European Journal of Taxonomy 987: 264–280
https://doi.org/10.5852/ejt.2025.987.2865
ISSN 2118-9773
www.europeanjournaloftaxonomy.eu
2025 · Rodríguez-Mirón G.M.

Research article

urn:lsid:zoobank.org:pub:4BA71B75-A64E-4E2B-8CB6-644FE8A95394

Redescription of the African genus *Poecilomorpha* Hope, 1814 (Megalopodidae: Megalopodinae) and description of a new species

Geovanni M. RODRÍGUEZ-MIRÓN

Colección Coleopterológica, Museo de Zoología, Facultad de Estudios Superiores Zaragoza, UNAM, Av. Batalla del 5 de mayo s/n, Col. Ejército de Oriente 09230 Mexico City, Mexico.
Email: geo20araa@yahoo.com.mx

urn:lsid:zoobank.org:author:CAF15E10-33C1-4BE1-8B84-1D91C6DC96EC

Abstract. Three species of the genus *Poecilomorpha* Hope, 1841, *P. passerinii* Hope, 1841 (type species), *P. minuta* (Pic, 1951) and *P. cribricollis* (Pic, 1951) are redescribed, and a new species *P. pseudocribricollis* sp. nov. is described. Illustrations of the habitus, aedeagus and spermatheca of all four taxa are provided. The following new combinations are proposed: *Leucastea apicalis* (Pic, 1951), *L. atricornis* (Pic, 1951), *L. curta* (Pic, 1951), *L. fasciaticeps* (Pic, 1951), *L. immaculatipes* (Pic, 1951), *L. impressipennis* (Pic, 1951), *L. laticornis* (Pic, 1951), *L. nigroapicalis* (Pic, 1951), *L. nigromaculata* (Pic, 1951), *L. overlaeti* (Pic, 1951), *L. testaceipennis* (Pic, 1917), *L. trimaculata* (Pic, 1951), *L. usambarica* (Weise, 1902), *Sphondylia diversipes* (Pic, 1951), *S. trilineata* (Erber & Medvedev, 2002), *S. gravastella* (Péringuey 1908), *Macrolopha aurovillosa* (Jacoby, 1894) and *Monrosolopha tarsata* (Bryant, 1941). *Poecilomorpha abyssinica* Pic, 1951 and *P. delaguensis* Pic, 1913 are proposed as new synonyms of *Sphondylia afer* (Klug, 1824). A list of the species of the genus *Poecilomorpha* is also included.

Keywords. *Clythraxeloma,* nomenclatural changes, taxonomy, Sphondyliini, *Poecilomorpha pseudocribricollis* sp. nov.

Rodríguez-Mirón G.M. 2025. Redescription of the African genus *Poecilomorpha* Hope 1841 (Megalopodidae: Megalopodinae) and description of a new species. *European Journal of Taxonomy* 987: 264–280. https://doi.org/10.5852/ejt.2025.987.2865

Introduction

The monospecific genus *Poecilomorpha* Hope, 1841 was described by Hope (1841) for *P. passerinii* Hope, 1841, a species distributed in Sierra Leone. Years later, Lacordaire (1845) placed five more species into the genus, from the Ethiopian and Oriental regions. Other authors such as Perroud (1853), Westwood (1864), Motschulsky (1866) and Jacoby (1894a, 1894b, 1895), described additional new species in *Poecilomorpha*.

The concept of *Poecilomorpha* has been widely utilized to include disparate species from the Ethiopian as well as the Oriental regions; until recently, *Poecilomorpha* comprised close to 50 species (Rodríguez-Mirón 2018; Rodríguez-Mirón *et al.* 2021). Throughout the history of *Poecilomorpha*, many species originally described in the genus have been transferred to other genera or have been the

basis for the creation of new ones such as *Piomelopus* Jacoby & Clavareau, 1905, *Bryantonaria* Pic, 1951, and *Antonaria* Jacoby & Clavareau, 1905; *Poecilomorpha* has been a 'dumping ground' within Megalopodidae.

Some authors have attempted to redefine the generic limits of *Poecilomorpha* (Chujo 1951; Pic 1951; Yu & Liang 2002); however, they did not include the type species of the genus in their studies. Recently, Rodríguez-Mirón *et al.* (2021) recognized *Poecilomorpha* as an artificial group; to contribute to the stability of the genus, *Macrolopha minuta* Pic, 1951 and *M. cribricollis* Pic, 1951 were transferred to *Poecilomorpha*. Additionally, the genus *Clythraxeloma* Kraatz, 1879 (Megalopodini Latreille, 1802) was restored in order to contain Palaearctic and Oriental species previously included in *Poecilomorpha*. Approximately 40 species of *Poecilomorpha* distributed in the Ethiopian region are currently recognized; however, for some species their generic placement is still not clear. Thus, it is necessary to carry out taxonomic work to recognize which species belong to the genus *Poecilomorpha*. The objective of the present work is to redefine the genus *Poecilomorpha* and to illustrate its diagnostic characteristics. Additionally, a new species is described, and nomenclatural changes are carried out.

Material and methods

Terms for anatomy and male genitalia structures follow Ehara (1954), and terms for female genitalia follow Suzuki (1988), Matsumura & Suzuki (2008) and Rodríguez-Mirón *et al.* (2017). Genitalia were dissected and the associated tissue was macerated in 10% KOH for 10 minutes. The specimens examined were obtained on loan from the Natural History Museum, London, U.K. (BMNH, Michael Geiser), the Royal Museum for Central Africa, Tervuren, Belgium (RMCA, Eliane De Coninck), the Museum für Naturkunde Berlin, Germany (ZMB, Bernd Jaeger), and the Muséum national d'Histoire naturelle (MNHN, Antoine Mantilleri); type specimens of *P. passerinii* were reviewed by means of images made available by the Oxford University Museum of Natural History (OUMNH). Also, *P. binotata* Péringuey, 1892, *P. divisa* Jacoby, 1895 and *P. gravastella* Péringuey, 1908 were reviewed from images made available by the Iziko Museums of South Africa (SAM). The specimens were examined and measured using a Carl Zeiss Discovery V8R stereo microscope. Photographs were obtained using a Zeiss Axio Zoom V-16 stereo microscope equipped with an Axiocam MRC5 camera. The label data of type specimens are given verbatim in quotation marks; different labels are separated by a forward dash (/).

