MW, 0.41–0.42; MSL, 0.14–0.15; AWIV, 0.56–0.61; ANW, 0.20–0.21; TL, 1.50–1.64.

**Male.** Metanotum with 6–8 marginal setae. Tergal setae: I, 8–10; II, 12–14; III–V, 12–15; VI, 12–14; VII, 10; VIII, 8. Sternal setae: II, each aster with 4 setae, 18–23 other setae; III, 19–24; IV, 29–31; V, 32–34; VI, 29–32; VII, 15–17; VIII, 6–8. Genital sac sclerite similar to Fig. 12. Dimensions: TW, 0.41–0.42; HL, 0.29–0.32; PW, 0.26–0.29; PSL, 0.10; MW, 0.35–0.37; MSL, 0.13–0.14; AWIV, 0.46–0.49; GL, 0.41–0.43; TL, 1.22–1.36.

**Type material.** Holotype female (NMNH), ex *T. flaviventris*, **TRINIDAD:** Sangre Grande, Melajo For, 15 May 1956, W. G. Downs, TRVL 207. Paratypes (NMNH, TNHM, RCD), all ex *T. flaviventris*: **TRINIDAD:** 1 male, same data as holotype; 2 females, 2 males, Caroni River, 4 Jan 1961, TRVL 5257; 1 male, Naparima Mayaro Road, 23 Jul 1968, E. S. Tikasingh, BM 1974–636; **NE PERU:** 2 males, SE Iquitos, Rio Napa, Explor Napa Camp, 16 Jun 1989, R. C. Dalglish et al 9406.

**Remarks.** The small number of marginal metanotal setae, the moderate dimensions, and the lengths of the postspiracular setae ally females of *Myrsidea flaviventris* with those of *M. barbati* and separate both of these species from all others of this group. The females of these two species may be separated from each other by the number of setae in each anal fringe, the width of the anus, and the number of sternal setae on V–VI. The males are recognized by their respective distinctive genital sac sclerites (Fig. 12 vs Fig. 10).

### ***Myrsidea similis* Price, Hellenthal and Dalglish, new species (Figs. 11–12)**

**Type host.** *Myiozetetes similis* (Spix), Social Flycatcher.

**Female.** Dorsal thorax and abdomen as in Fig. 11. Metanotum with 11 marginal setae. Tergites II–IV with slight medioposterior convexity. Tergal setae: I, 13; II, 17; III, 12; IV, 15; V, 13; VI, 12; VII, 10; VIII, 8. Postspiracular setae on III and V–VI shorter than very long postspiracular setae on adjacent segments. Sternal setae: II, each aster with 3 setae, 22 other setae; III, 18; IV, 33; V, 46; VI, 32; VII, 14; VIII–IX of subgenital plate, 24. Anus with 43 setae in dorsal fringe, 38 in ventral. Dimensions: TW, 0.51; HL, 0.36; PW, 0.32; PSL, 0.12; MW, 0.48; MSL, 0.15; AWIV, 0.68; ANW, 0.24; TL, 1.68.

**Male.** Metanotum with 10 marginal setae. Tergal setae: I, 11; II–III, 14; IV–V, 12; VI–VII, 11; VIII, 10. Sternal setae: II, each aster with 3 setae, 22 other setae; III, 18; IV, 37; V, 42; VI, 30; VII, 16; VIII, 8. Genital sac sclerite 0.11 long, as in Fig. 12. Dimensions: TW, 0.45; HL, 0.32; PW, 0.28; PSL, 0.11; MW, 0.39; MSL, 0.14; AWIV, 0.50; GL, 0.45; TL, 1.42.

**Type material.** Holotype female (OSU), ex *M. similis*, **COSTA RICA:** Limon Province, Las Diametes, 8 Apr 1964, O-2492. Paratype (OSU): 1 male, same data as holotype.

**Remarks.** The female of *Myrsidea similis* is distinguished from others of the group by its postspiracular setal configuration in conjunction with the large number of marginal metanotal and tergite II setae, the wide anus with its large number of fringe setae, and the large dimensions. The male genital sac sclerite is similar to those of *M. flaviventris* and *M. elaeinae* of this group, but the male of *M. similis* may be separated from them by its having more setae on tergites VII–VIII and sternites IV–V, only 3 setae in each sternite II aster, and tendency for greater temple width.

