

Revision of the genus *Melanolestes* Stål (Heteroptera: Reduviidae, Peiratinae)

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Melanolestes is a Nearctic and Neotropical genus of predatory reduviid bugs. It is revised and a diagnosis is given. The species up to date includes: *M. argentinus* Berg, *M. degener* Walker, *M. morio* Erichson, *M. picicornis* Stål, *M. picinus* Stål and *M. picipes* (Herrich-Schaeffer) and all are redescribed. Three new species, *M. goiasensis*, *M. lugens* and *M. minutus*, are described. A key is presented and the main taxonomic characters (head, pronotum, scutellum, male and female genitalia) are illustrated. Distribution maps and a table with measurements and ratios are included.

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Introduction

The genus *Melanolestes* was established by Stål (1866) and characterized by two characters: spongy fossa occupying distal third of fore femur and hind tibia, and uniformly dark color of the body. Martínez (1987) placed it as a subgenus of *Rasahus* Amyot & Serville because he could not find any substantial differences between them. However, we follow Maldonado-Capriles (1990) in retaining *Melanolestes* as a valid genus.

The present revision was prompted by the lack of a complete taxonomic treatment, and is an attempt to clearly delimit the species by the use of new characters.

Material and methods

The material examined belongs to the following institutions and personal collections: American Museum of Natural History (AMNH), New York, USA; The Natural History Museum (BMNH), London, United Kingdom; Instituto Nacional de Pesquisas Amazonicas (INPA), Manaus, Brazil; Museo Argentino de Ciencias Naturales (MACN), Buenos Aires, Argentina; Museo de Ciencias Naturales de La Plata (MLP), La Plata, Argentina; Museu de Zoologia University of São Paulo (MZSP), São Paulo, Brazil; Naturhistoriska Riksmuseet (NRS), Stockholm, Sweden; Rijksmuseum

van Natuurlijke Histoire (RMNH), Leiden, The Netherlands; Zoologisches Museum der Humboldt Universität zu Berlin (ZMB), Berlin, Germany; Zoological Museum, University of Helsinki (ZMH), Helsinki, Finland. Personal collections: Dr D. Carpintero (CC), Argentina, Dr L. Jirón (JC), Costa Rica and Dr J. Maldonado-Capriles (MC), Puerto Rico.

The terminology used for the external morphology follows Lent & Jurberg (1966), Lent & Wygodzinsky (1979) and Coscarón (1983a). The measurements and ratios, as given in Table 1, were taken according to a previous paper by Coscarón (1989). For this revision a total of 7 measurements and 11 ratios were selected. New measurements which were taken into account are: length of the pronotum (Pronl), measured as the distance between the anterolateral angles and the broadest zone of the posterior lobe of the pronotum, length of fore tarsi (Tarsf), length of mid tarsi (Tarsm) and length of hind tarsi (Tarsh). Ranges are given.

The terminology employed for the characters of the female genitalia is according to Coscarón (in press). The methodology for extraction, dissection, inflation and drawings of the male and female genitalia has been reported elsewhere (Coscarón 1983a).

The biology is unknown except for *M. argentinus* Berg and *M. picipes* Herrich-Schaeffer.

Genus *Melanolestes* Stål

Melanolestes Stål, 1866: 251, 259. Type species: *Pirates picipes* Herrich-Schaeffer, 1848, des. by Van Duzee 1916: 29.

Diagnosis. – Eyes in lateral view (Figs 1, 14, 17, 25, 33, 39, 46, 60, 70, 76, and 86) occupying more than half of the height of head. Pronotum with anterolateral angles developed. Anterior lobe of pronotum with sulci, lateral medial sulci not reaching transverse sulcus. Suture of metapleura curved. Scutellum not acuminate (Fig. 50). Fore and hind tibiae angularly dilated beneath (Figs 69, 75), spongy fossa preceded by a small prominence, occupying distal third of tibia (Figs 69, 75). Dorsum of body unicolorous, brownish to black.

Distribution. – Nearctic and Neotropical Regions.

Biology. – Carpintero (1981) found *M. picipes* attacking *Triatoma rubrovaria* (Blanchard), *T. infestans* (Klug) and *T. breyeri* Del Ponte. Readio (1927) mentions that *M. picipes* preferably eats scarabaeoid beetles.

Discussion. – The closest genus is *Rasahus* Amyot & Serville which differs in the shape of the apical portion of the fore and mid tibia which are not angularly dilated beneath and the spongy fossa occupies more than half the length of tibia. Species of *Rasahus*, except *R. atratus* Coscarón, have light-colored markings on the hemelytra.

Key to *Melanolestes* species

1. Pronotum with metallic sheen; lateral internal sulci neither united nor continuing to transverse sulcus (Fig. 26) *M. lugens* sp. n.
- Pronotum without metallic sheen; lateral internal sulci united and continuing to transverse sulcus 2
2. Body more stout, length exceeding 19.8 mm; ocelli not on a tubercle (Fig. 76); connexivum bicolorous (Fig. 75), brown to blackish brown with outer edges of each tergite orange to red *M. picinus* Stål
- Body more slender, length less than 16.6 mm; ocelli on a tubercle; connexivum unicolorous 3
3. Legs bicolorous 4
- Legs unicolorous 5
4. Connexivum orange; neck with lateral tubercles reduced *M. picicornis* (Stål)
- Connexivum red; neck with lateral tubercles developed; pronotum carinate along its entire edge (Fig. 40) *M. minutus* sp. n.
5. Neck with lateral tubercles reduced; uniformly dark brown species *M. goiasensis* sp. n.
- Neck with lateral tubercles developed 6

6. Connexivum invisible in dorsal view; golden pilosity between the eyes *M. degener* (Walker)
- Connexivum visible in dorsal view; brown pilosity between the eyes 7
7. Lateral margin of pronotum carinate at its entire length (Fig. 87); sulci of pronotum indistinct (Fig. 87) *M. picipes* (Herrich-Schaeffer)
- Lateral margin of pronotum not carinate at its entire length (Figs 2, 48); sulci of pronotum distinct (Figs 2, 48) 8
8. Lateral external sulci of pronotum not reaching transverse sulcus (Fig. 2); parameres externally (Figs 5, 7) without setae; female intersegmental line between tergites IX and X (Fig. 13) strongly sclerotized *M. argentinus* Berg
- Lateral external sulci of pronotum reaching transverse sulcus (Fig. 52); parameres externally (Figs 52, 54) with setae; female intersegmental line between tergites IX and X (Fig. 59) lightly sclerotized *M. morio* (Erichson)

Melanolestes argentinus Berg

(Figs 1–13, Map 1)

Melanolestes argentinus Berg, 1879: 163. Lethierry & Severin 1896: 121; Pennington 1921: 23; Wygodzinsky 1949: 52; Carpintero 1981: 86; Coscarón 1983b: 372; De Santis et al. 1985 (1987): 173; Maldonado-Capriles 1990: 361.

Type material. – Holotype ♂, Argentina: Corrientes (MLP). Allotype ♀, Buenos Aires (MLP).

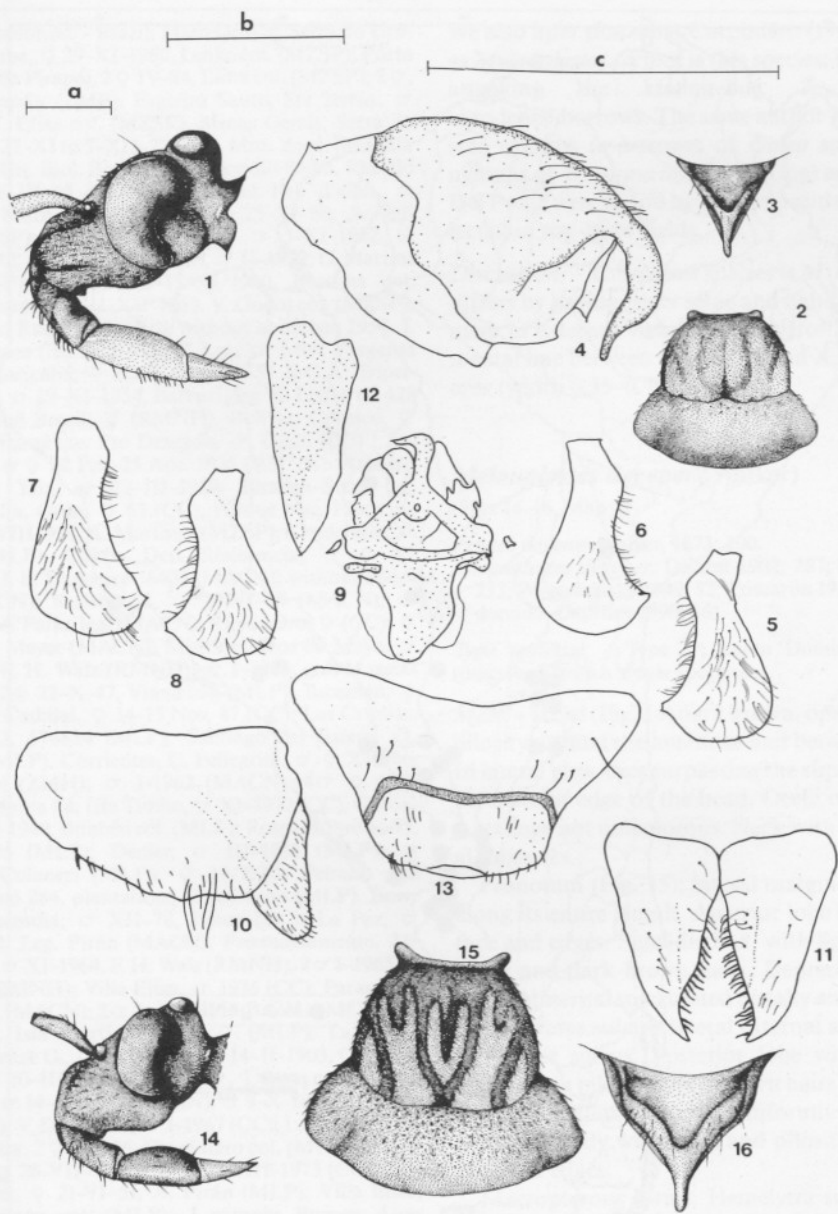
Male and female. – Head (Fig. 1) brown to dark brown, opaque. Light brown pilosity around the antennae and between the eyes. In lateral view, eyes neither surpassing the superior nor the inferior edge of the head. Ocelli on a tubercle. Antennae unicolorous. Neck with pair of lateral tubercles.

Pronotum (Fig. 2); lateral margin not carinate along its entire length. Anterior lobe hairy on surface and edges. Sulci distinct, with dark brown pilosity and hairs. Depression distinct. Lateral internal sulci united distally and continuing to transverse sulcus; lateral external sulci not reaching transverse sulcus. Posterior lobe (in some specimens, edges lighter) with pilosity, dark brown hairs and granulations. Scutellum (Fig. 3), uniformly dark brown; principal body with hairs and pilosity on the surface and edges.