Results

Taxonomy

Class Insecta Linnaeus, 1758
Order Coleoptera Linnaeus, 1758
Family Megalopodidae Latreille, 1802
Subfamily Megalopodinae Latreille, 1802

Tribe **Sphondyliini** Rodríguez-Mirón, 2021

Key to the genera of Sphondyliini Rodríguez-Mirón, 2021

1. Pronotum same width or wider than base of elytra, posterior edge sinuated ..... ***Monrosolopha*** Erber & Medvedev, 2002 (Fig. 1A)
– Base of pronotum less wide than base of elytra, posterior edge not sinuated (Fig. 1B) 2

2. Mesoventrite with transverse fovea anteriorly (Fig. 1C) 3
– Mesoventrite without transverse fovea anteriorly 7

3. Apical edge of elytra crenulate (Fig. 1D). Pronotum subconical in shape (Fig. 1E) .... ***Antonaria*** Jacoby & Clavareau,1905
– Apical edge of elytra not crenulate. Pronotum not subconical in shape (Fig.1A–B, G–I) 4

4. Antennae short, not extending beyond procoxae. Pronotum without lateral projections (Fig. 1H) . 5
– Antennae of medium length, beyond procoxae. Pronotum with lateral projections (Fig. 1B, G) 6

5. Pronotum with anterior and posterior groove (Fig. 1F) ..... ***Falsocolobaspis*** Pic, 1942
– Pronotum without anterior or posterior groove ..... ***Macroantonaria*** Pic, 1951

6. Pronotum surface with points separated from each other (Fig. 1B). Elytra without hump behind scutellum ..... ***Bryantonaria*** Pic, 1951
– Pronotum surface with contiguous punctuations (Fig. 1G). Elytra with hump behind scutellum .... ***Piomelopus*** Jacoby & Clavareau, 1905

7. Pronotum subcircular in shape, with setae conspicuous in some region of the body (Fig. 1H) .... ***Sphondylia*** Weise, 1902
– Pronotum trapezoidal in shape, with setae scattered (Fig. 1I) ..... ***Poecilomorpha*** Hope, 1841

Fig. 1. A. Pronotum of *Monrosolopha tarsata* (Bryant, 1941). **B**. Pronotum of *Bryantonaria crampeli* (Pic,1913), syntype, ♂ (MNHN). **C**. Mesoventrite pit of *B. crampeli*, ♂ (MNHN). **D**. Crenate elytral edge of *Antonaria* sp. **E**. Pronotum of *Antonaria* sp. **F**. Pronotum lateral view of *Falsocolobaspis elongatus* Pic, 1951, ♂ (RMCA). **G**. Pronotum of *Piomelopus flabellicornis* (Jacoby, 1895), ♂ (MNHN). **H**. Pronotum of *Sphondylia* sp. **I**. Pronotum of *Poecilomorpha passerinii* Hope, 1841, ♂ (MNHN).

Genus ***Poecilomorpha*** Hope, 1841
Figs 2–4

Poecilomorpha Hope, 1841: 178, pl. ii fig. 4 (original description).

Poecilomorpha – Lacordaire 1845: 721 (redescription). — Gemminger 1874: 3275 (catalogue). — Chapuis 1874: 93 (redescription). — Weise 1902: 119, 120 (diagnosis). — Jacoby & Clavareau 1905: 11 (redescription, catalogue). — Heyne 1908: 247 (number of species). — Pic 1908: 240 (misapplication of the name). — Clavareau 1913: 17 (catalog). — Jolivet 1951: 14 (faunal treatment). — Pic 1951: 27, 35 (misapplication of the name). — Chujo 1951: 60 (misapplication of the name). — Seeno & Wilcox 1982: 25 (checklist). — Erber & Medvedev 2002: 100 (misapplication of the name). — Yu & Liang 2002: 119 (mention of the type and misapplication of the name). — An 2015: 315 (misapplication of the name). — Rodríguez-Mirón 2018: 285 (checklist). — Rodríguez-Mirón *et al.* 2021: 16, 18 (phylogenetic treatment, nomenclature).

Type species

Poecilomorpha passerinii Hope, 1841 (by monotypy).

Diagnosis

Poecilomorpha differs from the other Sphondylini genera by the following combination of character states: head constricted posteriorly (Fig. 2F), the rounded apical edge of the ligula, internal edges of eyes posterior to canthi parallel (Fig. 2F), antennae (Fig. 2H) moderately long, reaching beyond procoxae; pronotum trapezoidal in shape (Fig. 1I); pronotum and elytra coarsely punctate (Fig. 2D); the subparallel external margins of elytra (Fig. D); metafemora swollen (Fig. 2E), metatarsomeres I–III shaped differently than pro- and mesotarsomeres III and tergite II with two sclerotized areas (Fig. 2I).

Redescription

Head. Constricted behind eyes (Fig. 2F); frontal surface along eye margins with ocellate punctures (Fig. 2F); frons convex, punctate. Antennae subclavate (Fig. 2H), medium in length reaching beyond procoxae, with 11 antennomeres; scape subconical with two longitudinal carinae on posterior part; antennomere I globose; V–X articulated laterally; XI ovoid; scape and antennomere II–IV with scattered setae; setae on X–XI short and compressed. Eyes (Fig. 2E–F) prominent 1.4 × as wide as long, covering ¾ of lateral sides of the head, margin posterior to canthi parallel (Fig. 2F). Frontoclypeal groove shallow (Fig. 2F). Clypeus trapezoidal, punctate, with erect pubescence laterally, anterior region translucent; labrum semicircular (Fig. 2F), surface of disc sparsely setose, anterior margin densely so. Mandibles triangular, external side convex in lateral view, punctate, with procumbent setae. Maxillary palps with three palpomeres, I subconical, longer than II; ligula complete. Labial palps with three palpomeres, I shorter than II and III, I subconical. Gula trapezoidal, impunctate.

Thorax. Pronotum (Fig. 1I) trapezoidal, wider than long, with groove along central part of posterior edge, strongly constricted posteriorly; surface convex, coarsely punctate; posterior part wider than anterior, with narrow posterolateral projections; posterior edge beaded, as wide as base of elytra. Procoxal cavities closed, procoxae contiguous, conical, protruding; mesocoxae ovate, protruding slightly; metacoxae subquadrate, metacoxal space wide. Mesoscutum (Fig. 2J) with stridulatory files; apical region rounded (Fig. 2J). Scutellum (Fig. 2J) subtriangular punctate with decumbent pubescence. Elytra (Fig. 2D) with external margins parallel, disc slightly convex dorsally, coarsely punctate; humeri not prominent. Meso- and metaventral processes joined (Fig. 2K), with orifice internally. Metaepisternum with anterior groove (Fig. 2K). Leg pairs progressively longer posteriorly; pro- and mesofemora elongate, metafemora swollen (Fig. 2E); metatrochanters truncate; meso- and metatibiae with row of denticles dorsally, apophysis rounded, apex with two spurs; pro- and mesotarsomeres I–III subconical; metatarsomeres

