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Phylogeny of *Pachylis* Lepeletier & Serville, 1825 (Hemiptera, Coreidae, Coreinae) with *Thasus* Stål, 1865 as a new synonym, and the redescription of *Pachylis laticornis* (Fabricius, 1798)

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In the morphological identification key for the species of *Pachylis* Le Peletier & Serville, 1825 (Costa & Campos 2022: 537), an error, unfortunately, escaped the various revisions of the manuscript. The key incorrectly ends in step 9, though it should go to step 14, resulting in the impossibility of identifying seven species. It was necessary to publish this corrigendum so that the users of the identification key can identify all the 15 species now classified in *Pachylis*. The key is reproduced in full below, with its corrected version from step 10 onwards.

Dans la clé d'identification morphologique des espèces de *Pachylis* Le Peletier & Serville, 1825 (Costa & Campos 2022: 537), une erreur a malheureusement échappé aux différentes révisions du manuscrit. La clé se termine de manière incorrecte à l'étape 9, alors qu'elle devrait aller à l'étape 14, ce qui entraîne l'impossibilité d'identifier sept espèces. Il était nécessaire de publier ce corrigendum afin que les utilisateurs de la clé d'identification puissent identifier l'ensemble des 15 espèces désormais classées dans *Pachylis*. La clé est reproduite intégralement ci-dessous, avec sa version corrigée à partir de l'étape 10.

KEY TO THE SPECIES OF *PACHYLIS* LE PELETIER & SERVILLE, 1825

The present key is based on Schaefer & Packauskas (1997), Brailovsky & Guerrero (2014), and Brailovsky *et al.* (1994).