Macropterous forms. Hemelytra surpassing the apex of abdomen in the male, not in the female. Corion with dark hairs.

Legs uniformly brown to dark brown.

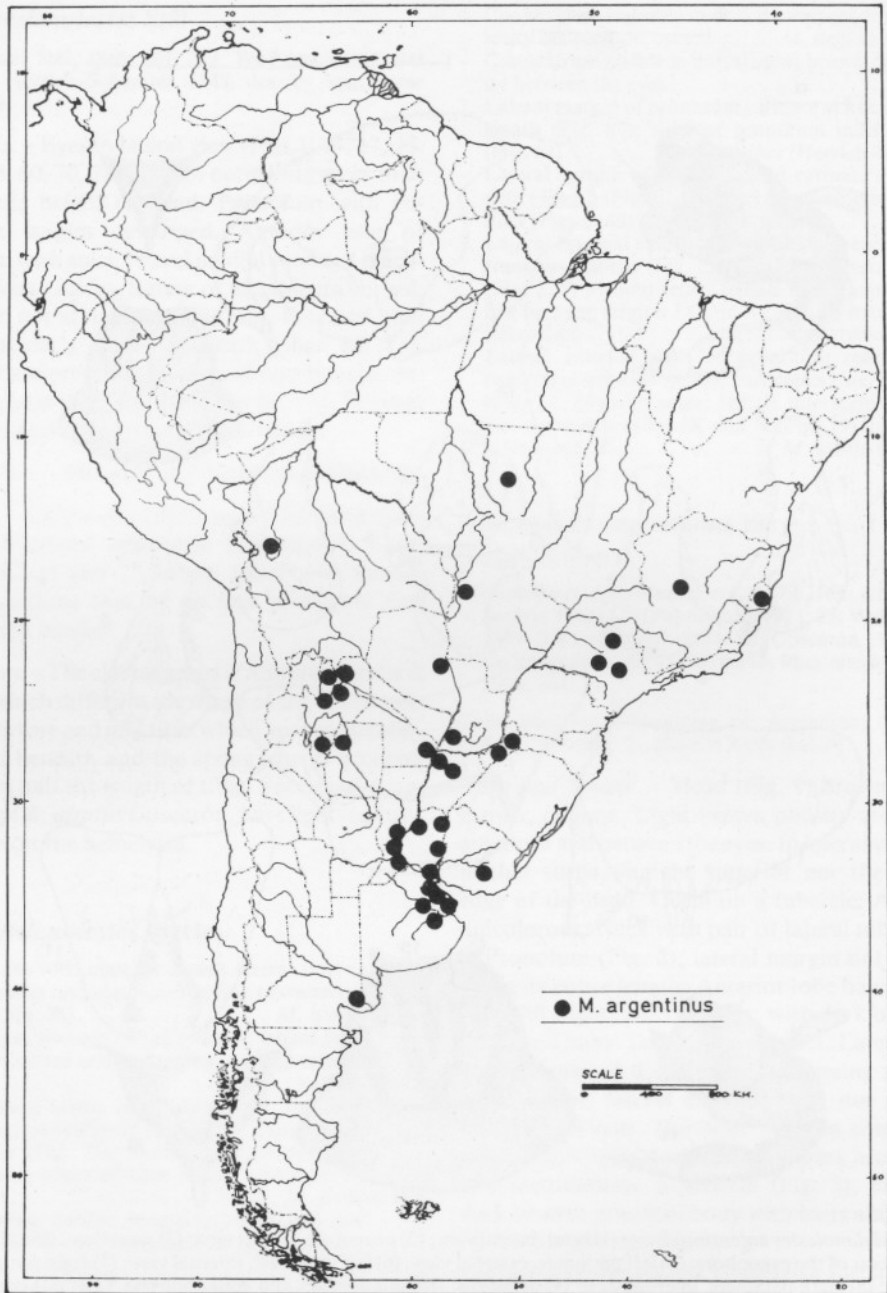
Connexivum brown to brownish black, visible in dorsal view (more obvious in the female). Urotergites unicolorous. Urosternites brown to dark brown with rugosities.



Figs 1-13. *Melanolestes argentinus* Berg: (1) head, lateral view; (2) pronotum, dorsal view; (3) scutellum, dorsal view; (4) medial process of the pygophore; (5) left paramere, external view; (6) left paramere, internal view; (7) right paramere, external view; (8) right paramere, internal view; (9) aedeagus; (10) gonocoxites and gonapophysys VIII; (11) gonocoxites IX; (12) gonapophysys IX; (13) IX and X tergites. Figs 14-16. *M. degener* (Walker): (14) head, lateral view; (15) pronotum, dorsal view; (16) scutellum, dorsal view. Scale figures (a) 2, 3; (b) 1, 14-16 and (c) 4-13. Scale line: 2.0 mm.

Male genitalia (Figs 4-9). Medial process of pygophore (Fig. 4) without hairs. Parameres (Figs 5-8) abundantly haired externally (Figs 5, 7). Aedeagus as in Fig. 9.

Female genitalia (Figs 10-13). Gonocoxites VIII (Fig. 10) with hairs and setae, gonapophysys (Fig. 10) with abundant short pilosity. Gonocoxites IX (Fig. 11) with abundant hairs, hairs on internal



Map 1: Distribution of *Melanolestes argentinus* Berg.

edge thin and thick, gonapophysis (Fig. 12) without a projection. Tergites IX and X (Fig. 13): intersegmental line strongly sclerotized.

See Table 1 for measurements.

Distribution. – Brazil, Paraguay, Argentina, Bolivia and Uruguay (Map 1). Newly recorded from Brazil, Paraguay and Bolivia.

Material examined. – Brazil: Mato Grosso, Serra do Urucum Corumba, ♀ 29–XI–1960, Lenko col. (MZSP); Pôrto Velho (Rio da Pirapê), 2 ♀ IV–64, Lima col. (MZSP); 2 ♀, Col. Kaslamsky (ZMB). Espiritu Santo, Sta Teresa, ♂ II–64, C. T. Elias col. (MZSP). Minas Gerais, Serra do Caraca, ♂ 27–XI to 5–XII–72, Exp. Mus. Zool. (MZSP). São Paulo, Est. Biol. Boraceia, Salesopolis 850m, Rabello col., ♂ 25–III–65 (MZSP); Itú, Faz Pau d'Alho, ♂ 22–XI–69, Martins col. (MZSP); ♂ 25–XI–60, A. Vulcano (MZSP); Cachoeira Paulista, ♂ 5–XI–1962, S. Madeiros col. (MZSP); Itú (filtro), ♂ II–1959, U. Martins col. (MZSP); Itú, ♂ 13–15/XI/1960, Martins col. (MZSP); Suzano, ♂ 11–XII–1963, V. Godoi col. (MZSP); Universidad Rural R. Janeiro, without abdomen 1954, J. H. Guimaraes (MZSP); MRAZ Lgt, ♂, Mus. Pragense (ZMB); Piracicaba, ♀ III–2–64, colls W & C.A. Tripelhorn (MC); ♂ 29–XI–1954, Barueri, leg. K. Lenko no 428 (MZSP); Süd Brasil, ♀ (RMNH). Bolivia: Coroico, ♀ (RMNH). Paraguay: Pto Deseado, ♂, Giain (CC); Assomption, ♂ ♀ 22 Feb–25 Apr. 1936 (RMNH). Argentina: Jujuy, Yala, ♀ 12–III–1939, Birabén–Scott leg. (MLP). Salta, Orán, ♀ 63 (CC); Parque Nac. Finca del Rey, ♂ ♀ VIII–958, A. Martinez (MZSP); Candelaria, ♂ VII–33 (MLP). Chaco, Dep. Resistencia, ♂ ♀ X–XII–1935, J. B. Daguerre 38402 (MACN); without abdomen (MACN); Resistencia, ♀ 10–VI–39 (MACN); ♂ 6–III–39, M. Parko leg. (MACN); Rio de Oro, ♀ (CC); ♀ IV–938, T. Meyer (MACN). Misiones, Dos de Mayo, ♂ XII–1964, F. H. Walz (RMNH); ♀ I–1965, col. Mascías (RMNH); 2 ♀ 22–X–47, Viana col. (MLP). Tucumán, ♀ (MLP); El Cadillal, ♀ 14–15 Nov. 87 (CC); Las Criollas, ♀ 2–6–913, 576834 (MLP). Santiago del Estero, ♂, Girardet (MLP). Corrientes, C. Pellegrini, ♂ ♀ X–1966, L. Apostol (ZMH); ♂ I–1962 (MACN), 4 ♂ ♀ 1962 (MACN). Santa Fé, Isla Timbo, ♂ XI–1972 (CC); Coronada, ♀ 21–I–1940, Birabén col. (MLP); Rosario, Pire no 75, ♀ 25–I–86 (MLP); Denier, ♂ III–1932 (MLP); ♂ 29/8/86, Colaneri (MLP); ♀ 17/2/85, Peirano and Colaneri, no 284, plantations of soy bean (MLP). Entre Ríos, Concordia, ♂ XII–78, Viana (CC); La Paz, ♂ 28–II–1952, Leg. Pirán (MACN); Pronunciamento, 2 ♀ (RMNH); ♂ XI–1964, F. H. Walz (RMNH); 2 ♂ I–1965, F. H. Walz (RMNH); Villa Elisa, ♂ 1976 (CC); Paranacito 34090, 2 ♀ (MACN); 2 ♂ Jan 1961, L. E. Peña (MC); Buenos Aires, Isla Martín García, ♀ (MLP); Luján, ♀ (MLP); Henze G., ♂ ♀ (ZMB); ♂ 14–II–1903, C. Bruch (MLP); ♂ 10–III–1897 (MLP), 2 ♂, J. Bosq col. (MLP); ♂ (RNS); ♂ 14–IV–1919 (MACN); ♂ 9–X–1898, S. Venturi (MACN); V. Dominico, ♂ I–1967 (CC); Lanus, ♀ X–68 (CC); Ezeiza, 2 ♀ 4–1976, Carpintero col. (MC); 3 ♂ Nov 67 (CC); ♂ 26–VII–75 (CC); ♀ 31–VIII–1975 (CC); Parque Pereira, ♀ 21–VI–51, A. Pirán (MLP); Villa Elisa, 7 ♂, Coscarón col. (MLP); 3 nymphs Buenos Aires (MLP); La Plata, 3 ♂ (MLP); ♀, 11862 (MACN); J. H. Jurrjaanse, ♀ 12–VII–1924 (RMNH); Newton, ♀ IV–1919 (MLP); 2 ♀ IV–1919 (MLP); Monte, ♀ I–73 (CC); 26882, Rosas, ♂, F. C. Sud (MACN); without abdomen (MLP); ♂, Jensen–Haarup (MC); San Miguel, nymph and ♀ III–56, Kormilev (MC). Río Negro, C. Conesa, ♂ 9/91, Carpintero col. (CC). Without locality, ♀ (RMNH). H. Rocheuse, ♀ (MC). Uruguay: 2 ♂ 2 ♀ and 1 without abdomen (MLP).