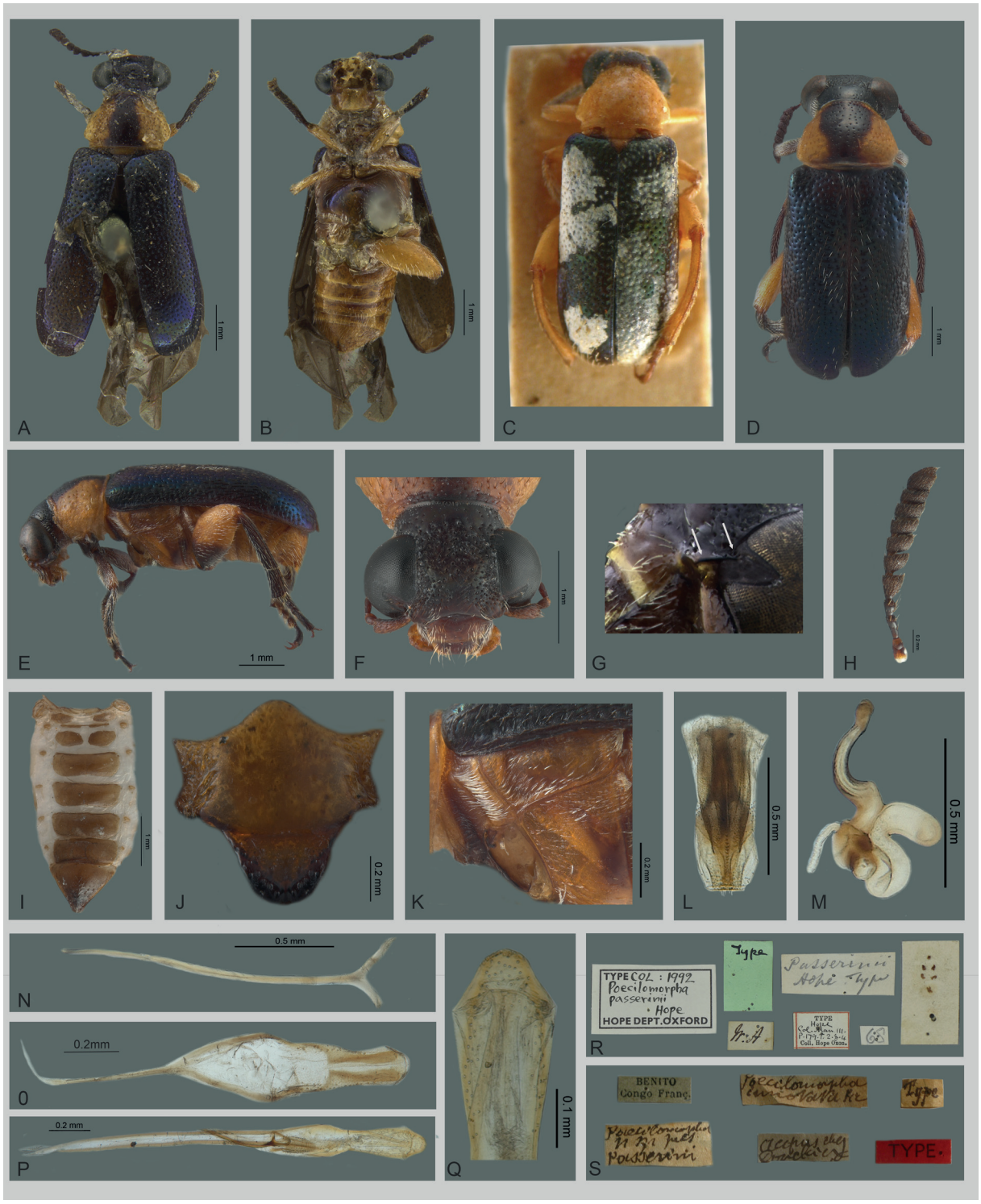

Fig. 2. A–B, R. *Poecilomorpha passerinii* Hope, 1841, syntype, ♂ (OUMNH). **A**. Dorsal view. **B**. Ventral view. **C**. *Poecilomorpha innotata* Pic, 1946, syntype, sex? (MNHN), dorsal view. **D–Q**. *Poecilomorpha passerinii* Hope, 1841. **D–K, N–Q**. ♂ (MNHN). **L–M**. ♀ (MNHN). **D**. Dorsal view. **E**. Lateral view. **F**. Frontal view. **G**. Margin of the antennal awning. **H**. Antenna. **I**. Dorsal abdomen view. **J**. Mesoscutum. **K**. Metaepisternum. **L**. Sternite VIII female. **M**. Spermatheca. **N**. Spiculum gastrale. **O**. Tegmen. **P**. Middle lobe. **Q**. Middle lobe apex. **R–S**. Type labels.

I–III subcylindrical; on each leg tarsomere IV reduced in size, tarsomere V curved, as long as I–III combined, dorsal edge with mucro; claws bifid; empodia short, with two setae.

Abdomen. Tergites (Fig. 2I) I and III with two sclerotized regions, rest membranous. First spiracle distinctly larger than others (Fig. 2J); pygidium subtriangular, punctate and setose; ventrite I with anterior edge beaded, abdominal process not projected between metacoxae; in females, last abdominal ventrite slightly concave apically, with projection in abdominal cavity.

Male genitalia. Aedeagus (Fig. 2P–Q); dorsal portion of median lobe membranous; struts and lateral margins of median lobe slightly sclerotized; struts fused with edge of median lobe. Tegmen (Fig. 2O); parameres long, fused; tegmen ring lanceolate; roof long.

Female genitalia. Spermatheca (Fig. 2M) complex; proximal part of spermathecal capsule kidney-shaped; stem and terminal portion of capsule connected by common duct.

Nomenclatural changes

Following the revision of the type specimens of *Poecilomorpha apicalis* Pic, 1951, *P. atricornis* Pic, 1951, *P. curta* Pic, 1951, *P. fasciaticeps* Pic, 1951, *P. immaculatipes* Pic, 1951, *P. impressipennis* Pic, 1951, *P. laticornis* Pic, 1951, *P. nigroapicalis* Pic, 1951, *P. nigromaculata* Pic, 1951*, P. overlaeti* Pic, 1951, *P. testaceipennis* Pic, 1917, *P. trimaculata* Pic, 1951, *P. usambarica* Weise, 1902 and a comparison with *Leucastea dohrni* Stål, 1855 (type species of the genus *Leucastea* Stål, 1855), the aforementioned *Poecilomorpha* species are transferred to *Leucastea* based on their subfiliform antennae, presence of two transverse and well-marked grooves on the pronotum (one anteriorly, the other posteriorly), and the rounded pronotal lateral edges (Jacoby & Clavareau 1905). Also following the revision of the type specimens of *Poecilomorpha diversipes* Pic, 1951, *P. trilineata* Erber & Medvedev, 2002 and from the examination of the photograph of the type specimen of *P. gravastella* Péringuey 1908, they are transferred to *Sphondylia* based on the following character states: head broad and without constriction behind eyes; eyes not prominent; thorax wider than long, widest at middle and with rounded lateral edges; pronotum without grooves; and elytra distinctly narrowed posteriorly (Jacoby & Clavareau 1905). Following the comparison of the type specimens of *Poecilomorpha abyssinica* Pic, 1951 and *P. delagoensis* Pic, 1913 with *Sphondylia afer* (Klug, 1824) it is considered that *P. abyssinica* and *P. delagoensis* are synonyms of *S. afer*.

