

# REDESCRIPTION OF TWO SPECIES FROM *EROTYLUS TECTIFORMIS*-GROUP (COLEOPTERA, EROTYLIDAE, EROTYLINAE)

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**Abstract.** — *Erotylus tectiformis* Kuhnt and *E. mirabilis* Kuhnt are redescribed and lectotypes designated.



**Key words.** — Coleoptera, Erotylidae, Erotylinae, Neotropical Region, taxonomy.

*Erotylus mirabilis* Kuhnt (1908) and *Erotylus tectiformis* Kuhnt (1910) were described from Brazil. Mader (1938) transferred *Erotylus tectiformis* to the genus *Cypherotylus* Crotch, because of its body shape and general appearance. Alvarenga (1970, 1994) synonymized *Cypherotylus* under *Gibbifer* Voet, transferring *E. tectiformis* to *Gibbifer*.

Following my study of genus *Erotylus* I concluded that these species form a natural group inside of *Erotylus*, here called *tectiformis*-group.

## MATERIAL

Specimens from the following collections were examined:

- BMNH – The Natural History Museum, London, United Kingdom – Dr. Malcolm D. Kerley
- DEI – Deutsches Entomologisches Institut, Eberswalde, Germany – Dr. Lothar Zerche
- EMUS – Entomological Museum, Utah State University, Logan, USA – Dr. Wilford J. Hanson
- ERC – Dr. Edward G. Riley's Collection, College Station, USA
- MACN – Museo Argentino de Ciencias Naturales "Bernardino Rivadavia", Buenos Aires, Argentina – Dr. A. O. Bachmann
- MNHN – Muséum National d'Histoire naturelle, Paris, France – Dr. Nicole Berti
- MIZPAN – Muzeum i Instytut Zoologii PAN, Warszawa, Poland
- NYSM – Insect Collection, New York State Museum, Albany, USA – Dr. Tim L. McCabe
- PSC – Dr. Paul E. Skelley's Collection, Gainesville, Florida, USA
- ZMB – Museum für Naturkunde, Zentralinstitut der Humboldt-Universität zu Berlin, Berlin, Germany – Dr. Manfred Uhlig

ZMUA – Instituut voor Systematiek en Populatiebiologie, Zoölogisch Museum Entomologie, Universiteit van Amsterdam, Amsterdam, Netherlands – Dr. Ben Brugge

## ABBREVIATIONS

- pl/pw – pronotum length/width ratio;
- el/ew – elytra length/width ratio;
- el/eh – elytra length/high ratio.

## *EROTYLUS TECTIFORMIS*-GROUP

**Description.** Body (Figs 1–4, 37–43) elongate, strongly gibbous in the middle, black; each elytron with yellow stripes and a red humeral spot.

Head (Figs 5 and 6) small, without stridulatory files on the vertex. Anterior clypeal margin deeply emarginate; frontoclypeal impression well developed; with distinct impression near inner edges of eye. Eyes oval, weakly prominent laterally. Antenna (Figs 19 and 47) slender and short, extending a little behind posterior margin of pronotum; club 3-segmented, narrow and elongate. Labrum (Fig. 20) almost square, punctured and clothed with setae on anterior and lateral borders. Mandible (Figs 21 and 22) bidentate apically, strongly curved inward; prostheca clothed with pubescence; with a brush of hairs between tooth and prostheca. Lacinia (Fig. 24) pubescent at the apex, and with pair of stout projections at the tip. Galea (Fig. 24) densely pubescent. Maxillary palp (Figs 24 and 46) 4-segmented, with semicircular terminal segment. Mentum (Fig. 23) triangular, sparsely setose. Labial palp (Figs 23 and 48) 3-segmented; last segment semicircular.

Pronotum (Figs 7 and 44) widest at base; sides weakly rounded. Pronotal disk usually with deep impressions and narrow, impunctate area at middle (sometimes this area is

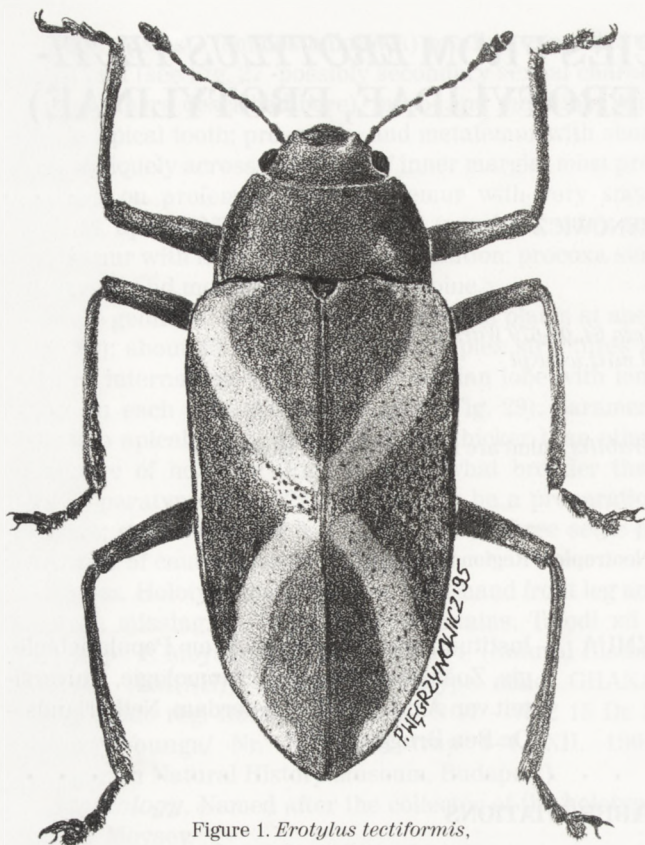


Figure 1. *Erotylus tectiformis*, dorsal view.

almost invisible). Anterior and lateral margins distinctly bordered; rarely posterior margin bordered near angles. Anterior and posterior angles with glandular openings (Figs 8 and 45).

