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Systematic Descriptions: Superfamily
Trichodactyloidea

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PART R, REVISED, VOLUME 1, CHAPTER 8T13: SYSTEMATIC DESCRIPTIONS: SUPERFAMILY TRICHODACTYLOIDEA

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Superfamily TRICHODACTYLOIDEA H. Milne Edwards, 1853

[*nom. transl.* NG, GUINOT, & DAVIE, 2008, ex Trichodactylacea
H. MILNE EDWARDS, 1853a, p. 213]

As for family. *Eocene–Holocene*.

Family TRICHODACTYLIDAE H. Milne Edwards, 1853

[*nom. transl.* SMITH, 1870, p. 152, ex Trichodactylacea
H. MILNE EDWARDS, 1853a, p. 213]

Carapace rectangular to ovate, usually wider than long, regions very weakly defined; with or without postgastric pits; front usually entire; anterolateral margin convex, sometimes with one spine; sternum ovate, sternal sutures 4/5 through 7/8 interrupted; male pleonal somites free, somites narrow. [Emended from DAVIE, GUINOT, & NG, 2015.] *Eocene–Holocene*: freshwater, Central and South America.

Trichodactylidae indeterminate. Reported in KLAUS and others, 2017. *Eocene–Miocene*: Peru. *Miocene*: Brazil.

Subfamily DILOCARCININAE Pretzmann, 1978

[Dilocarcininae PRETZMANN, 1978, p. 170] [=Holthuisiini PRETZMANN, 1978, p. 170; =Valdiviini PRETZMANN, 1978, p. 170]

Carapace rectangular to ovate, postgastric pits present; sternum ovate, comparatively narrow, sternal sutures 4/5, 5/6, and 6/7 broadly interrupted; penial groove in males totally open; male gonopod 1 variable; male pleonal somites usually exhibiting some

degree of fusion. [Emended from MAGALHÃES & TÜRKAY, 1996.] *Miocene–Holocene*.

Dilocarcinus H. MILNE EDWARDS, 1853a, p. 215 [**D. spinifer*; SD PRETZMANN, 1968, p. 75; =*Cancer septemdentatus* HERBST, 1783 in 1782–1804, p. 155]. Carapace spherical, with seven or more spines; pleonal somites 3–6 fused; dactyls wide, with setae. [Emended from PRETZMANN, 1968.] *Holocene*: South America.—FIG. 1,1a–b. *Dilocarcinus pagei* STIMPSON, 1861, USNM 244124, Holocene, Paraguay; dorsal (a) and ventral (b) views; scale bars, 1 cm (new).

Sylviocarcinus H. MILNE EDWARDS, 1853a, p. 215 [**S. devillei*; M; =*S. peruvianus* A. MILNE-EDWARDS, 1869, p. 174; =*Dilocarcinus spinifrons* KINGSLEY, 1881, p. 35; =*D. margaritifrons* ORTMANN, 1893, p. 492, pl. 17,11; =*S. gigas* SMALLEY & RODRÍGUEZ, 1972, p. 48, fig. 6,7,21,22] [=*Holthuisia* PRETZMANN, 1968, p. 74 (type, *Dilocarcinus pictus* H. MILNE EDWARDS, 1853a, p. 216; OD)]. Carapace square to rounded, about as long as wide, regions poorly defined except branchial regions which are inflated; front straight or broadly bilobed, serrate; orbits shallow; three to four anterolateral spines excluding outer-orbital spine; posterolateral margin convex, rounding into posterior margin; abdominal somites 3–5 or 3–6 fused; male gonopod 1 with or without subdistal lobe, with subdistal spines arranged into parallel rows. [Emended from MAGALHÃES & TÜRKAY, 1996.] *Miocene–Holocene*. *Miocene*: Colombia. *Holocene*: eastern South America, Mexico.—FIG. 1,2a–b. **S. devillei*, USNM 231573, Holocene, Peru, 2a, dorsal (a) and ventral (b) views; scale bars, 1 cm (new).

Subfamily TRICHODACTYLINAE H. Milne Edwards, 1853

[*nom. transl.* ORTMANN, 1893, p. 487, ex Trichodactylacea H. MILNE EDWARDS, 1853a, p. 213]

Carapace rectangular to ovate, lacking postgastric pits; sternum oval, wide, sternal sutures 4/5, 5/6, and 7/8 interrupted by