After revising the type specimen of *Poecilomorpha tarsata* Bryant, 1941 and comparing it with *Monrosolopha obscura* Erber & Medvedev (a monospecific genus), I transfer this species to *Monrosolopha*. This decision is based on the head being retracted into the pronotum, the pronotum being the same width or wider than the base of the elytra, and the posterior edge being sinuated. Additionally, after reviewing a photograph of a syntype of *Poecilomorpha aureovillosa* Jacoby, 1894 and comparing it with *Macrolopha rustica* Weise, 1902 (the type species of *Macrolopha* Weise, 1902), I transfer this species to *Macrolopha* (Macrolophini Rodríguez-Mirón, 2021). This transfer is based on the pronotum having sub-basal lateral projections that point posteriorly (Rodríguez-Mirón *et al.* 2021).

Rodríguez-Mirón (2018) overlooked that Bryant (1923) had synonymized *Poecilomorpha luteipennis* Westwood, 1864 with *Antonaria senegalensis* (Lacordaire, 1845), and erroneously listed it as a valid combination. In the same work, Bryant (1923) also established the combination *Falsotemnaspis lacordairei* (Westwood, 1864) and thus excluded this species from *Poecilomorpha*; however, Rodríguez-Mirón (2018) erroneously listed it in *Poecilomorpha*.

Checklist of species placed in the genus *Poecilomorpha* Hope, 1841

Poecilomorpha cribricollis (Pic, 1951)
Poecilomorpha minuta (Pic, 1951)
Poecilomorpha passerinii Hope, 1841
Poecilomorpha pseudocribricollis sp. nov.

Incertae sedis

Poecilomorpha atricolor Pic, 1951: 45 – type in RMCA
Poecilomorpha atripennis Pic 1946: 152 – type in MNHN
Poecilomorpha atripes Lacordaire, 1845: 727
Poecilomorpha bicoloripes Pic, 1951: 47 – type in RMCA
Poecilomorpha binotata Péringuey, 1892: 83 – type in SAM
Poecilomorpha calabarica Westwood, 1864: 274
Poecilomorpha divisa Jacoby, 1895: 163 – type in SAM
Poecilomorpha dollmani Bryant, 1931: 555 – type in BMNH
Poecilomorpha freyi Pic, 1951: 2 – type in MNHN
Poecilomorpha hacquardi Pic, 1955: 10 – type in MNHN
Poecilomorpha maynei Pic, 1951: 47 – type in RMCA
Poecilomorpha nigricornis Pic, 1955: 10 – type in MNHN
Poecilomorpha preapicalis Pic, 1955: 234 – type in MNHN
Poecilomorpha variabilis Perroud, 1853: 522 – type in MNHN
Poecilomorpha viridipennis Pic, 1951: 44 – type in RMCA
Poecilomorpha suturalis (Clavareau, 1909) – type in RMCA

Poecilomorpha passerinii Hope, 1841
Figs 1I–2

Poecilomorpha passerinii Hope, 1841: 179, pl. ii, fig. 4 (original description).
Poecilomorpha innotata Pic, 1911: 213 (original description), **syn. nov.**
Poecilomorpha innotata Pic, 1946: 152 (original description, objective junior homonym), **syn. nov.**

Poecilomorpha passerinii – Lacordaire 1845: 728 (misidentification according to Weise 1902). — Weise 1902: 119 (distribution, note). — Staines 2002: 17 (type material). — Rodríguez-Mirón 2018: 285: fig. 1l (checklist). — Rodríguez-Mirón *et al.* 2021 (phylogenetic treatment). — Jacoby & Clavareau 1905: 11 (catalogue). — Clavareau 1913: 17 (catalog). — Erber & Medvedev 2002: 100 (key to genera). — Yu & Liang 2012: 119. — Chujo 1951: 60 (mention as type species of the genus). — An 2015: 315 (mention as type species of the genus).

Type material

Syntype *Poecilomorpha passerinii* Hope, 1841 (only photographs studied)
SIERRA LEONE • ♀; "W.A. / *passerinii* Hope, type / Type (green label) / TYPE Hope Col. Man. III, p. 179, T.2, f.4, Coll. Hope Oxon. (white label with red border) / 68 / TYPE COL: 1992, *Poecilomorpha passerinii* Hope, HOPE DEPT (white label with black border)/ dissected mouthparts stuck to a card"; OUMNH.

Syntype *Poecilomorpha innotata* Pic, 1911
REPUBLIC OF THE CONGO • 1 spec.; "BENITO, Congo Franc. (green label) / *Poecilomorpha* n. sp. pres *passerinii*/ typus chez Donckier / Type / *Poecilomorpha innotata* Pic / TYPE. (red label)"; MNHN.

Other material examined

NIGERIA • 2 ♀♀; "Lagos Dist."; Jul. 1944; W.E.S. Merrett leg; NHMUK. • 1 ♂; Baly Coll.; NHMUK

SIERRA LEONE • 1 ♀; "Rhobomp"; MNHN. BENIN • 1 ♀; Kétou; 1900; R.P Paichoux leg; MNHN.

Differential diagnosis

Poecilomorpha passerinii differs from *P. minuta*, *P. cribricollis* and *P. pseudocribricollis* sp. nov. by the following combination of characters: surface of the ocular canthus concave; margin of the antennal awning not extended onto eye canthi (Fig. 2G); frontoclypeal groove arcuate (Fig. 2F); and elytral suture carinate on apical third length. In *P. minuta*, *P. cribricollis* and *P. pseudocribricollis*, the surface of the ocular canthi is convex; margin of the antennal awning prolonged onto eye canthi; frontoclypeal groove is straight; and elytra lacking a carina along suture.

Redescription

Male

Measurements and Coloration. Length 6.4–7.1 mm, width 2.5–2.6 mm. Head and antennae black; mandibles, labium, maxilla, thorax and abdomen orange; pronotal disc, coxae, base of femora, tibiae and tarsi brown; elytra iridescent, varying from blue to green.

Head. Occiput coarsely and sparsely punctate; interocular region coarsely and densely punctate, with long brown pubescence, interspaces smooth, 0.6–1 × as wide as puncture diameter (Fig. 2F); surface of ocular canthus concave; margin of the antennal awning not extended onto canthi (Fig. 2G); antennae reaching posterior edge of pronotum; scape twice as long as antennomere III, III as long as VI, V longer than wide, VI–X wider than long; frontoclypeal groove arcuate (Fig. 2F); last labial palpomere bullet-shaped, apex horizontally truncate; last maxillary palpomere subconical, apex truncate.