Biology. – Found in nests and borrows of rodents together with *Triatoma infestans* (Carpintero 1981).

We also infer that what Carpintero (1981) recorded as *Melanolestes picipes* is this species; it was found attacking the kissing-bug *T. rubrovaria* in rodents' borrows. The same author found 5th instar nymphs in borrows of *Galea* sp., attacking nymphs of *Triatoma infestans* (Klug) and *T. breyeri* Del Ponte were found by the same author. Also collected in soy-bean fields.

Discussion. – The closest species is *M. morio* which differs by having fewer setae and hairs on the paramere in external view, lightly sclerotized intersegmental line between tergites IX and X, and smaller eyes (width 0.55–0.70 mm).

Melanolestes degener (Walker)

(Figs 14–16, Map 2)

Pirates degener Walker, 1873: 100.

Melanolestes degener: Distant 1902: 287; Fracker, 1912: 233; Wygodzinsky 1949: 52; Coscarón 1983b: 374; Maldonado–Capriles 1990: 361.

Type material. – Type ♂, Santo Domingo (BMNH) (described from a single specimen).

Male. – Head (Fig. 14) dark brown, opaque. Golden pilosity around the antennae and between the eyes. In lateral view, eyes surpassing the superior but not the inferior edge of the head. Ocelli on a tubercle. Antennae not unicolorous. Neck with pair of lateral tubercles.

Pronotum (Fig. 15); lateral margin not carinate along its entire length. Anterior lobe hairy on surface and edges. Sulci distinct, with light brown pilosity and dark brown hairs. Depression distinct. Lateral internal sulci united distally and continuing to transverse sulcus; lateral external sulci reaching transverse sulcus. Posterior lobe with abundant light brown pilosity, dark brown hairs and granulations. Scutellum (Fig. 16), uniformly dark brown; principal body with hairs and pilosity on the surface and edges.

Macropterous forms. Hemelytra surpassing the apex of abdomen. Corion with dark brown hairs.

Legs uniformly dark brown.

Connexivum dark brown, not visible in dorsal view. Urotergites unicolorous. Urosternites brown to dark brown with rugosities.

Genitalia not examined.

Distribution. – Santo Domingo (Map 2).

Discussion. – The closest species is *M. morio* which differs by the presence of dark brown pilosity in the

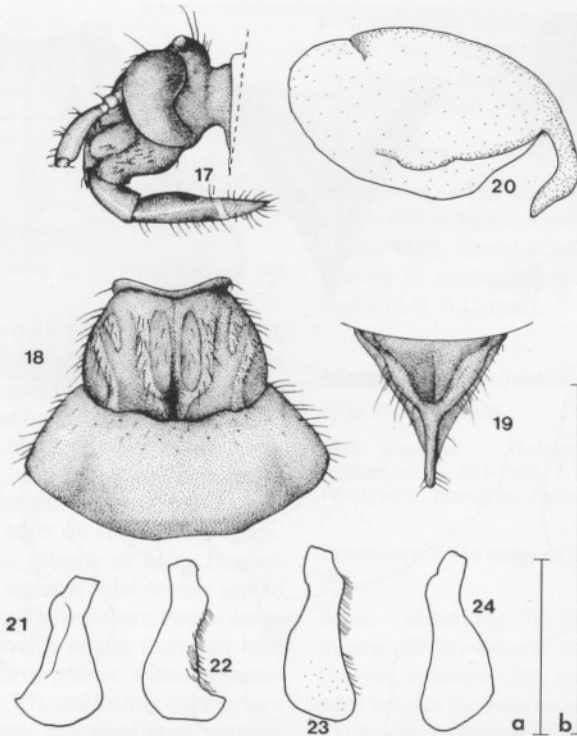


Map 2: Distribution of *M. picinus* Stål, *M. minutus* sp. n., *M. lugens* sp. n., *M. degener* (Walker) and *M. goiasensis* sp. n.

area of the antennae and between the eyes, and the eyes surpassing the superior and inferior edges of the head.

***Melanolestes goiasensis* sp. n.**

(Figs 17–24, Map 2)



Figs 17–24. *Melanolestes goiasensis* n.sp.: (17) head, lateral view; (18) pronotum, dorsal view; (19) scutellum, dorsal view; (20) medial process of the pygophore; (21) left paramere, external view; (22) left paramere, internal view; (23) right paramere, external view; (24) right paramere, internal view. Scale figures (a) 17–19 and (b) 20–24. Scale line: 2.0 mm.

Type material. – Holotype ♂, macropterous, Brazil: Goiás, Jataí, Nov. 1972, F. H. Oliveira (AMNH).

Etymology. – The name of the species refers to the locality of the type.

Male. – Head (Fig. 17) dark brown, opaque. Golden pilosity around the antennae and between the eyes. In lateral view, eyes surpassing the superior and inferior edges of the head. Ocelli on a tubercle. Antennae unicolorous. Neck without lateral tubercles.

Pronotum (Fig. 18); lateral margin not carinate along its entire length. Anterior lobe hairy on surface and edges. Sulci distinct, with light brown pilosity and dark brown hairs. Depression distinct. Lateral internal sulci united and continuing to transverse sulcus; lateral external sulci reaching transverse sulcus. Posterior lobe at base and along edges lighter than the anterior lobe, with abundant light brown pilosity and dark brown hairs and

granulations. Scutellum (Fig. 19), uniformly dark brown, principal body with hairs and pilosity on the surface and edges.

Macropterous forms. Hemelytra not reaching the apex of abdomen. Corion with dark brown hairs. Legs uniformly black colored.

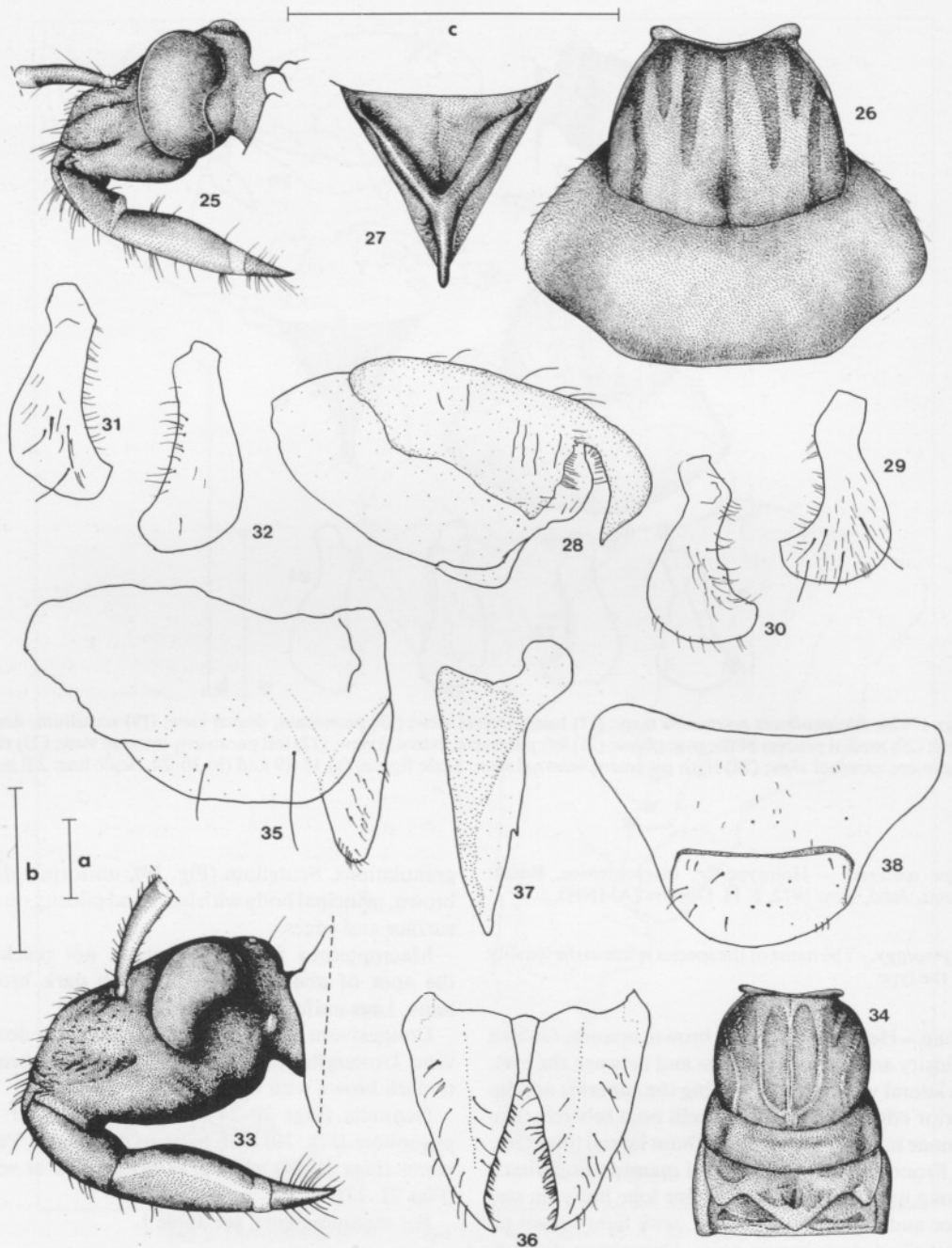
Connexivum dark brown, not visible on dorsal view. Urotergites unicolorous. Urosternites brown to dark brown with rugosities.

Genitalia (Figs 20–24). Medial process of the pygophore (Fig. 20) with hairs in basal area. Parameres (Figs 21–24) without external hairs or setae (Figs 21, 23).

For measurements, see Table 1.

Geographic distribution. – Brazil (Map 2).

Discussion. – The closest species is *M. minutus* which differs by the red connexivum, pronotum carinate along its entire lateral margin, shorter pronotum, and shorter hind tarsi.



Figs 25–38. *Melanolestes lugens* n.sp.: male 25–32: (25) head, lateral view; (26) pronotum, dorsal view; (27) scutellum, dorsal view; (28) medial process of the pygophore; (29) left paramere, external view; (30) left paramere, internal view; (31) right paramere, external view; (32) right paramere, internal view. Female 33–37: (33) head, lateral view; (34) pronotum and scutellum, dorsal view; (35) gonocoxites and gonapophysis VIII; (36) gonocoxites IX; (37) gonapophysis IX; (38) IX and X tergites. Scale figures (a) 34; (b) 25–26, 33 and (c) 35–38. Scale line: 2.0 mm.

***Melanolestes lugens* sp. n.**

(Figs 25–38, Map 2)

Type material. – Holotype ♂, Brazil: K. Olf, N 3229 (ZMB). Paratypes. 2 ♀, Mato Grosso, Três Lagoas, marg. esq. rio Sucuriu, Faz Canaa, I–1967, F. Lane col. (MZSP); ♀, Barra do Tapirapé, 21/31–XII–1965, B. Malkin col. (MZSP); ♀, Utiariti (325 m), Rio Papagaio, VII–VIII, 1961, K. Lenko col (MZSP). Paraguay: ♀, Concepción, Curaró, II–74, Viana (CC).