***Myrsidea elaeniae* Price, Hellenthal and Dalglish, new species**

**Type host.** *Elaenia flavogaster* (Thunberg), Yellow-bellied Elaenia.

**Female.** Dorsal thorax and abdomen much as in Fig. 11. Metanotum with 12 marginal setae. Tergites II–III or II–IV with slight medioposterior convexity. Tergal setae: I, 8–12; II, 10–14; III, 10–15; IV–V, 9–14; VI, 7–13; VII, 8–11; VIII, usually 8, rarely 7. Postspiracular setae on III and V–VI shorter than very long postspiracular setae on adjacent segments. Sternal setae: II, each aster with 4, rarely 3, setae, 19–28 other setae; III, 16–21; IV, 27–36; V, 31–41; VI, 29–35; VII, 12–19; VIII–IX of subgenital plate, 15–20. Anus with 28–37 setae in dorsal fringe, 26–32 in ventral. Dimensions: TW, 0.44–0.46; HL, 0.29–0.33; PW, 0.27–0.30; PSL, 0.10–0.11; MW, 0.38–0.43; MSL, 0.12–0.14; AWIV, 0.51–0.57; ANW, 0.17–0.19; TL, 1.35–1.48.

**Male.** Metanotum with 8–10 marginal setae. Tergal setae: I, 10–11; II–III, 12–16; IV–V, 10–14; VI, 10–12; VII, 8–10; VIII, 7–9. Sternal setae: II, each aster with 4, rarely 3, setae, 20–23 other setae; III, 16–18; IV, 25–29; V–VI, 29–34; VII, 15–19; VIII, 5–6. Genital sac sclerite as in Fig. 12. Dimensions: TW, 0.42–0.43; HL, 0.30–0.32; PW, 0.26–0.28; PSL, 0.09–0.10; MW, 0.35–0.38; MSL, 0.12–0.13; AWIV, 0.44–0.47; GL, 0.41–0.46; TL, 1.23–1.27.

**Type material.** Holotype female (NMNH), ex *E. flavogaster*, **COSTA RICA:** Cota Brus, Las Cruces Biological Station, 26 Jun 1993, R. L. Fisher 655. Paratypes (NMNH, TNHM, OSU, RCD), all ex *E. flavogaster*: **COSTA RICA:** 1 female, 1 male, same data as holotype; 6 females, 1 male, same except 18–21 Apr 1992, R. L. Fisher 50; 1 male, same except R. L. Fisher 96; 1 female, Alajuela, Cerro Montezuma, 4 May 1986, M. A. Marin 513; **VENEZUELA:** 1 female, Edo. Bolivar, 60 km E Sta. Elena, Jan 1987, R. C. Dalglish; 4 females, 1 male, Bolivar, Hato San Jose, 4 Apr 1967, 12582; **TRINIDAD:** 2 females, Brazil Village, 11 Feb 1966, T. H. G. Aitken, TRVL 11312; 1 male, Naparima, Mayaro Road, 23 Jul 1968, E. S. Tikasingh, BM 1974-636; **BELIZE:** 3 females, 1 male, Toledo Distr., Rideau, 9 May 1979, C. Lyal & A. Hutson.

**Remarks.** The consistently 12 marginal metanotal setae separate the female from all others of this group. The male of *Myrsidea elaeniae*, with the genital sac sclerite similar to that in Fig. 12, is close to *M. similis* and *M. flaviventris* of this group. It is tenuously separable from *M. similis* by having fewer setae on tergites VII–VIII and sternites IV–V and from *M. flaviventris* by differences in tergal and sternal setae counts.