Thorax. Pronotum (Fig. 1I) with disc coarsely and sparsely punctate, interspaces smooth, 2–3 × wider than puncture diameter; surface with black pubescence; base 1.3 × wider than anterior margin; posterior angles rounded. Scutellum (Fig. 1J) subtriangular, rounded at apex, deep punctate, with procumbent pubescence. Elytral (Fig. 2D–E) humeri rounded; pubescence brown and white randomized near the elytral suture; surface with carina along apical third of suture. Metaventral process with small notch projecting between mesocoxae (Fig. 2K). Metepisternum (Fig. 2K) finely punctate and pubescent, disc impunctate and glabrous; metaventrite convex, sparsely punctate and pubescent. Tibiae swollen near apex, with decumbent pubescence; hind tibiae also curved

Abdomen. Compact; pygidium declivous, triangular with the base longer than the lateral margins, sparsely punctate, pubescent; apex of last ventrite emarginate. Aedeagus (Fig. 2P–Q), median lobe with apex rounded; struts 1.5 × as long as median lobe. Tegmen (Fig. 2O) slightly sclerotized. Parameres (Fig. 2O) obtuse at apex, tegmen ring 'card spade-shaped', roof 1.5 × as long as parameres.

Female

Ventrite V with projection into abdominal cavity; projection triangular with rounded apex. Sternite VIII trident-shaped (Fig. 2L). Spermatheca complex (Fig. 2M); proximal part of spermathecal capsule with velum rounded; common duct globose; stem and terminal portions of capsule joined, terminal portion S-shaped, more robust than stem; spiculum gastrale asymmetrically forked (Fig. 2N).

Distribution

Benin (new record), Ghana (Weise, 1902), Nigeria (new record), Republic of the Congo (Pic 1911), Sierra Leone (Hope 1841).

Remark

Maurice Pic proposed *P. innotata* based on the absence of a black spot on the pronotum. Additionally, he described *P. innotata* twice based on the same specimen, in 1911: 213 and 1946: 152.

Poecilomorpha minuta (Pic, 1951)
Fig. 3

Macrolopha minuta Pic, 1951: 42.

Macrolopha minuta – Rodríguez-Mirón 2018: 278 (checklist).
Poecilomorpha minuta – Rodríguez-Mirón *et al.* 2021 (phylogenetic treatment, nomenclatural change).

Type material

Holotype
DEMOCRATIC REPUBLIC OF THE CONGO • ♂; "MUSÉE DU CONGO, Equateur: Flandria, fine 1928, R. P. Hulstaert / *Poecilomorpha passerinii* G. E. Bryant det. Hope / sg. Monocolobaspis mihi / *Macrolopha minuta* n sp / R. DET., F, 5138 / R. DET. 5630 / HOLOTYPUS *minuta* Pic"; RMCA.

Differential diagnosis

Poecilomorpha minuta differs from the other species of the genus by a finely punctate occiput (Fig. 3G) and scutellum with apex truncate. In the other examined species, the occiput is coarsely punctate. The

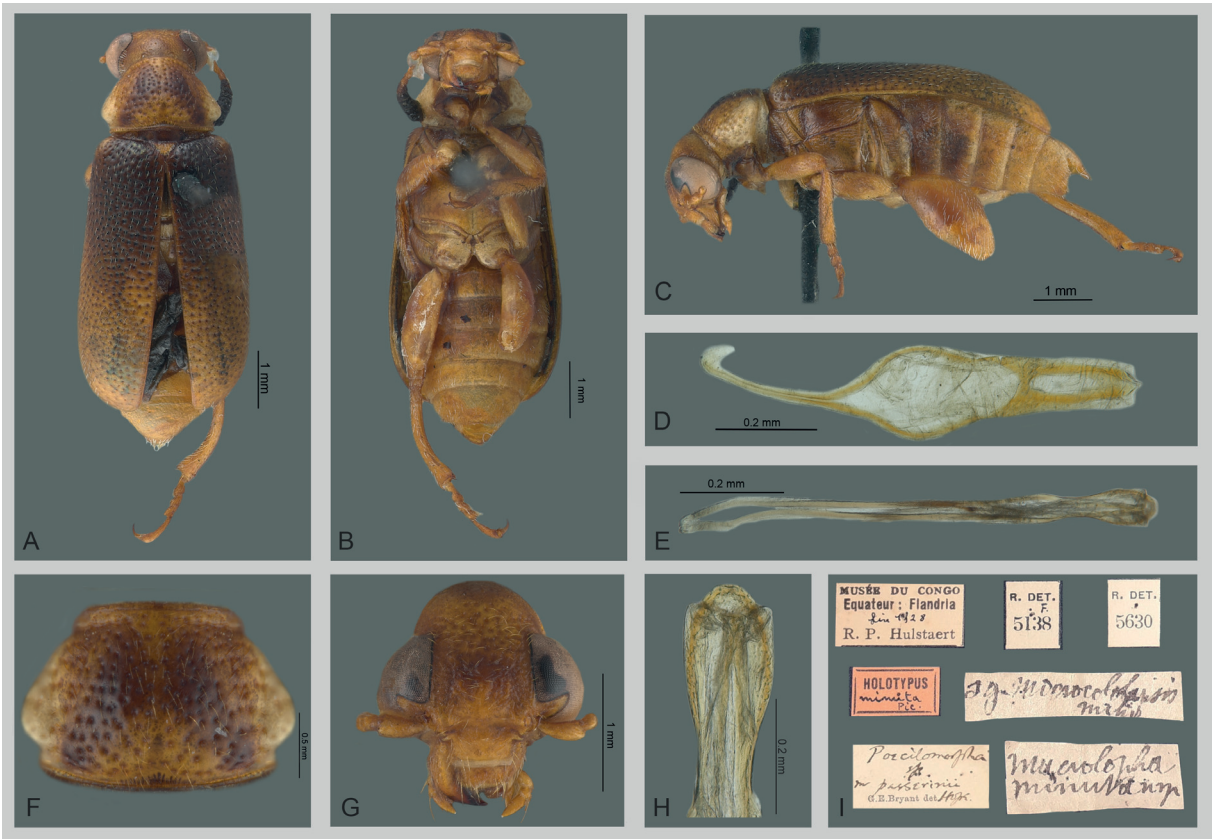

Fig. 3. *Poecilomorpha minuta*, holotype, ♂ (RMCA). **A**. Dorsal view. **B**. Ventral view. **C**. Lateral view. **D**. Tegmen. **E**. Middle lobe. **F**. Pronotum. **G**. Frontal view. **H**. Middle lobe apex. **I**. Type labels.

scutellum in *P. passerinii* and *P. pseudocribricollis* sp. nov. is rounded at apex; in *P. cribricollis* the apex is mucronate. *Poecilomorpha minuta* can also be differentiated from *P. passerinii* based on shape of aedeagus.