Prosternum (Fig. 9) with two glandular openings. Meso- and metasternum as in Fig. 10.

Scutellum (Figs 7 and 44) cordiform, with lateral and posterior impressions.

Elytra (Figs 1–7, 37–43) almost parallel sided, narrowing apically; strongly gibbous, with characteristic hump. Each elytron with red humeral spot (yellow in faded or tenereal specimens), and two or six yellow, narrow stripes running from top to edge of elytron. Punctuation of elytra irregular, deep and coarse; basal part of elytron with irregular elongated punctures joined by irregular grooves. Epipleuron as in Fig. 12.

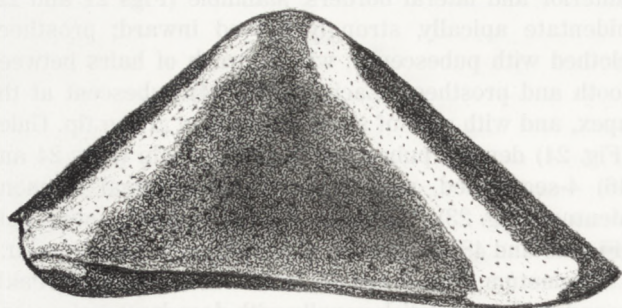


Figure 2. *Erotylus tectiformis*, elytron, lateral view.

Wing as in Fig. 11.

Legs (Figs 13–15) long, stout. Tibiae strongly curved, as long as femora, each with three strong carinae along outer surface, numerous, small teeth on inner surface, and pair short tibial spurs. Tarsi (Figs 16–18) broad. Claws curved, stout.

Male with pilose patch on the middle of first ventrite; last ventrite truncate posteriorly (Figs 25 and 49). Female without brush of hairs and with the posterior edge of last ventrite rounded (Figs 26 and 50).

Median lobe (Figs 31 and 55) narrow and only slightly curved. Median strut long, almost two times as long as median lobe. Flagellum slim (hair-like), with small basal piece.

**Note.** The main differences between *tectiformis*-group and all remaining groups of *Erotylus* are: general body form, elytra strongly gibbous in the middle of the *tectiformis*-group; surface of the elytra bears irregular coarse and deep punctuation in *tectiformis*-group, while the elytral punctuation in remaining groups of *Erotylus* are much more regular. The *tectiformis*-group also differs from all remaining groups of *Erotylus* because of unusual shape of flagellum in the male genitalia.

**Distribution.** Brazil.

## Key to the species

1. Two yellow stripes on each elytron . . . . . *E. tectiformis*
- Six yellow stripes on each elytron . . . . . *E. mirabilis*

### *Erotylus tectiformis* Kuhnt

*Erotylus tectiformis* Kuhnt, 1910: 268. Lectotype, female, Brazil, ZMB, here designated. Kuhnt 1911: 25; Blackwelder 1945: 461; Guérin 1948: 16.

*Cypherotylus tectiformis*: Mader 1938: 17.

*Gibbifer tectiformis*: Alvarenga 1994: 105.

**Diagnosis.** This species is similar to *E. mirabilis*, and differs in having two yellow stripes on each elytron.

**Description.** Length 18.7–23.7 mm, width 8.5–10.7 mm. Body (Figs 1–4) black; elytron black with two yellow stripes and a red humeral spot.