1. Humeral angles obtuse but with a small spine (if spine absent, angle obtuse) (Fig. 17A in Costa & Campos [2022]: 523); posterior margin of pronotum with shallow median depression (Fig. 17A in Costa & Campos [2022]: 523). Ventrally expanded metatibiae (Fig. 18A in Costa & Campos [2022]: 524) 2
 - Humeral angles sharp, acuminate, sometimes with a spine (if spine removed, angle remains acuminate) (Fig. 17B in Costa & Campos [2022]: 523); posterior margin of pronotum straight (Fig. 17B in Costa & Campos [2022]: 523). Expanded dorsal and ventral metatibiae (Fig. 18B in Costa & Campos [2022]: 524) 8
2. Antennomeres III black, reduced expansion (less than segment width) (Fig. 18C in Costa & Campos [2022]: 524) 3
 - Antennomeres III bicolor, lighter on basal third or median portion, of red to yellow tones, and the rest black; well-marked expansion (equals or twice the segment width) (Fig. 18D in Costa & Campos [2022]: 524) ... 5
3. Pronotal disc with two or three dark orange or reddish longitudinal bands (Fig. 17A in Costa & Campos [2022]: 523). Reddish brown scutellum with yellowish lateral margins, apex, and longitudinal band (Fig. 17A in Costa & Campos [2022]: 523). Posterior margin of abdominal sternite VII without a median longitudinal fissure (Fig. 17F in Costa & Campos [2022]: 523) *Pachylis pharaonis* (Herbst, 1784)
 - Pronotal disc light brown and without dark orange or reddish longitudinal bands (Fig. 17C in Costa & Campos [2022]: 523). Dark brown scutellum with lateral margins and apex dark orange, without a light longitudinal band (Fig. 17C in Costa & Campos [2022]: 523). Posterior margin of abdominal sternite VII with a median longitudinal fissure (Fig. 17G in Costa & Campos [2022]: 523) 4
4. Pronotum width greater than 13.20mm (male) and 11.20mm (female). Connexival segments III-VII dark brown (Fig. 19A in Costa & Campos [2022]: 526); posterior margin of connexival segments IV-VI with a small, wider than long spine (Fig. 19A in Costa & Campos [2022]: 526), and male VII without spine *Pachylis bipunctatus* (Thunberg, 1825)
 - Pronotum width is less than 11.60 mm (male) and 10.90mm (female). Connexival segments III-VII reddish brown with a yellowish macula in the middle third (Fig. 19B in Costa & Campos [2022]: 526); posterior margin of connexival segments IV-VI with a large, longer than wide spine (Fig. 19B in Costa & Campos [2022]: 526), and male VII with spine *Pachylis tenuicornis* Dallas, 1852.
5. Antennomere I light orange, black on base and apex; antennomere II light orange, black on apex (Fig. 18D in Costa & Campos [2022]: 524) *Pachylis peramplus* Brailovsky & Guerrero, 2014.
 - Antennomeres I and II black or reddish brown (Fig. 18E in Costa & Campos [2022]: 524) 6
6. Pronotal humeral angles acute and elevated, anterolateral margins yellowish or dark orange yellow (Fig. 17D in Costa & Campos [2022]: 523). Lateral margins of the scutellum yellow (Fig. 18B in Costa & Campos [2022]: 524). Black femora, tibiae, and trochanters. Posterior margin of abdominal sternite VII without a median longitudinal fissure *Pachylis argentinus* Berg, 1879
 - Pronotal humeral angles obtuse, reddish brown to black anterolateral margins (Fig. 17E in Costa & Campos [2022]: 523). Lateral margins of the scutellum reddish brown or black, not contrasting with the disc (Fig. 17E in Costa & Campos [2022]: 523). Femora, tibiae, and trochanters are never entirely black. Posterior margin of abdominal sternite VII with a median longitudinal fissure 7
7. Clavus and corium veins yellow, contrasting with the reddish brown surface of the hemelytra (Fig. 19C in Costa & Campos [2022]: 526). Posterior margin of pronotum markedly yellow (Fig. 17E in Costa & Campos [2022]: 523) *Pachylis nervosus* Dallas, 1852
 - Clavus and corium veins not contrasting with the rest of the hemelytra (Fig. 19D in Costa & Campos [2022]: 526). Posterior margin of the pronotum not contrasting with the disc *Pachylis laticornis* (Fabricius, 1798)
8. Antennomeres III dark, expansion marrow and elliptical (Fig. 18K-M in Costa & Campos [2022]: 524) ... 9
 - Antennomeres III dark brown (*Pachylis carchinus* n. comb.) or bicolored, expansion broad (Fig. 18F-J in Costa & Campos [2022]: 524) 11
9. Connexival segments IV-VII dark brown, with yellow spots (Fig. 19E in Costa & Campos [2022]: 526). Clavus and corium veins pale, contrasting with the hemelytral surface (Fig. 19E in Costa & Campos [2022]: 526) .. *Pachylis luteolus* (Brailovsky & Barrera in Brailovsky *et al.*, 1994) n. comb.
 - Connexival segments IV-VII dark brown to orange, without yellow spots (Fig. 19F in Costa & Campos [2022]: 526). Clavus and corium veins not contrasting with the hemelytral surface (Fig. 19F in Costa & Campos [2022]: 526) 10

10. Antennomeres III expansion no more than twice the width of antennomeres IV (Fig. 18K in Costa & Campos [2022]: 524). Humeral angles sharp. Spine of fourth connexival segment barely visible. Female's connexival segment VII bearing or not a small spine *Pachylis heteropus* stat. rev.
 — Antennomeres III expansion at least three times the width of antennomeres IV (Fig. 18M in Costa & Campos [2022]: 524). Humeral angles obtuse. Spine of fourth connexival segment small, clearly visible. Female's connexival segment VII with a small spine *Pachylis odonnellae* n. comb.
11. Antennomeres IV orange red or brownish orange red, subequal in length to antennomeres III (Fig. 18J in Costa & Campos [2022]: 524) *Pachylis neocalifornicus* n. comb.
 — Antennomeres IV dark brown or sharply bicolored, longer than antennomeres III (Fig. 18F-I in Costa & Campos [2022]: 524) 12
12. Antennomeres II reddish orange basally and dark brown distally (Fig. 18I in Costa & Campos [2022]: 524) *Pachylis acutangulus* stat. rev.
 — Antennomeres II dark brown (Fig. 19F-H in Costa & Campos [2022]: 526) 13
13. Antennomeres IV reddish orange basally and dark brown distally (Fig. 18H in Costa & Campos [2022]: 524) *Pachylis rutilus* n. comb.
 — Antennomeres IV dark brown (Fig. 18F, G in Costa & Campos [2022]: 524) 14
14. Antennomeres III unicolor (Fig. 18G in Costa & Campos [2022]: 524) *Pachylis carchinus* n. comb.
 — Antennomeres III reddish orange basally and dark brown distally (Fig. 18F in Costa & Campos [2022]: 524) *Pachylis gigas* stat. rev.