Redescription

Male

Measurements and Coloration. Body length 6.6 mm, width 2.4 mm. Entirely yellow orange except: antennae black, apex of mandibles brown, elytral basal thirds iridescent brown.

Head. Occiput finely punctate; interocular space convex, coarsely and densely punctate with long yellow setae, interspaces smooth less wide than puncture diameter (Fig. 3G); surface of ocular canthus convex; margin of antennal awning prolonged onto canthi; antennae extending beyond pronotal posterior edge; scape 1.8 × as long as antennomere III, III longer than VI, V as long as wide, VI–X wider than long; frontoclypeal groove straight (Fig. 3G.); last maxillary palpomere conical, apex acute; last labial palpomere bullet-shaped, apex acute.

Thorax. Pronotal disc coarsely punctate, interspaces smooth, 1.5 × as wide as puncture diameter (Fig. 3F); surface with yellow pubescence; base 1.4 × as wide as anterior margin. Scutellum subtriangular, apex truncate, deep punctate, with procumbent pubescence. Elytra with yellow pubescence, humeri weakly projected (Fig. 3A, C). Metaepisternum (Fig. 3C) finely punctate and pubescent, disc impunctate and glabrous. Metaventrite convex, sparsely punctate and pubescent. Tibiae swollen near apex, with decumbent pubescence; hind tibiae also curved.

Abdomen. Pygidium horizontally produced, sparsely punctate, sparsely pubescent, apex rounded; apex of last ventrite truncate and pubescent. Aedeagus (Fig. 3E, H) with median lobe apex rounded; struts twice as long as median lobe. Tegmen (Fig. 3D) slightly sclerotized, parameres mucronate at apex, tegmen ring pyriform; roof 1.3 × as long as parameres.

Female

Unknown.

Type locality

Democratic Republic of the Congo.

Remarks

Maurice Pic described *Poecilomorpha minuta* using material that he deposited in the Royal Museum for Central Africa at Tervuren (Pic 1951: 42). He did not specify how many specimens he reviewed, nor did he indicate that there was more than one. The Megalopodidae section at the Royal Museum for Central Africa is well curated, and within this collection, there is only one specimen labeled as the holotype (Fig. 2I). Therefore, the designation of the holotype follows the recommendations outlined in Articles 72.4.1.1 and 73.1.2 of the International Code of Zoological Nomenclature.

Poecilomorpha cribricollis (Pic, 1951)
Fig. 4

Macrolopha cribricollis Pic, 1951: 41.

Macrolopha cribricollis – Rodríguez-Mirón 2018: 277 (checklist).
Poecilomorpha cribricollis – Rodríguez-Mirón *et al.* 2021 (phylogenetic treatment, nomenclatural change).

Type material

Holotype
DEMOCRATIC REPUBLIC OF THE CONGO • ♂; "MUSÉE DU CONGO, de Luebo á Mboi, -II:1923, L. Achten / R. DET., A, 5630/ HOLOTYPUS *cribricollis* Pic / desire / *Macrolopha cribricrollis* n sp / sg *Micro colobaspis* mihi"; RMCA.

Fig. 4. *Poecilimorpha cribricollis,* holotype, ♂ (RMCA). **A**. Dorsal view. **B**. Ventral view. **C**. Frontal view. **D**. Pronotum. **E**. Lateral view. **F**. Maxillary and labial palps. **G**. Type labels.

Differential diagnosis

See *P. pseudocribricollis* sp. nov.

Redescription

Female

Measurements and Coloration. Body length 7.4 mm, width 2.7 mm. Head, antennae, pronotum, elytra basal thirds orange; elytra apical two-thirds iridescent black; mandibles, legs and abdomen brown.

Head. Occiput coarsely punctate, interocular space coarsely and densely punctate, with long black setae, interspaces smooth, same wider than puncture diameter (Fig. 3C); surface of ocular canthus convex; margin of antennal awning prolonged onto canthi; antennae not reaching pronotal posterior edge, scapes 2.4 × as long as antennomere III, III as long as IV, V–X longer than wide; frontoclypeal groove straight; last maxillary palpomere robust, subconical, apex truncate; labial palpomere robust (Fig. 4F), almond-shaped, apex truncate.

Thorax. Pronotum (Fig. 4D) with disc coarsely punctate, with black pubescence, interspaces smooth, 1.5–2.4 × as wide as puncture diameter, base 1.5 × as wide as anterior margin, posterior angles rounded. Scutellum subtriangular, weakly punctate, mucronate at apex, with procumbent pubescence. Elytra (Fig. 4A) coarsely punctate, pubescence black, lacking carina along suture. Metepisternum (Fig. 4E) finely punctate and sparsely pubescent. Metaventrite convex, sparsely punctate, pubescent. Tibiae subcylindrical, with decumbent pubescence; metatibiae also slightly curved.

Abdomen. Pygidium horizontally produced, triangular, with the base longer than the lateral margins, sparsely punctate, pubescent, apex rounded; last abdomen ventrite with apical edge slightly emarginate.

Male

Unknown.

Distribution

Democratic Republic of the Congo.

Remarks

Maurice Pic described *Poecilomorpha cribricollis* using material that he deposited in the Royal Museum for Central Africa in Tervuren (Pic 1951: 41). He did not specify how many specimens he reviewed, nor did he indicate that there was more than one. The Megalopodidae section at the Royal Museum for Central Africa is well curated, and within this collection, there is only one specimen labeled as the holotype (Fig. 3I). Therefore, the designation of the holotype follows the recommendations outlined in Articles 72.4.1.1 and 73.1.2 of the International Code of Zoological Nomenclature.

Poecilomorpha pseudocribricollis sp. nov.
urn:lsid:zoobank.org:act:44A210F5-B5C5-4031-AE52-5D43B7FE4F1E
Fig. 5

Type material

Holotype

DEMOCRATIC REPUBLIC OF THE CONGO • ♀; "COLL. MUS. TERVUREN, Luluabourg [= Kananga] (Kasal [sic. Kasaï]), 30-I-1963, Jan Deheegher / *Macrolopha* (*Microlobaspis*) *cribricollis*, G.M. Rodriguez-Mirón det. 2016"; RMCA.

Differential diagnosis

Poecilomorpha pseudocribricollis sp. nov. differs from *P. cribricollis* by the following combination of character states: last labial palpomere bullet-shaped, apex blunt; last maxillary palpomere bullet-shaped, apex blunt (Fig. 5D); apex of scutellum rounded; metaventrite with longitudinal groove (Fig. 5B, I). In *P. cribricollis*, the last labial and maxillary palpomeres almond-shaped (Fig. 4F); the apex of the scutellum is mucronate and the metaventrite concave.