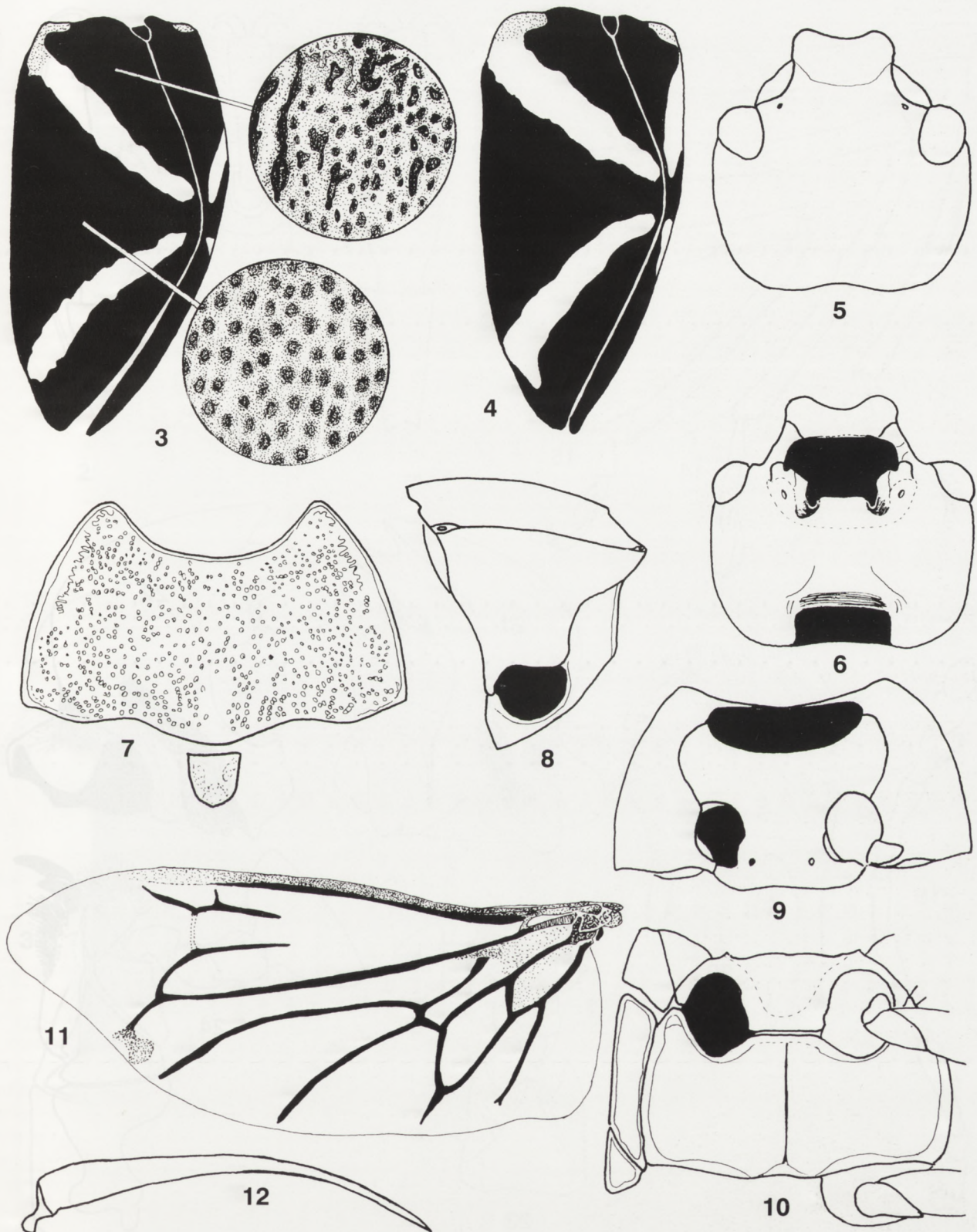
Head (Figs 5 and 6) punctuation distinct, punctures 2–3 diameter apart, interspaces smooth. Clypeus irregularly, deeply punctate; frontoclypeal impression almost straight in the middle. Antenna slender and short; club narrow and elongate, as in Fig. 19. Mouthparts as in Figs 20–24.

Pronotum (Figs 7 and 8) transverse (pl/pw = 0.61–0.67; average = 0.64), widest at base, sides weakly converging anteriorly and less convex than in *E. mirabilis*. Disk with short and narrow, sometimes obsolete, impunctate area at middle. Surface coarsely punctate, punctures 2–3 times larger than those on head.

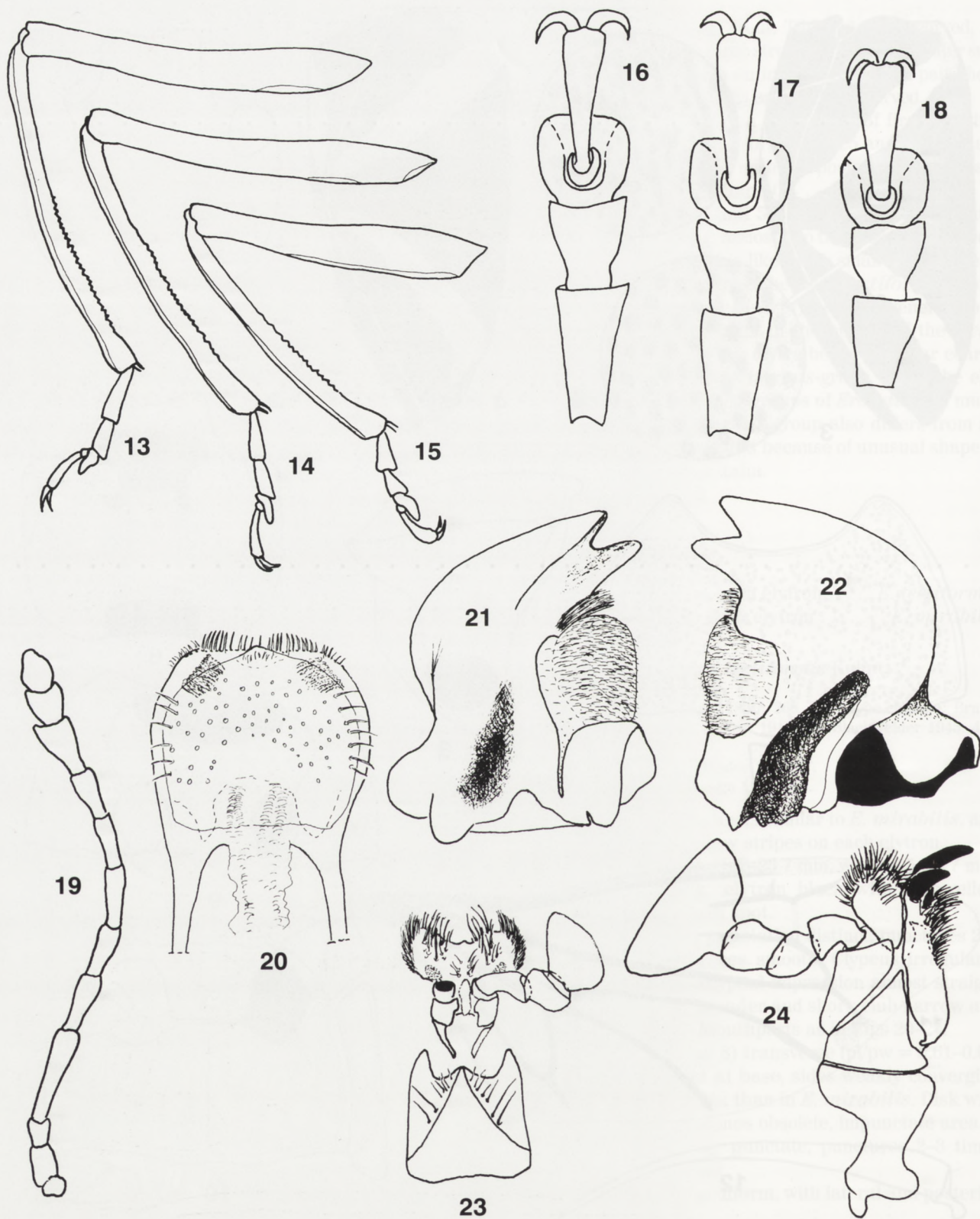
Scutellum (Fig. 7) cordiform, with lateral and posterior impressions.