***Myrsidea contopi* Price, Hellenthal and Dalglish, new species (Figs. 13–14)**

**Type host.** *Contopus cinereus* (Spix), Tropical Pewee.

**Female.** Dorsal thorax and abdomen as in Fig. 14. Metanotum with 10–11 marginal setae. Tergites I–II or I–III with slight medioposterior convexity. Tergal setae: I, 8–10; II, 13–14; III, 15–17; IV, 14–15; V–VI, 11–13; VII–VIII, 8. Postspiracular setae on III and

V–VI shorter than very long postspiracular setae on adjacent segments. Sternal setae: II, each aster with 4, less often 3, setae, 24 other setae; III, 19–21; IV, 30–32; V, 34–35; VI, 30; VII, 12–14; VIII–IX of subgenital plate, 22–25. Anus with 35–36 setae in dorsal fringe, 32–37 in ventral. Dimensions: TW, 0.43–0.44; HL, 0.31–0.32; PW, 0.27–0.28; PSL, 0.09–0.10; MW, 0.42–0.43; MSL, 0.14; AWIV, 0.56–0.58; ANW, 0.20–0.21; TL, 1.32–1.37.

**Male.** Metanotum with 9–10 marginal setae. Tergal setae: I, 7–8; II–III, 11–15; IV, 10–14; V, 10–12; VI, 10; VII, 8–10; VIII, 8. Sternal setae: II, each aster with 4, less often 3, setae, 18–22 other setae; III, 17–20; IV, 23–29; V, 28–30; VI, 22–27; VII, 13–16; VIII, 6–7. Genital sac sclerite 0.08 long, as in Fig. 13, with pronounced distal asymmetry. Dimensions: TW, 0.40–0.41; HL, 0.27–0.30; PW, 0.24–0.27; PSL, 0.09–0.10; MW, 0.36–0.37; MSL, 0.12–0.13; AWIV, 0.45–0.46; GL, 0.42–0.43; TL, 1.18–1.23.

**Type material.** Holotype male (NMNH), ex *C. cinereus*, **TRINIDAD:** Sangre Grande, Melajo Forest, 21 Feb 1956, W. G. Downs, TRVL 109. Paratypes (NMNH): 2 females, 5 males, same data as holotype.

**Remarks.** The male is readily recognized from all others of this group by its unique genital sac sclerite (Fig. 13). The female only is tenuously separable from other species in the group by chaetotaxy and dimensions.

### *oleaginei* species group

The males and females of the five species of this group have a reduced number of tergal and/or sternal setae and females with a significant modification of anterior abdominal tergites.

### *Myrsidea oleaginei* Price, Hellenthal and Dalglish, new species (Figs. 15–16)

**Type host.** *Mionectes oleagineus* (M. H. K. Lichtenstein), Ochre-bellied Flycatcher.

**Female.** Dorsal thorax and dorsoventral abdomen as in Fig. 15. Metanotum with 10–12 marginal setae. Tergites I–III enlarged, tapering to medioposterior point. Tergal setae: I, 10–15; II, 13–17; III–VI, 14–18; VII, 11–15; VIII, 8–11. Postspiracular setae on III and V–VII short, others long to very long. Sternal setae: II, each aster with 4 setae, 22–31 other setae; III, 20–24; IV, 22–29; V, 24–31; VI, 19–25; VII, 7–10; VIII–IX of subgenital plate, 18–22. Anus with 27–37 setae in dorsal fringe, 28–33 in ventral. Dimensions: TW, 0.41–0.44; HL, 0.27–0.30; PW, 0.25–0.28; PSL, 0.10–0.11; MW, 0.36–0.40; MSL, 0.14–0.15; AWIV, 0.47–0.55; ANW, 0.17–0.20; TL, 1.28–1.43.

**Male.** Metanotum with 8–10 marginal setae. Tergal setae: I, 9–11; II, 12–15; III–IV, 14–19; V–VI, 14–17; VII, 11–16; VIII, 10–12. Sternal setae: II, each aster with 4 setae, 19–28 other setae; III, 17–20; IV–V, 19–26; VI, 16–22; VII, 10–13; VIII, 5–7. Genital sac sclerite 0.09 long, as in Fig. 16, with distal narrow tapering. Dimensions: TW, 0.36–0.39;

HL, 0.23–0.27; PW, 0.23–0.26; PSL, 0.09–0.10; MW, 0.30–0.33; MSL, 0.11–0.13; AWIV, 0.38–0.42; GL, 0.35–0.37; TL, 1.04–1.14.