Etymology. – Its name refers to the brightness of the body.

Male. – Head (Fig. 25) dark brown, opaque. Dark brown pilosity around the antennae and between the eyes. In lateral view, eyes surpassing the superior and inferior edges of the head. Ocelli on a tubercle. Antennae unicolorous. Neck with lateral tubercles.

Pronotum (Fig. 26), dark brown with metallic green sheen, carinate along its entire lateral margin. Anterior lobe without hairs on surface and edges. Sulci indistinct, without pilosity or hairs. Depression indistinct. Lateral internal sulci neither united distally nor reaching transverse sulcus; lateral external sulci reaching transverse sulcus. Posterior lobe with pilosity and dark brown hairs, without granulations. Scutellum (Fig. 27), uniformly dark brown with metallic green sheen; principal body without hairs or pilosity on the surface and edges.

Macropterous forms. Hemelytra surpassing the apex of abdomen. Corion with median dark hairs.

Legs bicolorous, dark brown except light brown on distal internal surface of fore femur and lateral surfaces of tibiae.

Connexivum dark brown, visible in dorsal view. Urotergites unicolorous. Urosternites dark brown with rugosities.

Genitalia (Figs 28–32). Medial process of the pygophore (Fig. 28) with hairs. Parameres (Figs 29–32) externally (Figs 29, 31) with hairs and setae.

Measurements, see Table 1.

Female. – Similar to the male except for the following: Head (Fig. 33) with metallic sheen, granulated. Pronotum (Fig. 34); anterior lobe, except on the sulci, with rugosities. Sulci distinct. Depression strong. Lateral internal sulci united and continuing to transverse sulcus; lateral external sulci reaching transverse sulcus. Brachypterous. Legs with brown instead of light brown pattern. Connexivum blackish brown, with green metallic sheen.

Genitalia (Figs 35–38). Gonocoxites VIII (Fig. 35) with reduced hairs and setae, gonapophysis (Fig. 35) with reduced pilosity. Gonocoxites IX (Fig. 36) with abundant hairs, internal edge with

thin and thick hairs, gonapophysis (Fig. 37) with a projection. Tergites IX and X tergites (Fig. 38): intersegmental line strongly sclerotized.

Measurements, see Table 1.

Distribution. – Brazil and Paraguay (Map 2).

Discussion. – The closest species is *M. argentinus* which differs by the absence of metallic green color of the body, lateral internal sulci united and continuing to transverse sulcus, and larger male eye width (0.11–0.12 mm).

***Melanolestes minutus* sp. n.**

(Figs 39–45, Map 2)

Type material. – Holotype ♂, Argentina: Chaco, Resistencia, X–XII–1935, J. B. Daguerre 38381 (MACN). Paratype ♂, Paraguay: Asunción, Julio 71 Carpintero col. (CC).

Etymology. – The name of the species refers to the small size.

Male. – Head (Fig. 39) dark brown, opaque. Dark brown pilosity around the antennae and between the eyes. In lateral view, eyes surpassing the superior edge but not the inferior edge of the head. Ocelli on a tubercle. Antennae bicolorous. Neck with lateral tubercles.

Pronotum (Fig. 40); lateral margin carinate along its entire length. Anterior lobe with granulations and hairs on the surface and edges. Sulci distinct, with light brown pilosity, hairs and granulations. Depression distinct. Lateral internal sulci united and continuing to transverse sulcus; lateral external sulci reaching transverse sulcus. Posterior lobe with pilosity, light brown hairs and granulations. Scutellum (Fig. 41), not uniformly dark brown; principal body with hairs and pilosity on the surface and edges.

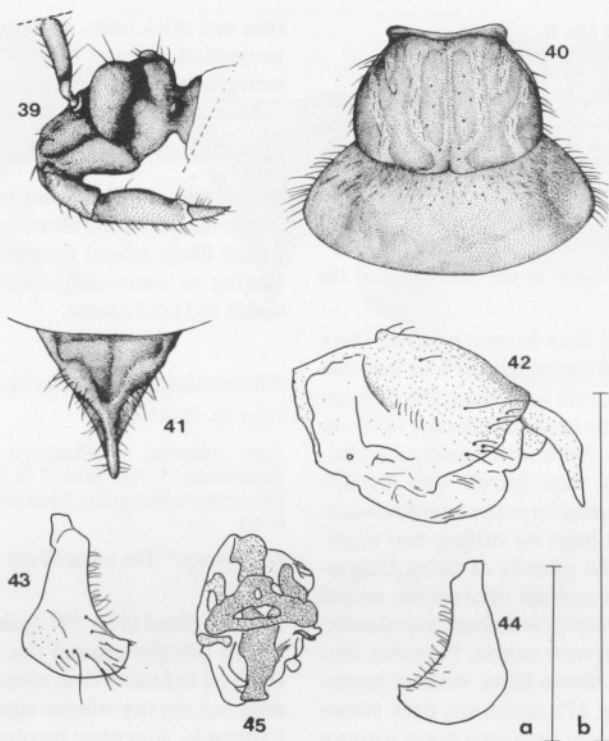
Macropterous forms. Hemelytra surpassing the apex of abdomen. Corion with median brown hairs.

Legs bicolorous, light brown with the base of coxa, distal part of fore and mid tibiae, fore femur and entire hind tibia and tarsi dark brown.

Connexivum red, visible in dorsal view. Urotergites unicolorous. Urosternites brown to dark brown with golden hairs and rugosities.

Genitalia (Figs 42–45). Medial process of pygophore (Fig. 42) with hairs on basal area. Parameres (Figs 43–44) with hairs on external surface (Fig. 43). Aedeagus as in Fig. 45.

Measurements, see Table 1.



Figs 39–45. *Melanolestes minutus* n.sp.: (39) head, lateral view; (40) pronotum, dorsal view; (41) scutellum, dorsal view; (42) medial process of the pygophore; (43) left paramere, external view; (44) left paramere, internal view; (45) aedeagus. Scale figures (a) 39–41 and (b) 42–45. Scale line: 2.0 mm.

Geographic distribution. – Paraguay and Argentina (Map 2).

Discussion. – The closest species is *M. goiasensis* which differs by the dark brown connexivum, pronotum not carinate along its entire lateral edge, longer pronotum, and longer hind tarsi.

Melanolestes morio (Erichson)

(Figs 46–59, Map 3)

Pirates morio Erichson, 1848: 613.

Melanolestes morio: Stål 1866: 259; 1872: 107.

Pirates picipes Walker, 1873: 97.

Melanolestes morio: Lethierry & Severin 1896: 121; Champion 1897–1901: 213; Fracker 1912: 233; Fracker & Bruner 1924: 164; Wygodzinsky 1949: 52; Coscarón 1983b: 374; Maldonado–Capriles 1990: 361.

Type material. – Type ♂, British Guyana, Schomburgk no 3237, Typus, Zool. Mus. Berlin (ZMB). no 3237; ♂, Mont. Ev. Br. Guy. Schwab, Typus, Zool. Mus. Berlin (ZMB).

Male and female. – Head (Figs 46, 47) brown to

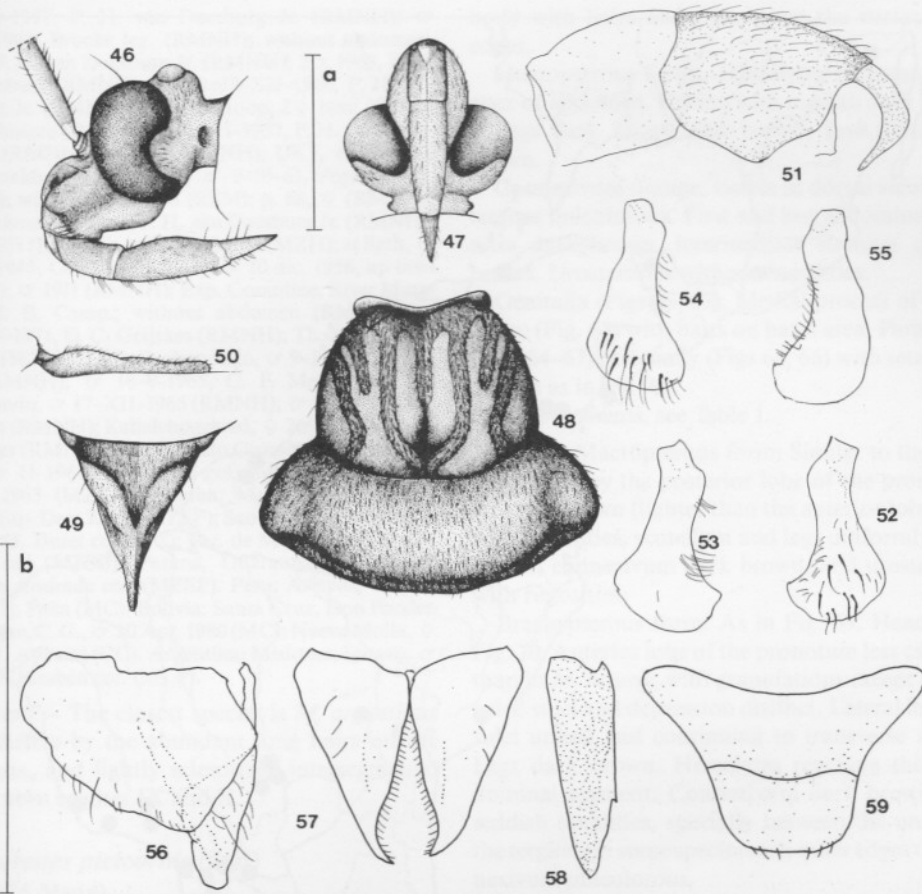
dark brown, opaque. Dark brown pilosity around the antennae and between the eyes. In lateral view, eyes surpassing the superior and inferior edges of the head. Ocelli on a tubercle. Antennae uni- or bicolorous. Neck with lateral tubercles.

Pronotum (Fig. 48); lateral margin not carinate along its entire length. Anterior lobe with hairs on the surface and edges. Sulci distinct, with dark brown pilosity and hairs. Depression distinct. Lateral internal sulci united and continuing to transverse sulcus; lateral external sulci reaching transverse sulcus. Posterior lobe with pilosity, dark brown hairs and granulations. Scutellum as in Figs 49 and 50, uniformly dark brown; principal body with hairs and pilosity on surface and edges.

Macropterous forms. Hemelytra may or may not surpass the apex of abdomen. Corion with median dark hairs.

Legs uniformly dark brown to brown.

Connexivum uniformly brown to blackish brown, visible in dorsal view. Urotergites unicolorous. Urosterites brown to dark brown with rugosities.