Prosternum as in Fig. 9. Meso- and metasternum as in Fig. 10.

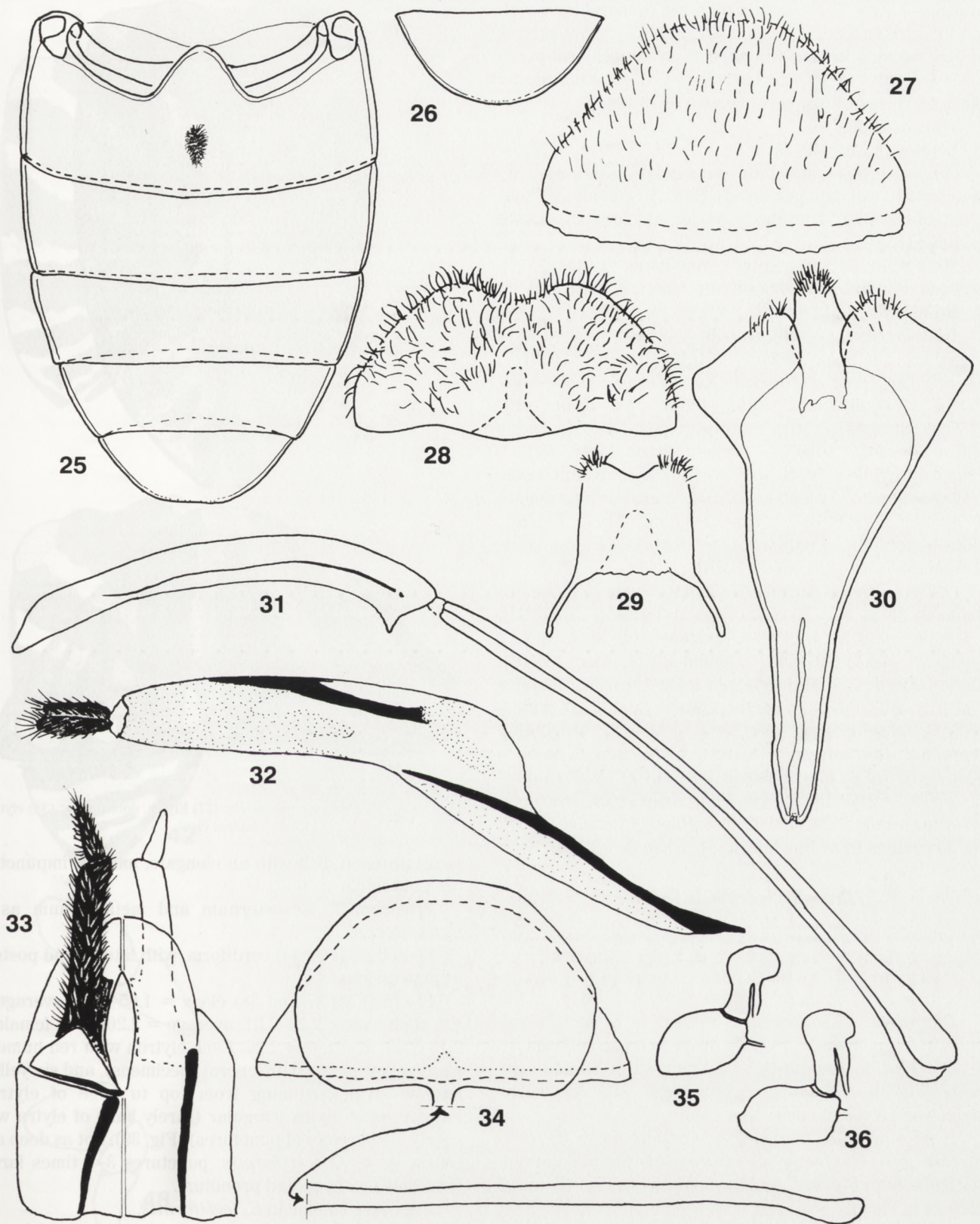
Elytra (Figs 1–4) el/ew = 1.61–1.79; average = 1.70; el/eh male = 2.00–2.07, average = 2.05; female = 2.15–2.34,