**Type material.** Holotype female (NMNH), ex *M. oleagineus*, **TRINIDAD:** Simla nr Arima, 11 Mar 1980, R. C. Dalglish 685. Paratypes, all ex *M. oleagineus* (NMNH, TNHM, RCD): **TRINIDAD:** 2 females, 3 males, same data as holotype; 2 females, 2 males, same except 6 Mar 1980, RCD 747; 1 female, 1 male, same except 10 Mar 1980, RCD 748; 3 females, 2 males, same except 13 Mar 1980, RCD 729; 2 males, same except 28 Mar 1980, RCD 692; 5 females, 4 males, Simla, Arima, 25 Mar 1978, RCD 535; 3 females, 2 males, same except 19 Mar 1976, RCD; 2 females, Arima Valley, 2 Mar 1961, T. Clay No. 89; 1 female, 1 male, Aripo Valley, 14 Jun 1960, TRVL 4499; 1 female, 1 male, Vega de Oropouche, 15 Dec 1959, TRVL 3749; 3 females, 1 male, same except 25 Nov 1958, Bird 2096; **BELIZE:** 1 female, 1 male, Toledo Distr., Aguacate, 3 May 1979, C. Lyal & A. Hutson; 1 female, 1 male, same except 5 May 1979; 1 female, 1 male, Toledo Distr., Union Camp, 13 May 1979, C. Lyal & A. Hutson; **COSTA RICA:** 1 male, Puntarenas, Dominical, Hacienda Baru, 1 Jul 1993, Fisher 704; 1 female, 1 male, same except 2 Jul 1993, Fisher 710; 1 female, same except 3 Jul 1993, Fisher 723; 1 female, 1 male, Puerto Viejo, La Selva Biological Station, 11–14 Jun 1992, R. L. Fisher 367; **NE PERU:** 2 females, 2 males, SE Iquitos, Rio Napa, Explor Napa Camp, 16 Jun 1989, RCD et al 9395; 2 females, 4 males, same except 17 Jun 1989, RCD et al 9393; 2 females, same except 13 Jun 1989, RCD et al 9398.

**Remarks.** This species is easily separated from others of this group by the unique shape of the anterior female abdominal tergites (Fig. 15) and the posteriorly narrowed male genital sac sclerite (Fig. 16). The number of tergal setae and dimensions further support this separation.

### *Myrsidea neocinereae* Price, Hellenthal and Dalglish, new species (Fig. 17)

**Type host.** *Serpophaga cinerea* (Tschudi), Torrent Tyrannulet.

**Female.** Dorsal thorax and dorsoventral abdomen as in Fig. 17. Metanotum with 18 marginal setae. Tergite I much enlarged, tapering to medioposterior blunt process; tergites II–V medially compressed and narrowed. Tergal setae: I, 18; II–III, 21–22; IV–V, 25–26; VI, 19; VII, 11; VIII, 8. Postspiracular setae on V–VII short, intermediate on III, and long to very long on other segments. Sternal setae: II, each aster with 4 setae, 27 other setae; III, 17; IV–V, 23–25; VI, 18; VII, 11; VIII–IX of subgenital plate, 26. Anus with 35–37 setae in each fringe. Dimensions: TW, 0.45; HL & PW, 0.30; PSL, 0.12; MW, 0.51; MSL, 0.19; AWIV, 0.59; ANW, 0.21; TL, 1.53.

**Male.** Metanotum with 10 marginal setae. Tergal setae: I, 12; II–V, 15–17; VI, 11; VII, 9; VIII, 8. Sternal setae: II, each aster with 4 setae, 30 other setae; III, 17; IV–V, 22–23; VI, 18; VII, 13; VIII, 8. Genital sac sclerite obscured. Dimensions: TW, 0.41; HL, 0.28; PW, 0.27; PSL, 0.11; MW, 0.36; MSL, 0.14; AWIV, 0.43; GL, 0.40; TL, 1.20.