Figs 46–59. *Melanolestes morio* (Erichson): (46) head, lateral view; (47) head, ventral view; (48) pronotum, dorsal view; (49) scutellum, dorsal view; (50) scutellum, lateral view; (51) medial process of the pygophore; (52) left paramere, external view; (53) left paramere, internal view; (54) right paramere, external view; (55) right paramere, internal view; (56) gonocoxites and gonapophysis VIII; (57) gonocoxites IX; (58) gonapophysis IX; (59) IX and X tergites. Scale figures (a) 46–50 and (b) 51–59. Scale line: 2.0 mm.

Male genitalia (Figs 51–55). Medial process of the pygophore (Fig. 51) without hairs in basal area. Parameres (Figs 52–57) with hairs and setae externally (Figs 52, 54).

Female genitalia (Figs 56–59). Gonocoxite VIII (Fig. 56) with hairs and setae, gonapophysis (Fig. 56) with reduced pilosity and hairs. Gonocoxites IX (Fig. 57) with scarce hairs, along internal edge with thin hairs only, gonapophysis (Fig. 58) with a projection. Intersegmental line between tergites IX and X (Fig. 59) strongly sclerotized.

Measurements, see Table 1.

Distribution. – USA (Arizona), Mexico, Cuba, Trinidad, Costa Rica, Panama, Belize, Colombia, Venezuela, Guyana, Surinam, Ecuador, Brazil,

Peru, Bolivia and Argentina (Map 3). Newly recorded from Trinidad, Peru and Argentina.

Material examined. – USA: Arizona, Canelo, ♂ Jul-10-57, D. Butter (ZMB). Cuba: Oriente Bayana, Laguna Blanca, ♀ 2-VII-59 (CC). Trinidad: Maracas, 2♂ July 1-15-62 (MC). Costa Rica: Aragua, Caagua, ♀ 7-II-1960, Bordón leg. (MC); Huanacaste, Liberia, ♂ ♀ 20 Abril 1981, col. M. Rivas (JC), ♀ 12-6-83 (JC). Panama: C.Z., Panama, L. Tr., 2♂ 2♀ Jan. Jun. 1965, Keena (MC); Corazal, ♂ IV-26-11, Aug. Busk (MC); Río Chagres, Juan Mina, 2♂ 15-IV-60, Duret col. (CC); Darien, Santa Fé, ♂ 6-VI-67, D.M. De Long y C.A. Triplehorn (MC). Guyana: Plantas Saint Juan de Maroni, ♂ 20-5-63, Spuche leg. (ZMB). Surinam: 2104, ♂ (RMNH); p. 1191, 2♂ (RMNH); p. 211, 19, 4♂, P. H. van Doesburg Jr. (RMNH); ♂, P. H. van Doesburg (RMNH); 901, ♂, P. H. van Doesburg Jr. (RMNH); Paramaribo, ♀ 2-1-1947, op. licht Dr D. C. Geypes (RMNH); ♂ 17-

Map 3: Distribution of *M. morio* (Erichson).

XII-54 (RMNH); ♀ 2-1-1959, P. H. van Doesburg Jr. (RMNH); 2♂ 17-2-1958, P. H. van Doesburg Jr. (RMNH); without abdomen 3-2-1958, P. H. van Doesburg Jr. (RMNH); ♂ 2-XII-1957, P. H. van Doesburg Jr. (RMNH); ♂, Mej. M. Koning (RMNH); 3♂ 1963, P. H.

van Doesburg (RMNH); ♂ 11-2-1958, P. H. van Doesburg Jr. (RMNH); ♂ 24-10-1957, P. H. van Doesburg Jr. (RMNH); ♂ 7-1-1959, P. H. van Doesburg Jr. (RMNH); ♂ 4-11-1958, P. H. van Doesburg Jr. (RMNH); without abdomen, 24-11-1957, P. H. van Doesburg Jr. (RMNH);

♂ 23-11-1957, P. H. van Doesburg Jr. (RMNH); ♂ 10-XII-1962, Brocke leg. (RMNH); without abdomen, 7-1959, P. H. van Doesburg Jr. (RMNH); 2♂ 1963, P. H. van Doesburg (RMNH); 3♂ 11/17-XII-1960, P. H. van Doesburg Jr. (RMNH); Zorg en Hoop, 2♀ Nov. 1963, J. W. Boekhuizeu (RMNH); ♂ 18-11-1957, P. H. van Doesburg Jr. (RMNH); ♂ 1911 (RMNH); UKT, ♂ 1962 op licht, Broekh. leg. (RMNH); ♂ 9-10-61, Poyenga leg. (RMNH); without abdomen (RSM); p. 68, ♀ (RMNH); 2049, without abdomen P. H. van Doesburg Jr. (RMNH); ♂ 6-1-1951 (RMNH); ♂, E. Rocheuse (MZH); at lighth, ♂ 26 aug. 1945, Geijkes (RMNH); ♂ 10 dic. 1956, ap licht (RMNH); ♂ 1911 (RMNH); Exp. Corantine, River Mata-pi, L. B. B. Camp., without abdomen (RMNH); ♂ 13-14-IV-1971, D. C. Geijkskes (RMNH); Th. Noordwijk, ♂ Sept. 1887 (RMNH); Brokopondo, ♂ 9-IV-1965, G. F. Mees (RMNH); ♂ 16-V-1965, G. F. Mees (RMNH); Brokopondo, ♂ 17-XII-1965 (RMNH); ♂ 11-1-1964, M. Boesman (RMNH); Kabalebogebed, ♀ 26-VIII-1973, D. C. Geijkes (RMNH). Brasil: Mato Grosso, Barra do Tapi-rapé, 2♂ 11-1964, B. Malkin col. (MZSP), ♂ 2♀ 21-31-Dic. 1965 (MZSP); Paraiba, Managuape, 5♂ 5♀ 7-1957, Exp. Dep. Zool. (MZSP); Sao Paulo: Riberao Preto, ♂ 1-55, Duret col. (CC); Fac. de Medicina, ♂ II-54, Barreto col. (MZSP); Parana, Guarauna, ♂ XII-38, Camargo Andrade col. (MZSP). Peru: Avispas, ♂ Oct. 1962, L. E. Peña (MC). Bolivia: Santa Cruz, Don Forster, Las Palmas, C. C., ♂ 20 Apr. 1980 (MC); Nueva Molla, ♀ 2-1954, I. Apostol (CC). Argentina: Misiones, Iguazú, ♂ 11-44, M. Birabén col. (MLP).

Discussion. - The closest species is *M. argentinus* which differs by the abundant long hairs on the parameres, and lightly sclerotized intersegmental line between tergites IX and X.

Melanolestes picicornis (Stål)

(Figs 60-74, Map 4)

Rasahus picicornis Stål, 1860: 69.

Melanolestes picicornis: Stål 1866: 259, 1872: 107; Lethierry & Severin 1896: 121; Wygodzinsky 1949: 52; Coscarón 1983b: 374; Maldonado-Capriles 1990: 361.

Type material. - Type ♀, Rio de Janeiro (NRS).

Male. - Head (Fig. 60) dark brown, opaque. Dark brown pilosity around the antennae and between the eyes. In lateral view, eyes neither attaining the superior nor the inferior edge of the head. Ocelli on a tubercle. Antennae unicolorous. Neck with lateral tubercles reduced.

Pronotum (Fig. 61); lateral margin carinate along its entire length. Anterior lobe with hairs on the surface and edges. Sulci indistinct, with pilosity but no hairs. Depression indistinct. Lateral internal sulci united distally and continuing to transverse sulcus; lateral external sulci reaching transverse sulcus. Posterior lobe with pilosity and granulations, without hairs. Scutellum (Fig. 62) not uniformly dark brown (margins more lightly colored); principal

body with hairs and pilosity on the surface and edges.

Macropterous forms. Hemelytra surpassing the apex of abdomen. Corion with median dark hairs.

Legs dark brown and brown, fore tibia light brown.

Connexivum orange, visible in dorsal view. Urotergites unicolorous. First and last abdominal sternites dark brown, intermediate sternites orange brown. Urosternites without rugosities.

Genitalia (Figs 63-67). Medial process of pygophore (Fig. 63) with hairs on basal area. Parameres (Figs 64-67) externally (Figs 64, 66) with setae. Aedeagus as in Fig. 68.

Measurements, see Table 1.

Female. - Macropterous form: Similar to the male but differs by the posterior lobe of the pronotum which is brown (lighter than the anterior lobe) and with rugosities, scutellum and legs uniformly dark brown, connexivum dark brown, and urosternites with rugosities.

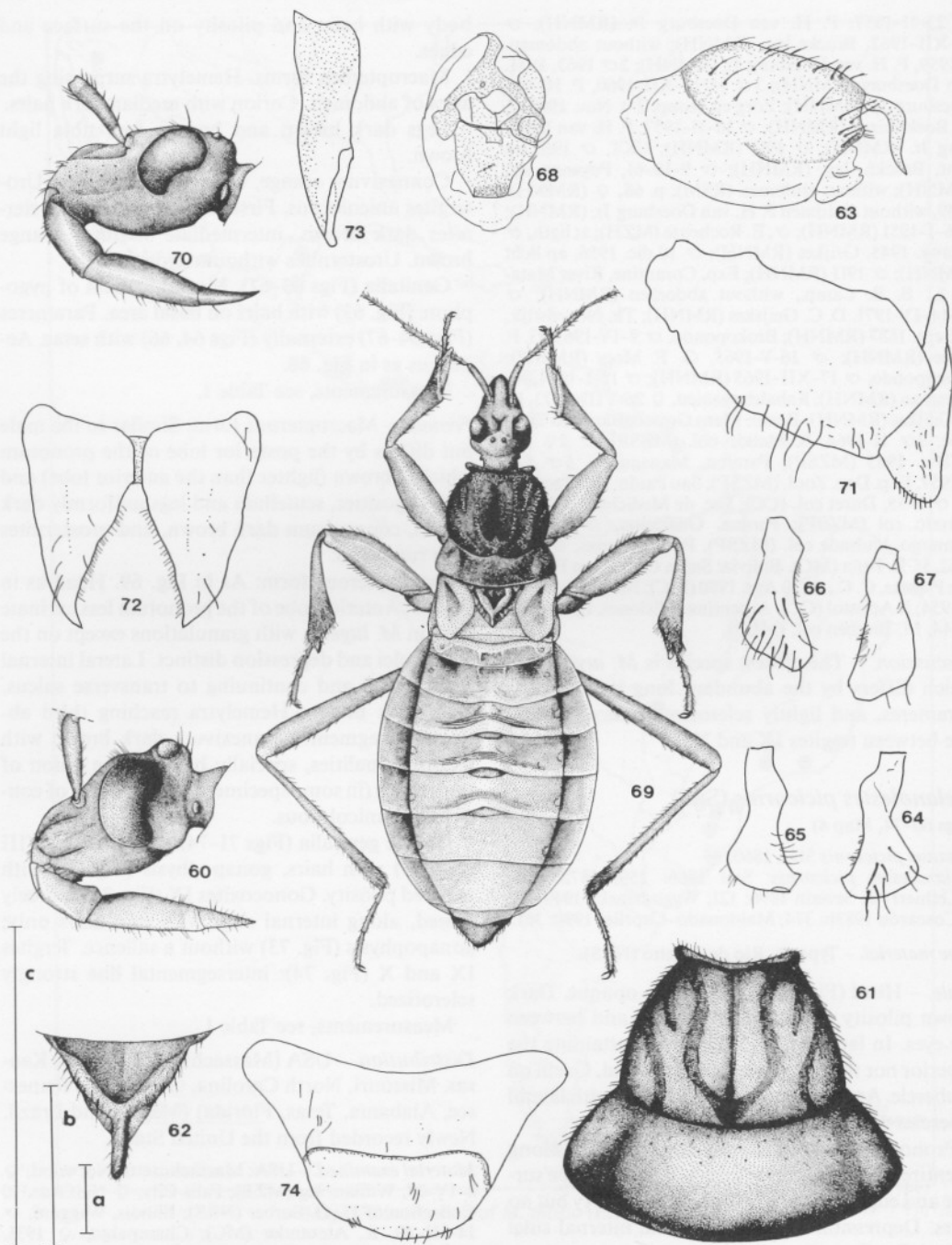
Brachypterous form: As in Fig. 69. Head as in Fig. 70. Anterior lobe of the pronotum less carinate than in *M. lugens*; with granulations except on the sulci; sulci and depression distinct. Lateral internal sulci united and continuing to transverse sulcus. Legs dark brown. Hemelytra reaching third abdominal segment. Connexivum dark brown with reddish tonalities, specially between the union of the tergites (in some specimens); outer edges of connexivum unicolorous.