Figures 3–12. *Erotylus tectiformis*. (3–4) elytra, laterodorsal view, in circles – details of punctation; (5) head, dorsal; (6) head, ventral; (7) pronotum and scutellum, dorsal; (8) pronotum, lateral; (9) prosternum; (10) meso- and metasternum; (11) wing; (12) epipleuron.



Figures 13–24. *Erotylus tectifomis*. (13) mid leg; (14) hind leg; (15) fore leg; (16) mid tarsus; (17) hind tarsus; (18) fore tarsus; (19) antenna; (20) labrum, dorsal; (21) mandible, ventral; (22) mandible, dorsal; (23) labium and mentum, ventral; (24) maxilla, ventral.



Figures 25–36. *Erotylus tectiformis*. (25) abdomen, male; (26) last sternite of female; (27) 8th sternite; (28) 8th tergite; (29) 9th sternite; (30) 9th tergite with proctiger; (31) median lobe, lateral; (32) tegmen, lateral; (33) ovipositor, dorsal – left, ventral – right; (34) 9th sternite and tergite, dorsal; (35–36) spermatheca.

average = 2.26. Each elytron with red humeral spot (yellow in faded or teneral specimens), and two yellow, narrow stripes running from top to edge of elytron. Elytral punctures irregular, deep and coarse, 6–7 times as large as those on vertex. Basal part of elytra as in Fig. 3.

Wing as in Fig. 11.

Legs as in Figs 13–18.

Male with pilose patch on the middle of first ventrite; last ventrite truncate posteriorly (Fig. 25). Female without brush of hairs and with the posterior edge of last ventrite rounded (Fig. 25).

Male genitalia and genital segments as in Figs 27–32. Ovipositor as in Fig. 33; spermatheca as in Figs 35 and 36.

**Bionomics.** Unknown.

**Distribution** (Fig. 60). Brazil.

**Types.** Lectotype (female): “Matto Grosso”, “103976”, “Type”, “*Erotylus tectiformis* Kuhnt Type”, “Zool. Mus. Berlin”, “Lectotypus *Erotylus tectiformis* Kuhnt des. P. Węgrzynowicz” [ZMB]. Paralectotypes: “Rio Machados Matto Grosso”, “103975”, “Type”, “Zool. Mus. Berlin”, “Paralectotypus *Erotylus tectiformis* Kuhnt des. P. Węgrzynowicz” [1 female – ZMB]; “Matto Grosso Zobrys & Wolter”, “103975”, “Type”, “Zool. Mus. Berlin”, “Paralectotypus *Erotylus tectiformis* Kuhnt des. P. Węgrzynowicz” [2 males – ZMB].

**Other material examined.** 20 specimens (5 males, 15 females). No locality label [1 male, on the slide – MiIZPAN, 1 female – MACN]; BRAZIL. Amazone, coll. A. J. Buis [2 females – ZMA, MiIZPAN]; Lugaba (?) [1 male – ZMB]. Matto Grosso: 1886, P. Germain [1 male – MNHN, 7 females – MNHN, MiIZPAN]. Amazonas: Manés, IX. 1939 [1 male – NYSM]; Manicore [2 females – MNHN, MiIZPAN]. Rondônia: Rio Jaeundá, IX.1963, E. M. Bon [1 male – ZMUA]; 62 km SE of Ariquemes, 7–18.XI.1995, W. J. Hanson [1 female – EMUS]; 62 km S of Ariquemes, Fazenda Rancho Grande 8–24.VI.1992, T. J. Riley [1 female – ERC]; Rio Machados (now Rio Jiparaná) [1 female – ZMB].