**Type material.** Holotype female (TNHM), ex *S. cinerea*, **BOLIVIA:** Prov. Chiquitos, Dto. Santa Cruz, Brit. Mus. 1961-489. Paratype (TNHM), 1 male, same data as holotype.

**Remarks.** Though this new species is based on a single pair, the female, with its highly distinctive development of the anterior abdominal tergites and the large number of tergal setae, is easily separated from all other species of this group. A few quantitative features appear to support male separation, but there is need for additional material.

***Myrsidea cayanensis* Price, Hellenthal and Dalglish, new species (Figs. 18–19)**

**Type host.** *Myiozetetes cayanensis* (L.), Rusty-margined Flycatcher.

**Female.** Dorsal thorax and dorsoventral abdomen as in Fig. 18. Metanotum with 9 marginal setae. Tergite I with very slight medioposterior convexity, II with wide rounded convexity, III with moderate rounded convexity, IV–VI with slight median compression, and VII–VIII normal. Tergal setae: I, 13; II–V, 14–15; VI, 13; VII, 11; VIII, 8. Postspiracular setae shortest on V, moderately long on I, III, and VI–VIII, and very long on II and IV. Sternal setae: II, each aster with 4–5 setae, 26 other setae; III, 25; IV, 40; V, 54; VI, 41; VII, 17; VIII–IX of subgenital plate, 20; posterior margin of subgenital plate with heavy irregular spiculations (Fig. 19). Anus with 37 setae in dorsal fringe, 32 in ventral. Dimensions: TW, 0.50; HL, 0.34; PW, 0.31; PSL, 0.12; MW, 0.44; MSL, 0.16; AWIV, 0.61; ANW, 0.22; TL, 1.55.

**Male.** Unavailable.

**Type material.** Holotype female (NMNH), ex *M. cayanensis*, **VENEZUELA:** Edo. Bolivar, 60 km E Sta. Elena, Jan 1987, R. C. Dalglish.

**Remarks.** The female of this species, with its modification of the anterior abdominal tergites (Fig. 18) coupled with the unusual spiculation associated with the posterior margin of the subgenital plate (Fig. 19), the small number of marginal metanotal setae, and the large number of sternal setae on IV–VII, is separable from others of this group.

***Myrsidea olivacei* Price, Hellenthal and Dalglish, new species (Fig. 20)**

**Type host.** *Mionectes olivaceus* Lawrence, Olive-striped Flycatcher.

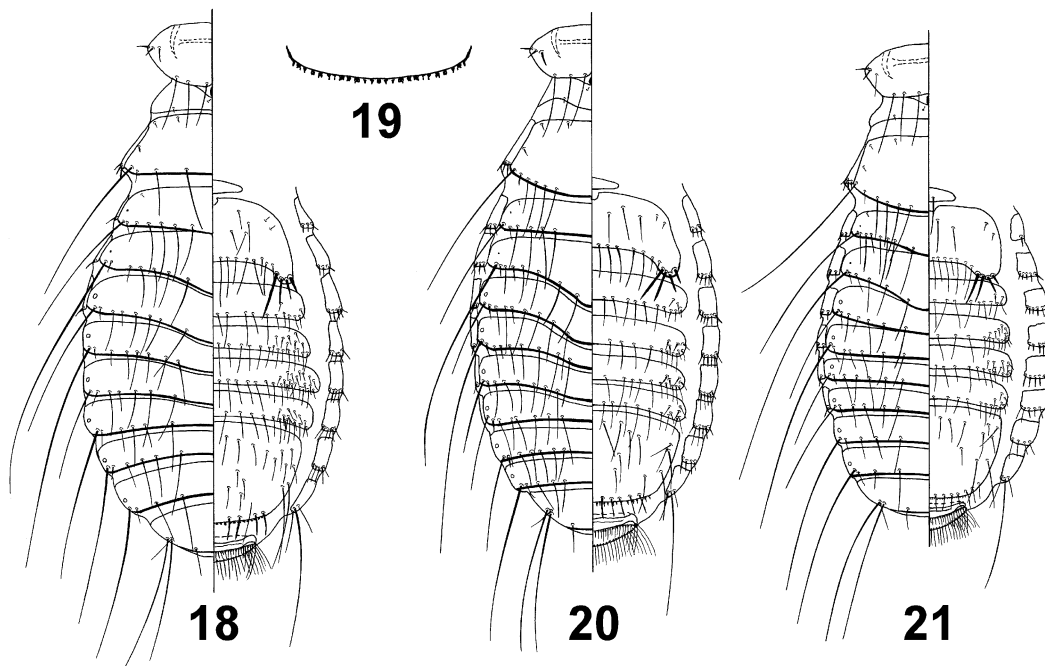
**Female.** Dorsal thorax and dorsoventral abdomen as in Fig. 20. Metanotum with 12 marginal setae. Tergite II with rounded medioposterior process, III–VI with median constriction, and I and VII–VIII normal. Tergal setae: I, 13; II–VI, 16–17; VII, 14; VIII, 10. Postspiracular setae on III and V–VII shortest, intermediate on I, and long to very long on II, IV, and VIII. Sternal setae: II, each aster with 4 setae, 24 other setae; III, 24; IV–VI, 28–31; VII, 13; VIII–IX of subgenital plate, 18; margin of subgenital plate with conspicuous well defined uniform spiculations (Fig. 20). Anus with 36–37 setae in each fringe.