Female genitalia (Figs 71-74). Gonocoxites VIII (Fig. 71) with hairs, gonapophysis (Fig. 71) with reduced pilosity. Gonocoxites IX (Fig. 72) sparsely haired, along internal edge with thin hairs only; gonapophysis (Fig. 73) without a salience. Tergites IX and X (Fig. 74): intersegmental line strongly sclerotized.

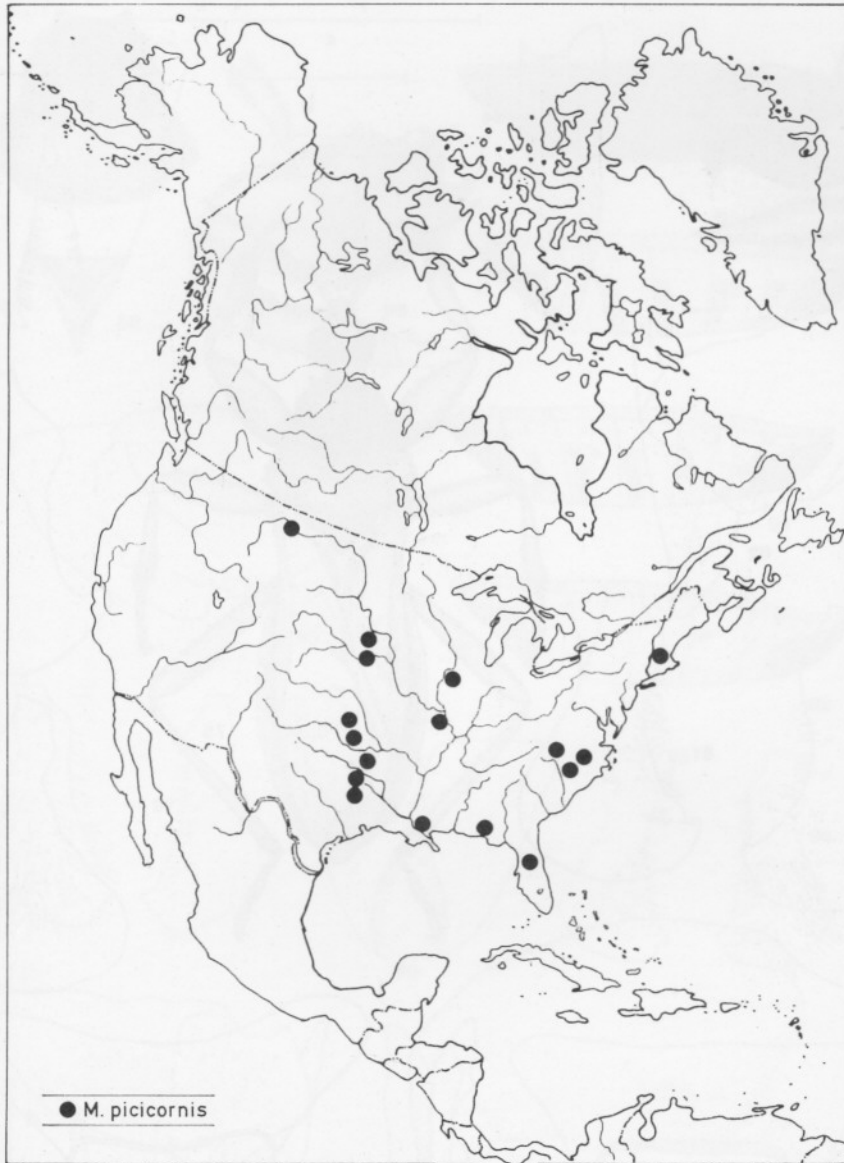
Measurements, see Table 1.

Distribution. - USA (Massachusetts, Illinois, Kansas, Missouri, North Carolina, Oklahoma, Tennessee, Alabama, Texas, Florida) (Map 4) and Brazil. Newly recorded from the United States.

Material examined. - USA: Massachusetts, Norwood, ♀ 4-IV-09, William leg (MZB); Falls City, ♀ Nel. Aus. 10 Collection of H. G. Barber (NRS); Illinois, Waggani, ♂ 14-III-49, R. Alexander (MC); Champaign, ♀ 1931, Coll. Jordan (MZB). Kansas: Douglas, Co. Univ. Kansas Nat. Hist. Res., 3♀ 4-13-58, Entomology Class (MC); Missouri, 3♂ ♀ (RMNH). Carolina, ♂, Coll. Geem 8187 (ZMB). North Carolina, ♂, 032 (RMNH); Raleigh, ♂ 11-23-1952, D. L. Weisman (MC); Nord Carolina, ♂, 1331 leg. C. Beumer, Coll. V. D. Vaarj (RMNH). Oklahoma,



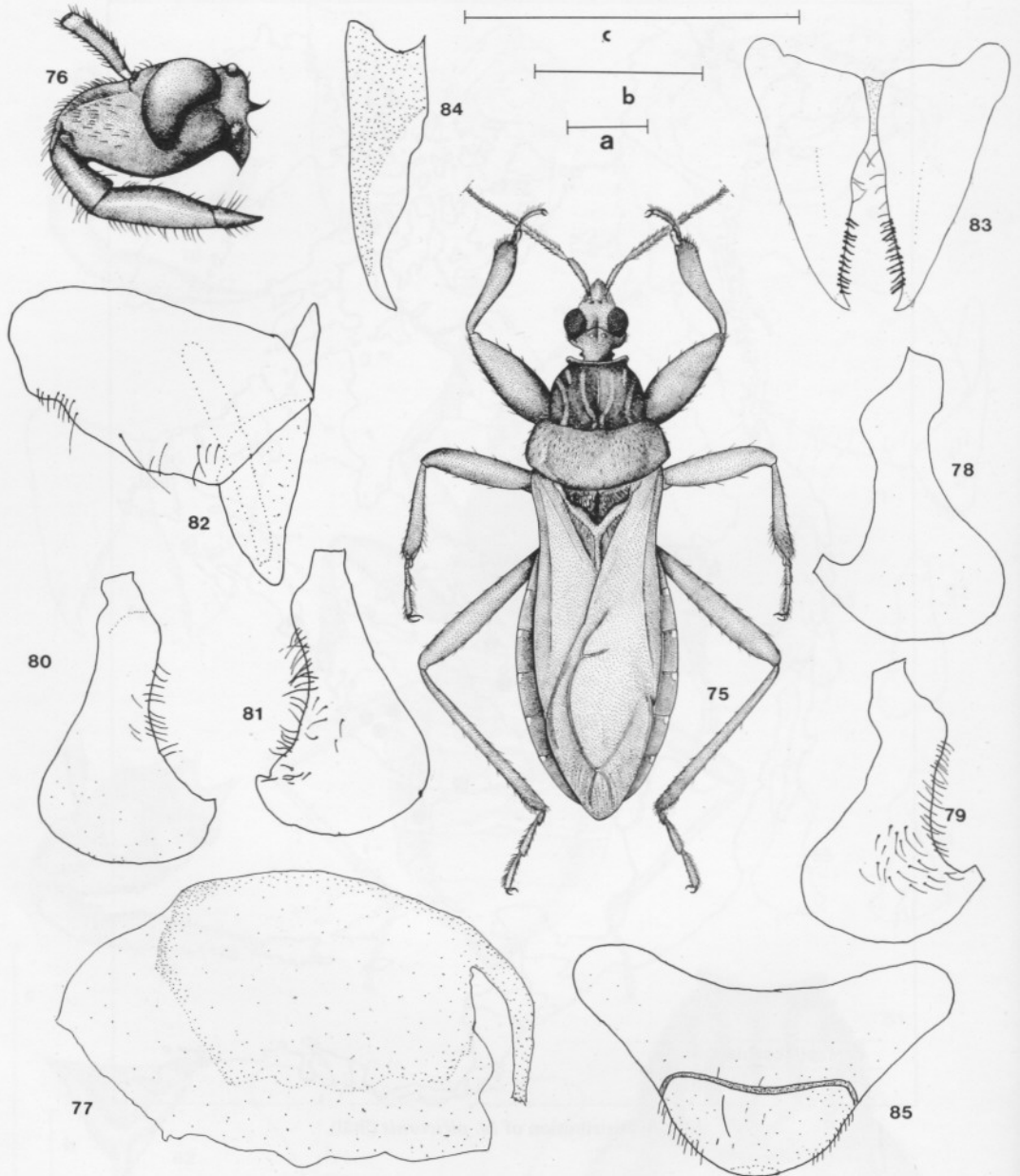
Figs 60-74. *Melanolestes picicornis* (Stål): (60) head, lateral view; (61) pronotum, dorsal view; (62) scutellum, dorsal view; (63) medial process of the pygophore; (64) left paramere, external view; (65) left paramere, internal view; (66) right paramere, external view; (67) right paramere, internal view; (68) aedeagus; (69) general aspect of a brachypterous female; (70) head, lateral view; (71) gonocoxites and gonapophysis VIII; (72) gonocoxites IX; (73) gonapophysis IX; (74) IX and X tergites. Scale figures (a) 69; (b) 60-62, 70 and (c) 63-74. Scale line: 2.0 mm.

Map 4: Distribution of *M. picicornis* (Stål).