### *Erotylus mirabilis* Kuhnt

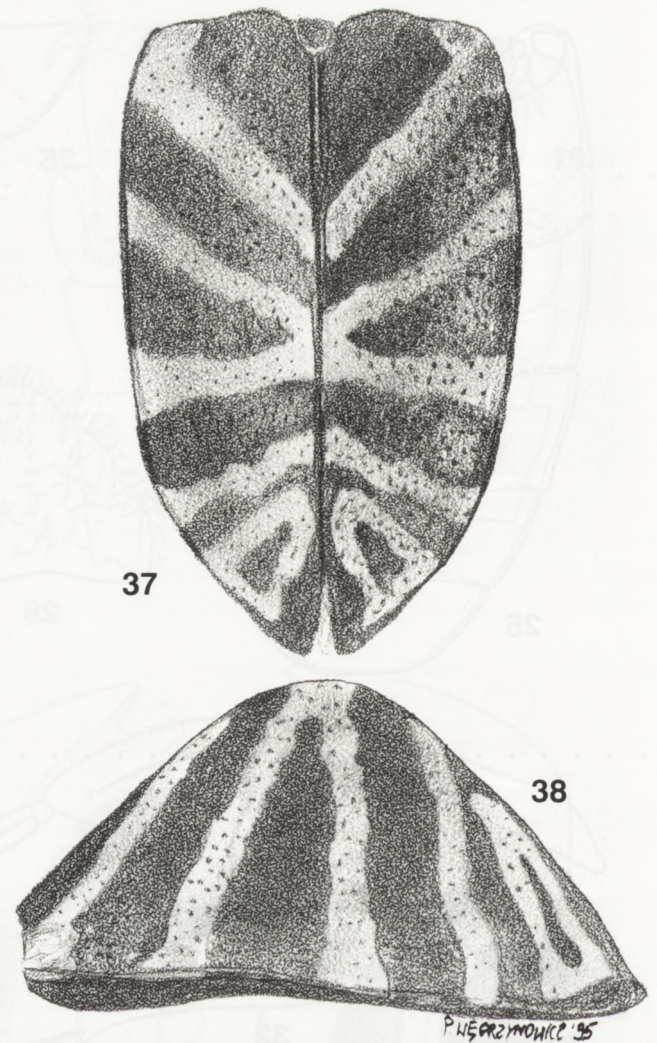
*Erotylus mirabilis* Kuhnt, 1908:72. Lectotype male, Brazil, ZMB, here designated. Kuhnt 1909: 34, pl. 2, fig. 9; Kuhnt 1911: 24; Blackwelder 1945: 461; Guérin 1948: 15; Alvarenga 1994: 93.

**Diagnosis.** This species is similar to *E. tectiformis* and differs in having six yellow stripes on each elytron.

**Description.** Length 19.5–23.4 mm, width 9.3–11.0 mm. Body (Fig. 37–43) black; elytron black with six yellow stripes and a red humeral spot.

Head similar *E. tectiformis*. Clypeus as in *E. tectiformis*, but frontoclypeal impression double curved. Antenna as in Fig. 47. Maxillary palp as in Fig. 46; labial palp as in Fig. 48.

Pronotum (Figs 44 and 45) (pl/pw = 0.59–0.69; average = 0.63) more convex than in *E. tectiformis*; disk with deep impressions on the anterior angles and an impression near the posterior margin. Punctuation similar to that on the



Figures 37–38. *Erotylus mirabilis*. (37) Elytra, dorsal view; (38) elytron, lateral view.

head; pronotal disk with an elongate, narrow, impunctate area at middle.

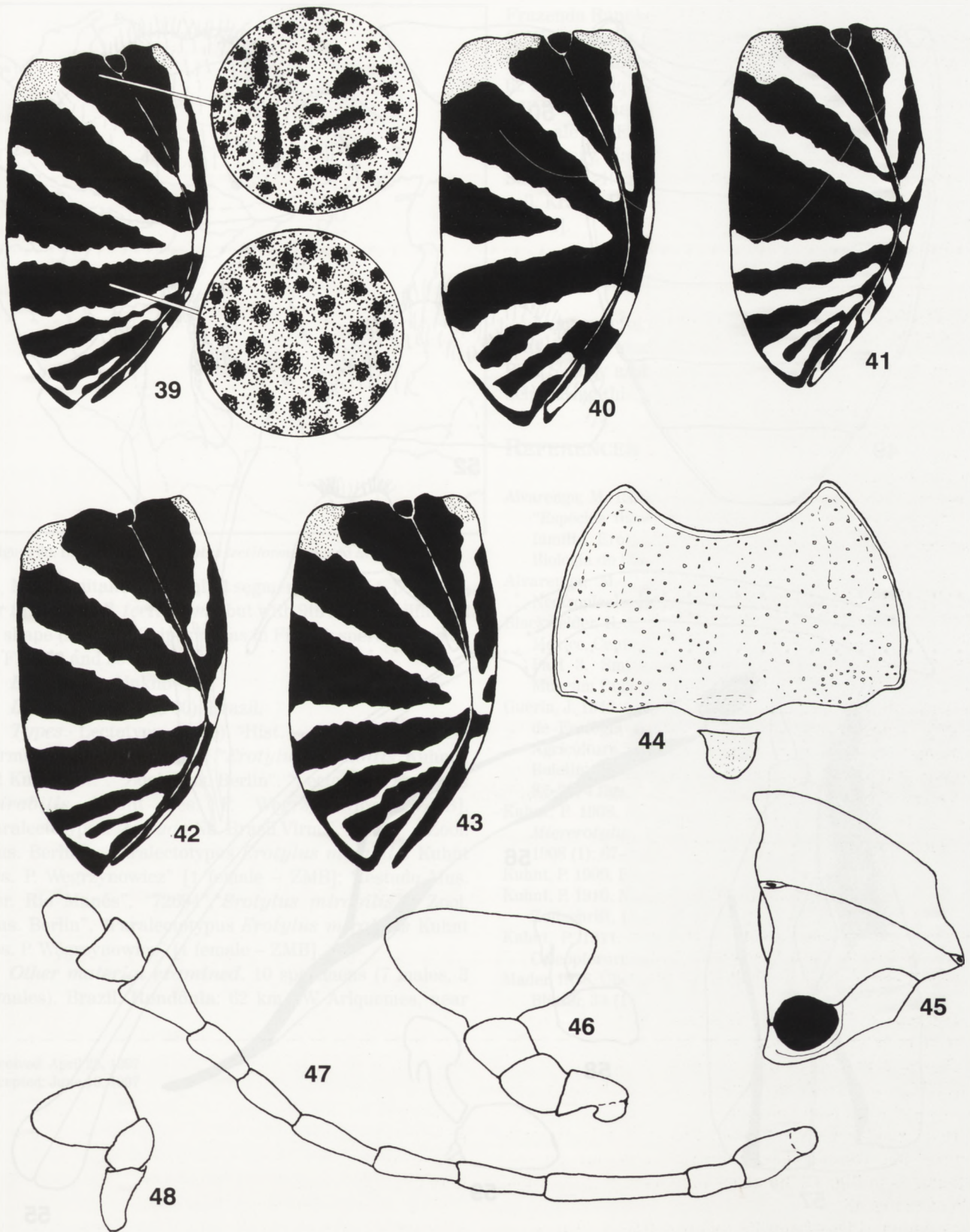
Prosternum, mesosternum and metasternum as in *E. tectiformis*.