Dimensions: TW, 0.45; HL, 0.31; PW, 0.28; PSL, 0.10; MW, 0.43; MSL, 0.15; AWIV, 0.55; ANW, 0.20; TL, 1.43.

**Male.** Metanotum with 10 marginal setae. Tergal setae: I, 11; II, 17; III–VI, 13–16; VII, 12; VIII, 10. Sternal setae: II, each aster with 4 setae, 19 other setae; III, 19; IV, 21; V, 26; VI, 21; VII, 12; VIII, 5. Genital sac sclerite as in Fig. 16. Dimensions: TW, 0.40; HL, 0.28; PW, 0.26; PSL, obscured; MW, 0.35; MSL, 0.13; AWIV, 0.44; GL, 0.38; TL, 1.12.

**Type material.** Holotype female (NMNH), ex *M. olivaceus*, **TRINIDAD:** Simla nr Arima, 14 Mar 1980, R. C. Dalglish 704. Paratype (NMNH): 1 male, same data as holotype.

**Remarks.** The female, with the modified anterior tergites, is closest to *Myrsidea cayanensis*, from which it is separable by its shorter postspiracular setae on VI–VII, a different spiculation configuration on the subgenital plate margin, 12 marginal metanotal setae, smaller dimensions, and more tergal setae on IV–VII. The male is identifiable by differences in its dimensions, quantitative chaetotaxy, and form of the genital sac sclerite.



**FIGURES 18–21.** 18–19, *Myrsidea cayanensis*. 18, Female dorsal thorax and dorsoventral abdomen. 19, Margin of female subgenital plate. 20–21, Female dorsal thorax and dorsoventral abdomen. 20, *M. olivacei*. 21, *M. spadicei*.

***Myrsidea spadicei* Price, Hellenthal and Dalglish, new species (Fig. 21)**

**Type host.** *Attila spadiceus* (J. F. Gmelin), Bright-rumped Attila.



**Female.** Dorsal thorax and dorsoventral abdomen as in Fig. 21. Metanotum with 13 marginal setae. Tergite I only slightly expanded medially; tergite II longest medially, III somewhat compressed, and IV–VIII normal. Tergal setae: I, 15; II, 13; III–V, 14–16; VI, 12; VII, 10; VIII, 8. Postspiracular setae shortest on III and V–VI, and long to very long on other segments. Sternal setae: I, with single seta; II, each aster with 4 setae, 25 other setae; III, 25; IV–V, 33–36; VI, 29; VII, 14; VIII–IX of subgenital plate, 23. Anus with 44 setae in dorsal fringe, 38 in ventral. Dimensions: TW, 0.49; HL, 0.33; PW, 0.30; PSL, 0.12; MW, 0.47; MSL, 0.18; AWIV, 0.60; ANW, 0.25; TL, 1.55.