Krause Cleveland Co, ♀ Jan. 1949 (MC); Cleveland, ♂ 11-15-1947, R. Oliver (MC); Fort Jill, ♂ April 22-19, J. C. Schaffner (MC); Stringtonn, ♂ 5-IX-1943 (MC); Fort Jill, ♂ April 1-1954, J. O. Schaffner (MC); Tennessee, ♂, Troost (MZH). Alabama, Mobile, ♀ 1-25-1911, Col. Ay, M. R. Ludling (MZH). Louisiana, 5 mi North Baton Rouge, ♀ 1962, B. March KAA (MC). Texas, Waco, ♂ 18-III-66 (MC); Plano, 4♂ July at night at light trap, E. S. Tucker (MZH); 5♂ (MZH); 2♂ October (MZH). Florida, N. E. Everglades Loop R., ♂ 29-11-1977, E. Gittemberguer

(RMNH). 4♂ ♀, Rolle (MZH); Travis County, W. Tills, 2♂ 1889 (MZH); Stanford Univ, ♂ XII-21-08, Col. Ay, W. M. Mann (MZH); ♂ 11-27-10 (MZH); 2♀, Museum Leiden, E. Le Moults Cornells N. Amerika (MZH); Heim de Baleac, ♂ 29-7-60 (ZMB). ♂ (RMNH). ♀ (NRS).

Discussion. - The closest species is *M. picipes* which differs by the unicolorous legs and peculiar male genitalia.



Figs 75–85. *Melanolestes picinus* Stål: (75) general aspect; (76) head, lateral view; (77) medial process of the pygophore; (78) left paramere, external view; (79) left paramere, internal view; (80) right paramere, external view; (81) right paramere, internal view; (82) gonocoxites and gonapophysis VIII; (83) gonocoxites IX; (84) gonapophysis IX; (85) IX and X tergites. Scale figures (a) 75; (b) 76 and (c) 77–85. Scale line: 2.0 mm.

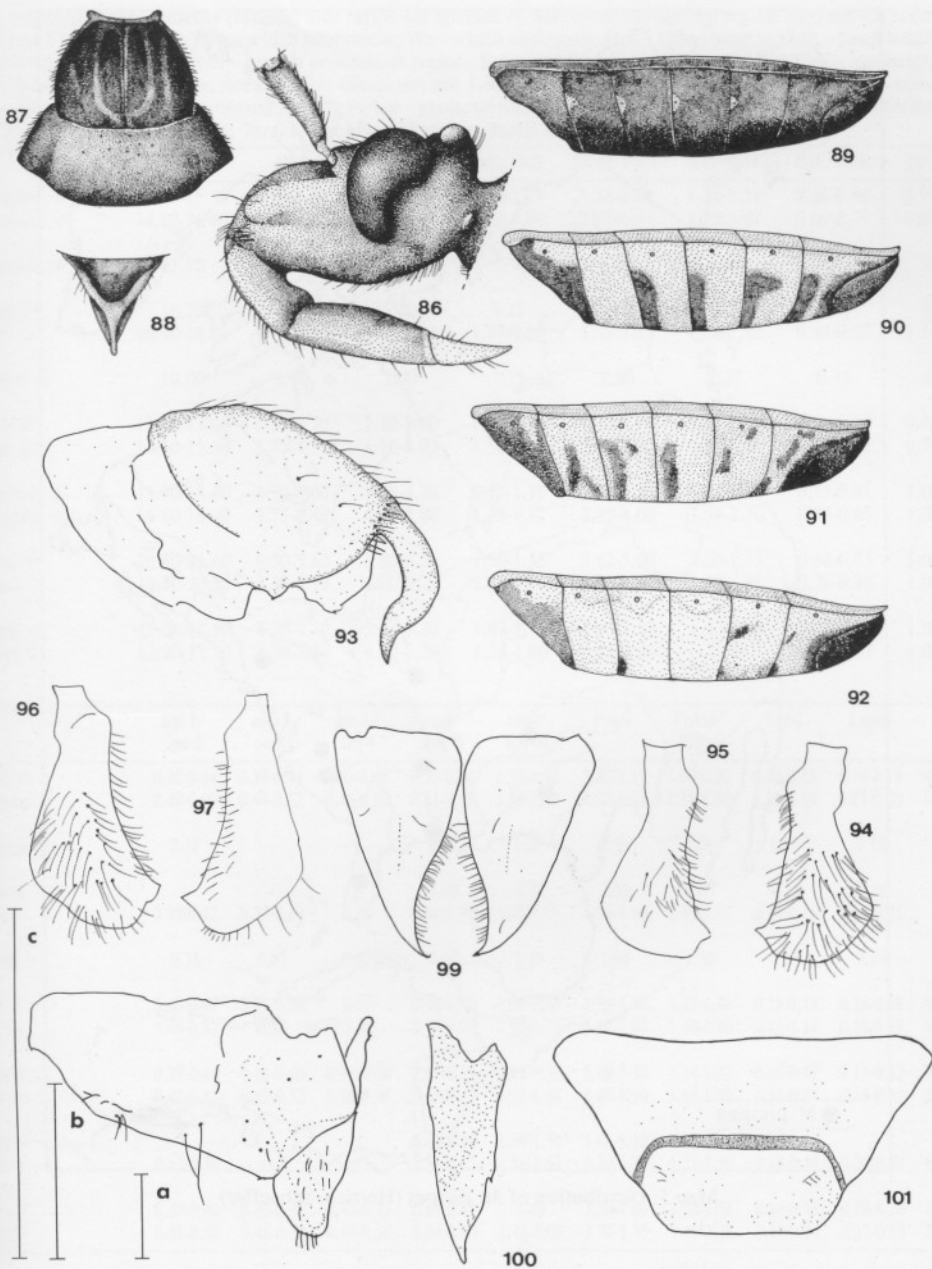
***Melanolestes picinus* Stål**

(Figs 75–85, Map 2)

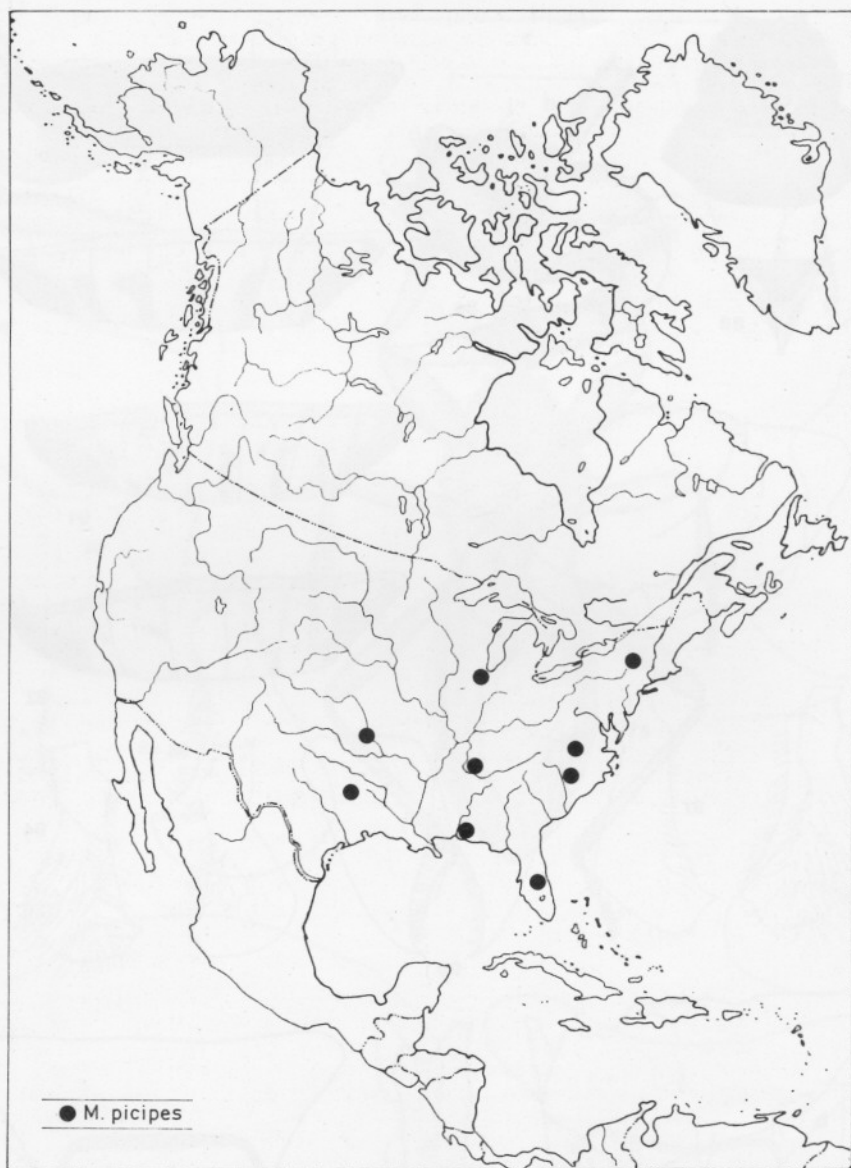
Melanolestes picinus Stål, 1872: 107. Lethierry & Severin

1896: 121; Fracker & Bruner 1924: 164; Wygodzinsky 1949: 52; Coscarón 1983b: 374; Maldonado-Capriles 1990: 361.

Type material. – Type ♀, Brasilia borealis (NRS).



Figs 86-101. *Melanolestes picipes* (Herrich-Schaeffer): (86) head, lateral view; (87) pronotum, dorsal view; (88) scutellum, dorsal view; 89-92: variation of the abdominal pattern coloration; (93) medial process of the pygophore; (94) left paramere, external view; (95) left paramere, internal view; (96) right paramere, external view; (97) right paramere, internal view; (98) gonocoxites and gonapophysis VIII; (99) gonocoxites IX; (100) gonapophysis IX; (101) IX and X tergites. Scale figures (a) 87, 88-92; (b) 86 and (c) 93-101. Scale line 2.0 mm.

Map 5: Distribution of *M. picipes* (Herrich-Schaeffer)

Male and female. – General aspect of the male as in Fig. 75. Head (Fig. 76) blackish brown, opaque. Golden pilosity around the antennae and between the eyes. In lateral view eyes reaching or surpassing the superior edge but not the inferior edge of the head. Ocelli not on a tubercle. Antennae unicolorous. Neck with lateral tubercles.

Pronotum; lateral margin not carinate along its entire length. Anterior lobe hairy on surface and edges. Sulci distinct, with dark brown pilosity and hairs. Depression distinct. Lateral internal sulci united distally and continuing to transverse sulcus; lateral external sulci reaching transverse sulcus. Posterior lobe without pilosity or granulations and

Table 1. Selected measurements (ranges) and ratios for species of *Melanolestes* (excepting *M. degener* (Walker)). Abbreviations: Tl – total length; Wp – width pronotum; Wa – width abdomen; HdL – Head length; HdH – head height; AoCl – length anteocular region; PoCl – length postocular region; Eyl – eye length; Eyw – eye width; Eyh – eye height; Eyio – length eye interocular region; oce – ocellar diameter; ant 1–4 – antennal segments 1–4 lengths; rosl–III – rostral segments 1–III lengths; Pronl – pronotum length; PrAnl – pronotal anterior lobule length; PrPol – pronotal posterior lobule length; Tarsf – length fore tarsus; Tarsm – length mid tarsus; Tarsh – length hind tarsus.