Scutellum (Fig. 44) cordiform, with lateral and posterior impressions.

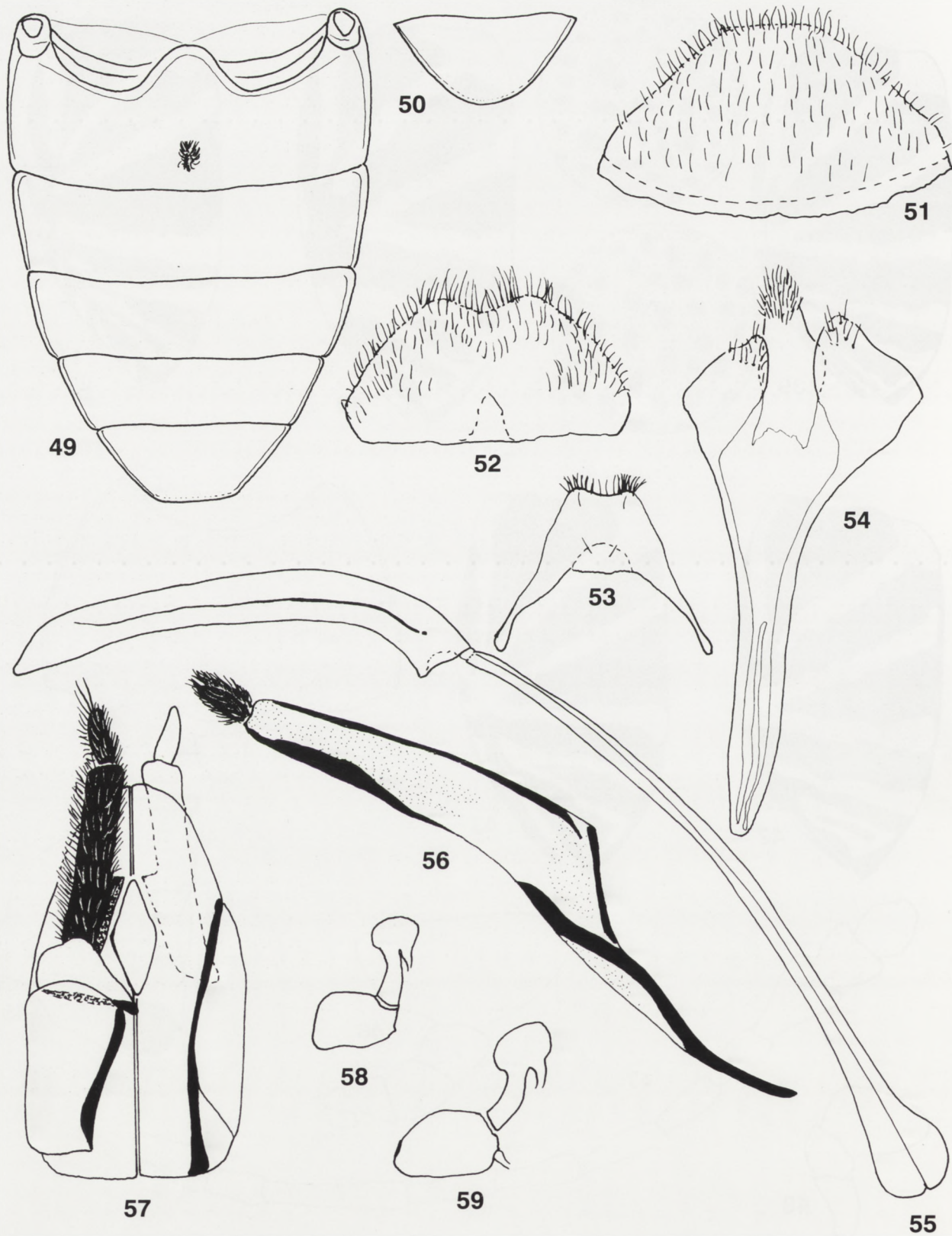
Elytra (Figs 37 and 38) el/ew = 1.65–1.69, average = 1.6; el/eh male = 2.23–2.31, average = 2.26; el/eh female = 2.16–2.40, average = 2.26. Each elytron with red humeral spot (yellow in faded or teneral specimens), and six yellow, narrow stripes running from top to edge of elytron. Punctuation of elytra irregular (rarely base of elytra with poorly visible rows of punctures) (Fig. 39), not as deep and coarse as in *E. tectiformis*; punctures 3–4 times larger than those on head and pronotum.