Description

Female

Measurements and Coloration. Body length 6.5 mm, width 2.5 mm. Head, antennae, pronotum, elytral basal thirds orange; elytral apical two-thirds iridescent black-violet; mandibles, legs and abdomen brown.

Head. Occiput coarsely punctate; interocular space coarsely and densely punctate, with long brown pubescence, interspaces smooth, same wider than puncture diameter (Fig. 5C); frons convex, impunctate, glabrous; surface of ocular canthus convex; margin of the antennal awning prolonged onto canthi; length of antennae not exceeding pronotal posterior edge; scape 2.7× as long as antennomere III; III longer than VI; V and VIII as long as wide; VI, VII, IX and X wider than long; frontoclypeal groove straight (Fig. 5C); last labial palpomere bullet-shaped, apex blunt; last maxillary palpomere bullet-shaped, apex blunt (Fig. 5D).

Fig. 5. *Poecilomorpha pseudocribricollis.* sp. nov., holotype, ♀ (RMCA). **A**. Dorsal view. **B**. Ventral view. **C**. Frontal view. **D**. Maxillary and labial palps. **E**. Pronotum. **F**. Sternite VIII. **G**. Spermatheca. **H**. Lateral view. **I**. Metaventrite. **J**. Spiculum gastrale. **K**. Type labels.

Thorax. Pronotum (Fig. 5E) with disc coarsely punctate, with black pubescence, interspaces smooth, 1.5× as wide as puncture diameter, base 1.35× as wide as anterior margin, posterior angles blunt. Scutellum subtriangular, apex rounded, weakly punctate, with procumbent pubescence. Elytra (Fig. 5A) with humeri weak, pubescence black; surface without carina. Metaventral process with edge curved. Metaepisternum finely punctate and pubescent, posterior portion impunctate and glabrous. Metaventrite with longitudinal groove (Fig. 5B, I), sparsely punctate, pubescent. Tibiae subcylindrical, with decumbent pubescence; metatibiae also slightly curved.

Abdomen. Pygidium horizontally produced, triangular with base longer than lateral margins, sparsely punctate, pubescent, apex rounded. Last abdominal ventrite with apical edge emarginate; projection in abdominal cavity triangular, apex rounded.

Genitalia. Spermatheca complex (Fig. 5G); proximal part of spermathecal capsule with velum truncate, common duct globose; stem and terminal portion of capsule joined; terminal portion L-shaped, more robust than stem; sternite VIII trident-shaped (Fig. 5F), external prongs bifid; spiculum gastrale symmetrically forked (Fig. 5J).

Male

Unknown.

Distribution

Democratic Republic of Congo.

Discussion

After comparing the external morphology of *Poecilomorpha passerinii* (type species of the genus) with type specimens of several species originally described in this genus, some were recognized as not belonging to *Poecilomorpha*. Consequently, 13 are transferred to *Leucastea* (Leucasteini Rodríguez-Mirón, 2021), five to *Sphondylia,* and one each to *Monrosolopha* and *Macrolopha*. Of the 20 species recognized as belonging to *Poecilomorpha*, only four can be confidently retained in this genus.

Based on the type material studied, it was found that some taxa do not meet the criteria to be classified within an already defined taxon, so it is necessary to establish new genera to contain them. In some cases, it was not possible to study the type specimens of some taxa to be certain to which genus they belonged to; however, based on the original description it was recognized that they meet the definition of *Poecilomorpha*.

The study of type specimens is crucial for conducting effective taxonomic research and for preventing setbacks, such as those encountered in the examination of African Megalopodidae. Pic (1951) and Erber & Medvedev (2002) provided essential elements that aid in differentiating the genera within this family. However, particularly concerning *Poecilomorpha*, neither study reviewed the type species. Additionally, new species were described, and a taxon was incorrectly transferred to *Poecilomorpha* based on a flawed definition of the genus. A thorough revision of the specimens utilized by these authors resulted in the transfer of taxa to other genera.

After this exercise, the need to carry out a more in-depth study of the species still included in *Poecilomorpha* became apparent; this had previously been noted by Rodríguez-Mirón *et al.* (2021), who recognized *Poecilomorpha* as a paraphyletic group. Nevertheless, *P. passerinii*, *P. minuta* and *P. cribricollis* were recognized in the same work as forming a monophyletic group.

After reviewing the main collections worldwide (Natural History Museum, London, U.K.; Museum of Central Africa, Tervuren, Belgium; Muséum national d´Histoire naturelle, Paris, France; National Museum of Natural History, Smithsonian Institution, Washington D.C., U.S.A; and American Museum of Natural History, New York, USA), only seven specimens of *P. passerinii*, and the holotypes of *P. cribricollis*, *P. minuta* and *P. pseudocribricollis* sp. nov. were found, indicating that *P. passerinii* and related species are rarely collected. Their rarity could be the result of low population densities due to intrinsic characteristics of the species, lack of collecting effort, difficulties in reaching certain microhabitats, or a combination of these factors. Their distribution is limited to Sierra Leone, the Democratic Republic of the Congo, Benin and Nigeria; the last two countries constitute new country records for *P. passerinii*.

Acknowledgments

I thank Susana Guzmán (IBUNAM, Mexico) for kindly providing all the facilities for the use of the Zeiss Axio Zoom V-16 equipment, and Daniel J. Curoe for edits to the manuscript and his valuable comments. Rob Douglas (OUMNH, Oxford, UK) is acknowledged for providing photographs of the type of *Poecilomorpha passerinii*, Zikhona Njeza (ISAM, Cape Town, South Africa) is acknowledged for providing photographs of the types of *P. divisa*, *P binotata* and *P. gravastella*. Lastly, Maxwell Barclay (BMNH, London, UK), Antoine Mantilleri (MNHN, Paris, France), Stéphane Hanot (RMCA, Tervuren, Belgium) and Bernd Jaeger (ZMB, Berlin, Germany) are thanked for their assistance, help, and facilities during the revision of specimens. This work was supported by project PAPIIT-UNAM IA205322 (Sistemática y evolución morfológica de Megalopodidae (Coleoptera: Chrysomeloidea).

References

An S.L. 2005. Classification of leaf beetles from Korea. Part V. Subfamily Megalopodinae (Coleoptera: Chrysomelidae). *Journal of Asia-Pacific Biodiversity* 8: 314–317. https://doi.org/10.1016/j.japb.2015.10.014

Bryant G.E. 1923. Notes on synonymy in the Phytophaga (Coleoptera). *Annals and Magazine of Natural History, 9th Series* 12: 130–147.

Chapuis F. 1874. *Histoire Naturelle des Insectes Genera des Coléoptères. Vol. 10: Famille des Phytophages*. Librairie encyclopédique de Roret, Paris.