**Male.** Metanotum with 12 marginal setae. Tergal setae: I, 10–13; II–V, 14–17; VI, 13–14; VII, 10–11; VIII, 8. Sternal setae: I, with single seta; II, each aster with 4 setae, 19–21 other setae; III, 19–22; IV–V, 30–36; VI, 28–29; VII, 12–14; VIII, 4. Genital sac sclerite as in Fig. 12. Dimensions: TW, 0.45–0.46; HL, 0.28–0.31; PW, 0.28–0.29; PSL, 0.11–0.12; MW, 0.39–0.40; MSL, 0.14; AWIV, 0.47–0.49; GL, 0.44–0.46; TL, 1.31–1.41.

**Type material.** Holotype female (NMNH), ex *A. spadiceus*, **COSTA RICA:** Puerto Viejo, La Selva Biological Station, 11–14 Jun 1993, R. L. Fisher 380. Paratypes, all ex *A. spadiceus* (NMNH, RCD): 1 male, same data as holotype; **COSTA RICA:** 1 male, Limon, Punta Cocles Hotel, 10 km E Pto. Viejo, 24–25 Apr 1992, R. L. Fisher 206.

**Remarks.** This is the only species of tyrannid *Myrsidea* that has a seta on sternite I for both sexes. This feature, supplemented with the quantitative chaetotaxy and dimensions, will separate *M. spadicei* from others of this group as well as from other tyrannid *Myrsidea*.

## Discussion

The results of this study are consistent with those on passerine *Myrsidea* of the Pycnonotidae by Hellenthal and Price (2003) and of the Pipridae by Dalglish and Price (2004). These have shown an unusually high and unanticipated degree of host/louse specificity. The current analysis of tyrannid *Myrsidea* has revealed a close morphological relationship with those from the Pipridae, yet the species separation remains clear cut. This relationship is especially evident in the structure of the male genital sac sclerite, with the typical pattern being an elongate triangular shape with a dark median distal line. The unique chaetotaxy and female tergal development offer excellent features for species recognition. Thus, the *Myrsidea* support Dickinson (2003) and others who place the Pipridae close to the Tyrannidae.

Key to the Species of *Myrsidea* from the Tyrannidae

## Female

- 1 Tergites IV–VI with >31 setae, VII >26 setae ..... 2  
 - Tergites IV–VI with <28 setae, VII <20 setae ..... 3
- 2 Sternites IV–VI with >50 setae; tergites I–II with <22 setae; temple width >0.50 .....  
 ..... *magnidens* Stafford  
 - Sternites IV–VI with <40 setae; tergites I–II with >28 setae; temple width <0.48.....  
 ..... *stenodesma* (Carriker)
- 3 Tergite I much enlarged (Figs. 15, 17) ..... 4  
 - Tergite I not much enlarged ..... 5
- 4 Anterior tergites medioposteriorly rounded (Fig. 17); tergites IV–V with >20 setae ....  
 ..... *neocinereae* **n. sp.**  
 - Anterior tergites medioposteriorly pointed (Fig. 15); tergites IV–V with <20 setae .....  
 ..... *oleaginei* **n. sp.**
- 5 Tergite II with pronounced medioposterior rounded expansion (Figs. 18, 20, 21) ..... 6  
 - Tergite II with at most only slight medioposterior convexity ..... 8
- 6 Metanotal margin with <11 setae; postspiracular seta on VI very long, much longer  
 than on V (Fig. 18); subgenital plate margin as in Fig. 19 ..... *cayanensis* **n. sp.**  
 - Metanotal margin with >10 setae; postspiracular seta on VI shorter; subgenital plate  
 margin not so heavily spiculated ..... 7
- 7 Sternite I with single seta (Fig. 21); temple >0.47 wide; anus >0.23 wide .....  
 ..... *spadicei* **n. sp.**  
 - Sternite I without seta (Fig. 20); temple <0.47 wide; anus <0.22 wide . *olivacei* **n. sp.**
- 8 Sternite V with >50 setae; temple >0.52 wide ..... 9  
 - Sternite V with <48 setae; temple <0.52 wide ..... 11
- 9 Anus >0.27 wide; postspiracular seta on III shorter than on II and IV (Fig. 4) .....  
 ..... *pitangi* **n. sp.**  
 - Anus <0.27 wide; postspiracular seta on III similar in length to those on II and IV  
 (Figs. 7–8) ..... 10
- 10 Postspiracular seta on V shorter than those on adjacent segments (Fig. 8) .....  
 ..... *melancholici* **n. sp.**  
 - Postspiracular seta on V equal to length of those on adjacent segments (Fig. 7) .....  
 ..... *seversoni* **n. sp.**
- 11 Metanotal margin with at least 10 setae ..... 12  
 - Metanotal margin with <10 setae ..... 14
- 12 Temple >0.49 wide; metathorax >0.46 wide ..... *similis* **n. sp.**  
 - Temple <0.48 wide; metathorax <0.45 wide ..... 13
- 13 Tergite I with slight medioposterior convexity (Fig. 14); ex *Contopus* .. *contopi* **n. sp.**  
 - Tergite I without such convexity; ex *Elaenia* ..... *elaeniae* **n. sp.**