Legs very similar to *E. tectiformis*.

Ventrites (Fig. 49) similar to *E. tectiformis*. Male with pilose patch on the middle of first ventrite; last ventrite truncate posteriorly (Fig. 49). Female without pilose patch and with the posterior edge of last ventrite rounded (Fig. 50).



Figures 39–48. *Erotylus mirabilis*. (39–43) elytra, laterodorsal view, in circles – details of punctation; (44) pronotum and scutellum, dorsal; (45) pronotum, lateral; (46) maxillary palp; (47) antenna; (48) labial palp.



Figures 49–59. *Erotylus mirabilis*. (49) abdomen, male; (50) last sternite of female; (51) 8th sternite; (52) 8th tergite; (53) 9th sternite; (54) 9th tergite with proctiger; (55) median lobe, lateral; (56) tegmen, lateral; (57) ovipositor, dorsal – left, ventral – right; (58–59) spermatheca.



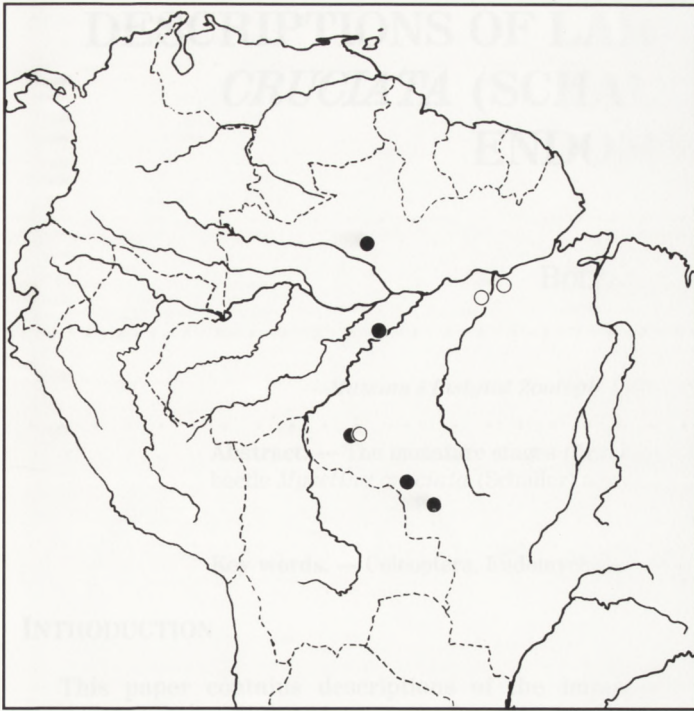


Figure 60. Distribution of *Erotylus tectiformis* ● and *E. mirabilis* ○.

Male genitalia and genital segments (Figs 51–56); similar to these of *E. tectiformis* but with 9th sternite different in shape (Fig. 53). Ovipositor as in Fig. 57; spermatheca as in Figs 58 and 59.

**Bionomics.** Unknown

**Distribution** (Fig. 60). Brazil.

**Types.** Lectotype (male) "Hist. – Coll. 21659 Brasil Virmnd", "21659", "Type", "*Erotylus mirabilis* Kuhnt", "P. Kuhnt det.", "Zool. Mus. Berlin", "Lectotypus *Erotylus mirabilis* Kuhnt des. P. Węgrzynowicz" [ZMB]. Paralectotypes: "testudo Nb. Brasil Virm.", "21659", "Zool. Mus. Berlin", "Paralectotypus *Erotylus mirabilis* Kuhnt des. P. Węgrzynowicz" [1 female – ZMB]; "testudo Mus. Ber. Rio Manés", "72694", "*Erotylus mirabilis*", "Zool. Mus. Berlin", "Paralectotypus *Erotylus mirabilis* Kuhnt des. P. Węgrzynowicz" [1 female – ZMB].

**Other material examined.** 10 specimens (7 males, 3 females). Brazil. **Rondônia:** 62 km SW Ariquemes, near

Fazenda Rancho Grande, 5–17. X. 1993, J. E. Eger, L. B. & C. W. O'Brien [1 female – PSC]; 62 km SW Ariquemes, near Fazenda Rancho Grande, 8–20. XI. 1994 [1 male – PSC]; 62 km SE Ariquemes, 7–18. XI. 1995, W. J. Hanson [1 male – EMUS]. **Amazonas:** no further date [2 males – MiZPAN, 1 female – DEI]; Marés, 1880, Hahnel [1 male – MNHN]; Massanary, Hahnel [1 male – MNHN]. **Pará:** Taperinha – Santarem, 1920, A. H. Fassel [1 male – MNHN]; Itaituba, coll. Kraatz [1 female – DEI]. No locality label [1 female – BMNH].

#### ACKNOWLEDGEMENTS

I am grateful to all the curators who made the material available for studies. I also thank Drs. Adam S. Ślipiński, Paul Skelley and Joseph McHugh for their comments and help during this project.

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Received: April 25, 1997

Accepted: June 10, 1997

Corresponding Editor: D. Iwan

Issue Editor: D. Iwan