	Tl	Wp	Wa	HdL/HdH	AoCl/PoCl	Eyl/Eyw	Eyh/HdH	Eyio/oce			
<i>M. argentinus</i> ♂	14.70-15.70	3.90-4.30	3.90-4.60	1.58-1.73	3.33-4.54	1.33-1.58	0.88-0.96	0.70-0.88			
<i>M. argentinus</i> ♀	14.80-16.60	3.80-4.70	4.60-5.30	1.47-1.60	2.97-4.44	1.33-1.67	0.69-0.77	0.83-1.23			
<i>M. goiasensis</i> ♂	11.10	3.00	3.40	1.70	3.50	1.30	0.90	0.67			
<i>M. lugens</i> ♂	16.70	4.20	5.20	1.71	3.43	1.21	0.98	0.76			
<i>M. lugens</i> ♀	16.40-18.00	3.90-4.30	5.40-6.30	1.45-1.56	3.75-5.33	1.50-1.92	0.44-0.57	1.34-1.67			
<i>M. minutus</i> ♂	10.00	2.90	2.90	1.75	2.00	1.37	0.75	0.84			
<i>M. morio</i> ♂	12.20-13.00	3.20-3.70	3.20-3.80	1.46-1.73	3.03-4.00	1.18-1.50	0.89-1.00	0.64-0.74			
<i>M. morio</i> ♀	14.40-15.30	3.80-4.30	4.10-4.90	1.50-1.60	3.50-4.20	1.62-1.80	0.70-0.87	0.79-1.39			
<i>M. picicornis</i> ♂	12.90-14.30	3.70-4.00	3.80-4.20	1.50-1.75	2.13-2.58	1.30-1.54	0.75-0.81	1.00-1.53			
<i>M. picicornis</i> ♀	15.60-16.80	3.75-4.40	4.50-5.80	1.48-1.67	3.33-4.00	1.54-2.50	0.56-0.63	1.50-1.82			
<i>M. picinus</i> ♂	20.30-20.60	5.30-5.60	5.80-6.20	1.50-1.55	3.62-5.00	1.60-1.73	0.68-0.73	1.00-1.04			
<i>M. picinus</i> ♀	19.80-20.90	5.60-5.90	6.00-6.70	1.50-1.70	3.88-4.86	1.50-1.81	0.70-0.80	1.06-1.16			
<i>M. picipes</i> ♂	15.70-17.50	4.30-4.70	5.00-5.30	1.63-1.75	3.00-4.33	1.33-1.50	0.73-0.79	1.07-1.33			
<i>M. picipes</i> ♀	12.20-17.20	4.20-5.20	4.80-5.30	1.26-1.60	2.75-3.20	1.69	0.55-0.67	1.08-1.60			
	ant 1/ ant 2	ant 1/ ant 3	ant 1/ ant 4	rosl/ ross II	ros I/ ros III	Pronl	PrAnl/ PrPol	Tarsf	Tarsm	Tarsh	
<i>M. argentinus</i> ♂	0.40-0.44	0.39-0.44	0.40-0.46	0.53-0.63	1.17-1.48	3.20-3.55	1.00-1.32	0.13-0.15	0.16-0.19	0.25-0.28	
<i>M. argentinus</i> ♀	0.49-0.50	0.44-0.52	0.46-0.50	0.61-0.65	1.46-1.58	3.30-4.05	1.18-1.50	0.13-0.14	0.17-0.20	0.23-0.26	
<i>M. goiasensis</i> ♂	0.38	-	-	0.67	1.20	2.50	1.08	0.11	0.12	0.21	
<i>M. lugens</i> ♂	-	-	-	0.60	1.20	3.60	1.30	0.15	0.18	0.25	
<i>M. lugens</i> ♀	0.39-0.42	0.37-0.39	0.36	0.61-0.70	1.47-1.71	3.70-4.10	2.60-3.33	0.14-0.16	0.16-0.21	0.23	
<i>M. minutus</i> ♂	0.33	0.37	0.37	0.60	1.33	1.00	1.30	0.15	0.10	0.16	
<i>M. morio</i> ♂	0.40-0.48	0.42-0.50	0.44	0.58-0.70	1.09-1.40	2.90-3.40	1.22-1.46	0.12-0.14	0.16-0.18	0.22-0.27	
<i>M. morio</i> ♀	0.46-0.52	0.52	0.48	0.57-0.70	1.33-1.75	3.40-3.80	1.40-1.50	0.12-0.14	0.16-0.18	0.23-0.28	
<i>M. picicornis</i> ♂	0.39-0.44	0.36-0.40	0.38-0.42	0.63-0.75	1.14-1.33	3.10-3.40	1.14-1.42	0.10-0.12	0.15-0.17	0.25-0.26	
<i>M. picicornis</i> ♀	0.42-0.57	0.42-0.52	0.39-0.50	0.65-0.72	1.50-1.64	3.60-3.90	1.65-1.79	0.11-0.14	0.16-0.19	0.23-0.26	
<i>M. picinus</i> ♂	-	-	-	0.60-0.63	1.39-1.50	5.05-5.10	1.27-1.36	-	-	-	
<i>M. picinus</i> ♀	0.52-0.56	-	-	0.57-0.63	1.56-1.63	5.10-5.30	1.27-1.50	0.18-0.19	0.20-0.24	0.32-0.35	
<i>M. picipes</i> ♂	0.40-0.44	0.40-0.42	0.42-0.43	0.63-0.67	1.43	3.70-4.00	1.30-1.53	0.14-0.15	0.18-0.20	0.26-0.27	
<i>M. picipes</i> ♀	0.46-0.50	0.46-0.50	0.48-0.50	0.64-0.80	1.43-2.00	3.70-3.80	1.40-2.28	0.13-0.14	0.17-0.19	0.23-0.25	

with dark brown hairs. Scutellum uniformly dark brown; principal body with hairs and pilosity on surface and edges.

Macropterous forms. Hemelytra not reaching the apex of abdomen. Corion with median dark hairs.

Legs uniformly dark brown.

Connexivum brown to blackish brown, in dorsal aspect orange to reddish along the margins of each tergite. Urotergites unicolorous. Urosternites brown to dark brown with rugosities.

Male genitalia (Figs 77–81). Medial process of

pygophore (Fig. 77) without hairs on basal area. Parameres (Figs 78–81) without external hairs or setae (Figs 78, 80).

Female genitalia (Figs 82–85). Gonocoxite VIII (Fig. 82) with hairs; gonapophysis (Fig. 82) without pilosity nor hairs. Gonocoxites IX (Fig. 83) with reduced hairs and pilosity, along internal edge with thin and thick hairs (coarser than in any other species), gonapophysis (Fig. 84) without a projection. Tergites IX and X (Fig. 85): intersegmental line strongly sclerotized.

Measurements, see Table 1.

Distribution. – Brazil (Map 2).

Material examined. – Brasil: Amazonas, Manaus, Parintins, ♀ 29-7-1957, Col. Nina (INPA); n 2616, Vista Alegre, Manacapuru, Solimoes, ♀ 19-X-1964, col. (leg. Nina Eduardo) (INPA); Manaus, ♀ 30-7-1956, col. Elias (INPA); ♂ ♀ I-III-1978, Faustino (INPA); Est. Am. km 64, ♀ A. Faustino (INPA); Amazon Sup. Teffe ♂ ♀ (NRS).

Discussion. – This species is very distinctive by its body shape and structure of male and female genitalia.

Melanolestes picipes (Herrich-Schaeffer)

(Figs 86–101, Map 5)

Pirates picipes Herrich-Schaeffer, 1846: 62.

Pirates abdominalis Herrich-Schaeffer, 1846: 63.

Melanolestes picipes: McPherson et al. 1991: 396.

For additional taxonomic references, see Froeschner (1988) and Maldonado-Capriles (1990).

Male and female. – Head (Fig. 86) dark brown, opaque. Dark brown pilosity around the antennae and between the eyes. In lateral view eyes surpassing the superior but not the inferior edge of the head. Ocelli on a tubercle. Antennae unicolorous. Neck with lateral tubercles.

Pronotum (Fig. 87); lateral margin carinate along its entire length. Anterior lobe with hairy surface and edges. Sulci indistinct, with dark brown pilosity and hairs. Depression distinct. Lateral internal sulci united distally and continuing to transverse sulcus; lateral external sulci reaching transverse sulcus. Posterior lobe with pilosity and granulations, without hairs (in some specimens lighter colored than the anterior lobe). Scutellum (Fig. 88) uniformly dark brown; principal body with hairs and pilosity on surface and edges.

Macropterous form. Hemelytra surpassing the apex of abdomen. Corion with median dark hairs.

Legs uniformly brown or dark brown.

Connexivum (Fig. 89) dark brown or orange red-

dish, visible in dorsal view. Urosternites dark brown to orange reddish with brownish patterns as in Figs 89–92. In specimens with dark brown connexivum the abdomen is ventrally dark brown; if connexivum orange reddish the ventral abdominal color pattern is variable.

Male genitalia (Figs 93–97). Medial process of pygophore (Fig. 93) with hairs on basal area. Parameres (Figs 94–97) with hairs externally (Figs 94–96).

Female genitalia (Figs 98–100). Gonocoxites VIII (Fig. 98) with hairs; gonapophysis (Fig. 98) with reduced pilosity. Gonocoxites IX (Fig. 99) along internal edge with thin hairs only; gonapophysis (Fig. 100) with a projection. Tergites IX and X (Fig. 101) with strongly sclerotized intersegmental line.

Measurements, see Table 1.

Distribution. – USA (New York, Illinois, South Carolina, Tennessee, Oklahoma, Alabama, Texas) (Map 5).

Material examined. – United States of America: New York, ♂, Wilkins (RMNH). Illinois, Oakwood, ♀ Apr. 1921, Col Jordan (ZMB). Carolina mer., 2♂, Belfrage (NRS). Carolina, 2♂, Belfrage (NRS). Tennessee, ♂, Troost (RMNH). Oklahoma, Cleveland Co, ♂, Brickisri (MC); ♂ 10-12-1949, J. D. Hathaway (MC). Alabama, Mobile, ♂ 1-10-1911, HP (MZH). Texas, 12♂, Belfrage (NRS). 2♂, Belfrage (ZMH). ♂ (RMNH).

Biology. – It was reared by Readio (1927) from eggs to nymphs, one generation per year. It feeds preferably on scarabaeoid beetles and passes the winter under boulders (Readio 1927).

Discussion. – The closest species is *M. picicornis* which differs by the bicolorous legs and structure of the male genitalia.

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