REFERENCES

- BERG C. 1879. — *Hemiptera Argentina enumeravit speciesque novas*. X typographiae P. E. Coni, Bonariae, 316 p. <https://doi.org/10.5962/bhl.title.36493>
- BRAILOVSKY H. & GUERRERO I. 2014. — Revisión del género *Pachylis* con descripción de dos especies nuevas, sinonimias y datos de distribución (Hemiptera: Heteroptera: Coreidae: Nematopodini). *Revista Mexicana de Biodiversidad* 85 (2): 363-382. <https://doi.org/10.7550/rmb.41466>
- BRAILOVSKY H., SCHAEFER C. W., BARRERA E. & PACKAUSKAS R. 1994. — A revision of the genus *Thasus* (Hemiptera: Coreidae: Coreinae: Nematopodini). *Journal of the New York Entomological Society* 102: 318-343.
- BURMEISTER H. 1835. — *Handbuch der Entomologie. Zweiter Band. Besondere Entomologie. Ordnung. Rhynchota*, Berlin, 400 p. <https://doi.org/10.5962/bhl.title.35274>
- COSTA, W. S. & CAMPOS, L. A. 2022. — Phylogeny of *Pachylis* Lepelletier & Serville, 1825 (Hemiptera, Coreidae, Coreinae) with *Thasus* Stål, 1865 as a new synonym, and the redescription of *Pachylis laticornis* (Fabricius, 1798). *Zoosystema* 44 (21): 503-547. <https://doi.org/10.5252/zoosystema2022v44a21>. <http://zoosystema.com/44/21>
- DALLAS W. S. 1852. — *List of the specimens of Hemipterous Insects in the Collection of the British Museum. Catalog of Hemiptera*. Part 2. Taylor and Francis, London, 638 p. <https://doi.org/10.5962/bhl.title.20373>
- FABRICIUS J. C. 1798. — *Classis XII: Ryngota. Supplementum Entomologiae Systematicae*. Christ. Gottl. Proft, Copenhagen, 552 p. <https://doi.org/10.5962/bhl.title.122153>
- HERBST J. F. W. 1784. — Kurze Einleitung zur Kenntniss der Insekten, für Ungeübte und Anfänger, in BOROWSKI (ed) *Gemeinnützige Naturgeschichte des Thierreichs*, Berlin and Stralsund, 278 p.
- LATREILLE P. A. 1811. — Insectes de l'Amérique Equinoxiale, recueillis pendant la voyage de MM, in HUMBOLDT A. & BONPLAND A. (ed.). *Recueil d'Observations de Zoologie et d'anatomie comparée; Faites dans l'océan Atlantique, dans l'intérieur du nouveau continent et dans la mer du Sud, pendant le années 1799, 1800, 1801, 1802, et 1803*. Gallica Bibliothèque Numérique, Paris, 416 p.
- LE PELETIER A. L. M. & SERVILLE J. G. A. 1825. — Hemiptera Heteroptera, in OLIVIER G. A. (ed). *Encyclopédie méthodique*. Agasse, Paris, 833 p.
- SCHAEFER C. W. & PACKAUSKAS R. 1997. — Notes on the genus *Thasus* (Hemiptera: Coreidae). *Journal of the New York Entomological Society* 105: 206-214.
- STÅL C. 1858[1859]. — Hemipterologiska bidrag. *Ofversigt af Kongliga Vetenskaps-Akademiens Forhandlingar* 15: 433-454.
- THUNBERG C. P. 1825. — *Insectorum hemelytrorum tria genera illustrata*. Palmblad et c., Upsala, 10 p. <https://doi.org/10.5962/bhl.title.8189>