- 14 Anus not >0.19 wide; each anal fringe with <32 setae; sternite V with <35 setae ..... *barbati* **n. sp.**  
 - Anus at least 0.20 wide; each anal fringe with >33 setae; sternite V with >36 setae ....  
 ..... *flaviventris* **n. sp.**

Male (excluding *Myrsidea seversoni* and *M. cayanensis*)

- 1 Tergites II–VI with >30 setae ..... 2  
 - Tergites II–VI with <25 setae ..... 3  
 2 Sternites IV–VI with >50 setae; temple width >0.45..... *magnidens* Stafford  
 - Sternites IV–VI with <35 setae; temple width <0.44 ..... *stenodesma* (Carriker)  
 3 Temple >0.47 wide; prothorax at least 0.30 wide ..... 4  
 - Temple <0.47 wide; prothorax <0.30 wide ..... 5  
 4 Tergite I with at least 10 setae; sternite IV with <43 setae, V <50 setae .. *pitangi* **n. sp.**  
 - Tergite I with <10 setae; sternite IV with >42 setae, V >52 setae .. *melancholici* **n. sp.**  
 5 Metanotal margin with >11 setae; sternite I with single seta ..... *spadicei* **n. sp.**  
 - Metanotal margin with <11 setae; sternite I without seta ..... 6  
 6 Tergite VIII with at least 10 setae ..... 7  
 - Tergite VIII with not >9 setae ..... 10  
 7 Metanotal margin with not >7 setae; genital sac sclerite as in Fig. 10..... *barbati* **n. sp.**  
 - Metanotal margin with at least 8 setae; genital sac sclerite otherwise ..... 8  
 8 Temple >0.43 wide; metathorax >0.37 wide; genitalia >0.40 long ..... *similis* **n. sp.**  
 - Temple <0.42 wide; metathorax <0.36 wide; genitalia <0.40 long ..... 9  
 9 Genital sac sclerite distally narrowed (Fig. 16); tergite II with <16 setae .....  
 ..... *oleaginei* **n. sp.**  
 - Genital sac sclerite distally wider (Fig. 6); tergite II with >16 setae ..... *olivacei* **n. sp.**  
 10 Genital sac sclerite as in Fig. 13; ex *Contopus* ..... *contopi* **n. sp.**  
 - Genital sac sclerite otherwise ..... 11  
 11 Metasternal plate with >7 setae; tergite I with at least 12 setae; sternite II with >28  
 setae in addition to aster setae ..... *neocinereae* **n. sp.**  
 - Metasternal plate with <7 setae; tergite I with <12 setae; sternite II with <26 such setae  
 ..... 12  
 12 Metanotum with 8–10 marginal setae; tergite I with 10–11 setae; ex *Elaenia* .....  
 ..... *elaeniae* **n. sp.**  
 - Metanotum with 6–8 marginal setae; tergite I with 8–10 setae; ex *Tolmomyias* .....  
 ..... *flaviventris* **n. sp.**

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