Chûjô M. 1951. A taxonomic study on the Chrysomelidae (Insecta-Coleoptera) from Formosa, Part III, Subfamily Megalopodinae. *Technical Bulletin of the Faculty of Agriculture, Kagawa University* 3: 57–71.

Clavareau H. 1913. 6. Megalopinae. *In*: Junk W. & Schenkling S. (eds) *Coleopterorum Catalogus, Pars 53*: 7–19. Junk, Berlin.

Ehara S. 1954. Comparative anatomy of male genitalia in some cerambycids. *Journal of the Faculty of Sciences Hokkaido University Series VI. Zoology* 12: 61–115.

Erber D. & Medvedev L.N. 2002. Untersuchungen zur Taxonomie afrikanischer Megalopodinae mit Beschreibungen einer neuen Gattung und fünf neuer Arten (Coleoptera, Chrysomelidae). *Entomologica Basiliensia* 24: 97–121.

Gemminger M. & von Harold E. 1876. *Catalogus Coleopterum Hucusque Descriptorum Synonymicus et Systematicus. Chrysomelidae I, Acredit Index Generum Universalis.* Monachii, Paris / London.

Heyne A. & Taschenberg O. 1908. *Die exotischen Käfer in Wort und Bild*. J.F. Schreiber, Esslingen / München.

Hope F.W. 1841. *The Coleopterist's Manual, Part the Third, Containing Various Families, Genera, and Species of Beetles, Recorded by Linnaeus and Fabricius. Also, Descriptions of Newly Discovered and Unpublished Insects*. JC Bridgewater, South Molton Street and Bowdery and Kerby, Oxford Street, London.

Jacoby M. 1894a. Descriptions of new genera and species of phytophagous Coleoptera. *Novitates Zoologicae* 1 (2): 508–551. https://doi.org/10.5962/bhl.part.24565

Jacoby M. 1894b. Descriptions of some new genera and species of phytophagous Coleoptera, contained in the collection of the Brussels Museum and my own. *Annales de la Société entomologique de Belgique* 38: 184–197.

Jacoby M. 1895. Contributions to the knowledge of African phytophagous Coleoptera. Part I. *Transactions of the Royal Entomological Society of London* 43 (2): 159 –179. https://doi.org/10.1111/j.1365-2311.1895.tb01668.x

Jacoby M. & Clavareau H. 1905. Fascicule 33: Coleoptera Phytophaga, Fam. Megalopidae. *In*: Wytsman P.A. (ed.) *Genera Insectorum*: 1–20. V. Verteneuil & L. Desmet, Brussels.

Jolivet P. 1951. Coleoptera: Megalopodidae. *In*: de Witte G.F. (ed.) *Exploration du Parc National de l'Upemba, fascicule 4*: 13–14. Institut des Parcs Nationaux du Congo Belge, Brussels.

Lacordaire T. 1845. *Monographie des Coleopteres Subpentamères de la Famille des Phytophages. Tome 1*. Muquardt, Bruxelles. https://doi.org/10.5962/bhl.title.48433

Matsumura Y. & Suzuki K. 2008. Comparative morphology of internal reproductive systems in leaf beetles of the Donaciinae and Criocerinae (Coleoptera: Chrysomelidae) and its implication for the phylogeny. *Zootaxa* 1845 (1): 1–32. https://doi.org/10.11646/zootaxa.1845.1.1

Motschulsky V. 1866. D'un catalogue des insectes de l'ile de Ceylan. *Bulletin de la Société impériale des naturalistes de Moscou* 39 (2): 393–446.

Perroud B.P. 1853. Description de quelques Coléoptères nouveaux ou peu connus. *Annales de la Société Linnéenne de Lyon* 1: 389–528.

Pic M. 1908. Bemerkungen über *Poecilomorpha quadrimaculata* Reitter. *Wiener entomologische Zeitung* 27: 240. https://doi.org/10.5962/bhl.part.11633

Pic M. 1911. Mégalopides Africains nouveaux (Col. Phytophaga). *Bulletin de la Société entomologique de France* 16 (10): 213–214. https://doi.org/10.3406/bsef.1911.24912

Pic M. 1946. Observations et notes descriptives sur les Megalopides (Col. Phytophages). *Novitates entomologicae* 20: 149–152.

Pic M. 1951. Etude abrégée sur les Mégalopides du Congo. *Revue de Zoologie et de Botanique Africaines* 45 (2): 24–48.

Rodríguez-Mirón G.M. 2018. Checklist of the family Megalopodidae Latreille (Coleoptera: Chrysomeloidea); a synthesis of its diversity and distribution. *Zootaxa* 4434 (2): 265–302. https://doi.org/10.11646/zootaxa.4434.2.3

Rodríguez-Mirón G.M., Zaragoza-Caballero S. & López-Pérez S. 2017. Comparative morphology of the spermatheca in Megalopodidae (Coleoptera, Chrysomeloidea). *ZooKeys* 720: 47–64. https://doi.org/10.3897/zookeys.720.14088

Rodríguez-Mirón G.M., Zaragoza-Caballero S. & Morrone J.J. 2021. Phylogenetic analysis of the family Megalopodidae (Coleoptera: Chrysomeloidea): better taxon-sampling facilitates detection of new relationships and new taxa. *Cladistics* 37 (6): 677–716. https://doi.org/10.1111/cla.12466

Seeno T.N. & Wilcox J.A. 1982. Leaf beetle genera (Coleoptera, Chrysomelidae). *Entomography* 1: 1–221.

Staines C.L. 2002. Chrysomelidae (Coleoptera) types in the Hope Entomological Collections, Oxford. *Zootaxa* 121 (1): 1–28. https://doi.org/10.11646/zootaxa.121.1.1

Suzuki K. 1988. Comparative morphology of the internal reproductive system of Chrysomelidae (Coleoptera). *In*: Jolivet P., Petitpierre E. & Hsiao T.H. (eds) *Biology of Chrysomelidae*: 317–355. Kluwer Academic Publishers, Dorrecht / Boston / London. https://doi.org/10.1007/978-94-009-3105-3_19

Weise J. 1902. *Afrikanische Chrysomeliden*. *Archiv für Naturgeschichte* 68 (1): 119–174.

Westwood J.O. 1864. Descriptions of some new species of coleopterous insects belonging to the eupodous Phytophaga, natives of the old world and Australia. *Transactions of the Entomological Society of London* 3 (2): 271–280. https://doi.org/10.1111/j.1365-2311.1864.tb00106.x

Yu P.Y. & Liang H.B. 2002. A check-list of the Chinese Megalopodinae (Coleoptera: Chrysomelidae). *Oriental Insects* 36: 117–128. https://doi.org/10.1080/00305316.2002.10417329

Manuscript received: 12 June 2024
Manuscript accepted: 8 January 2025
Published on: 17 April 2025
Topic editor: Tony Robillard
Section editor: Max Barclay
Desk editor: Eva-Maria Levermann