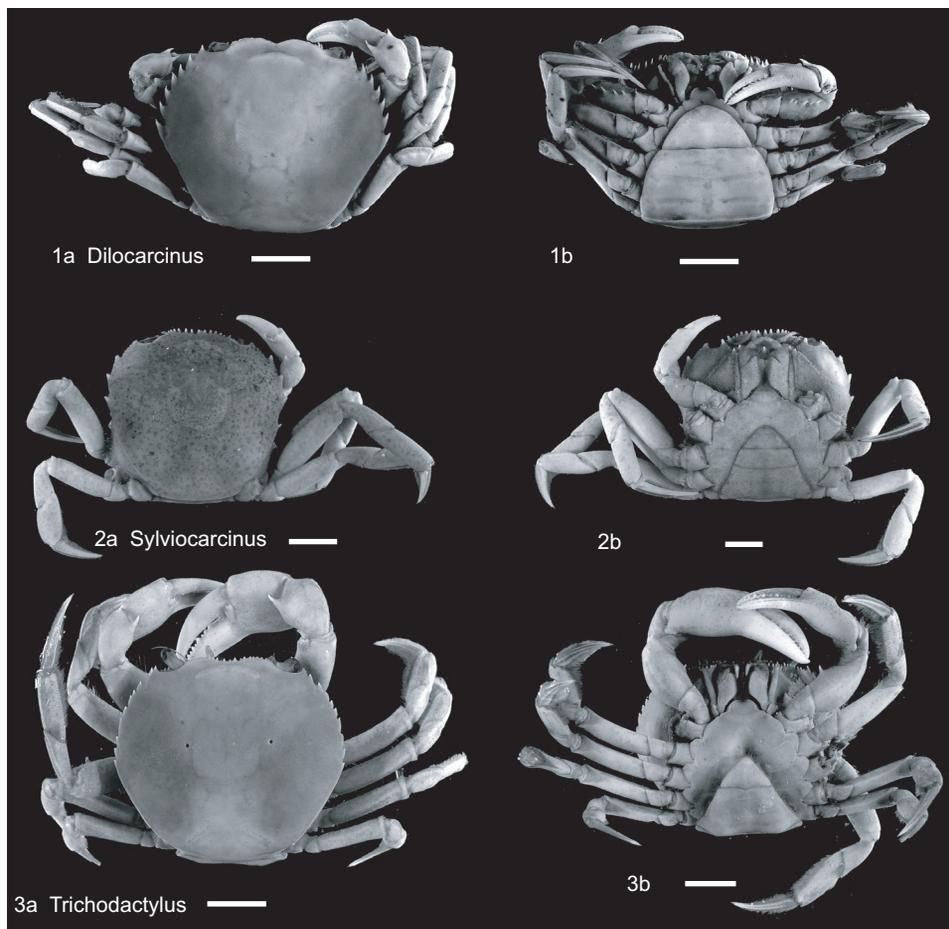


FIG. 1. Trichodactylidae (p. 1–2).

only short distance; sternal lobe of sternite 8 and sometimes episternite 7 partly covered by penial groove in males; male gonopod 1 simple, opening terminal, with subdistal spines; all pleonal somites usually free. [Emended from MAGALHÃES & TÜRKAY, 1996.] *Holocene*.

Trichodactylus LATREILLE, 1825, p. 705 [**T. fluviatilis*; M]. Anterolateral and posterolateral margins entire or with up to five spines; sternum ovate, wide; all male pleonal somites free. *Holocene*: tropical South America.—FIG. 1, 3*a–b*. *Trichodactylus dentatus* H. MILNE EDWARDS, 1853b, USNM 91237, *Holocene*, Venezuela, dorsal (*a*) and ventral (*b*) views; scale bars, 1 cm (new).

ABBREVIATIONS FOR MUSEUM REPOSITORIES

USNM: United States National Museum of Natural History, Smithsonian Institution, Washington, D.C., USA

REFERENCES

- Davie, P. J. F., Danièle Guinot, & P. K. L. Ng. 2015. Systematics and Classification of Brachyura. *Treatise on Zoology, Taxonomy, Biology. The Crustacea* 9 (C-II Decapoda Brachyura [part 2]):1049–1130.
- Herbst, J. F. W. 1782–1804. *Versuch einer Naturgeschichte der Krabben und Krebse nebst einer systematischen Beschreibung ihrer verschiedenen Arten* 1 [1782–1790]:1–274, pl. 1–21; 2 [1791–1796]:i–viii,

- iii, iv, 1–225, pl. 22–46; 3[1799–1804]:1–66, pl. 47–50. (G. A Lange, Berlin; J. C. Fuessly, Zürich).
- Kingsley, J. S. 1881. Carcinological Notes No. 1. Proceedings of the Academy of Natural Sciences of Philadelphia 1880:34–37.
- Klaus, Sebastian, Célio Magalhães, Rodolfo Salas-Gismondi, Martin Gross, & Pierre-Olivier Antoine. 2017. Palaeogene and Neogene brachyurans of the Amazon Basin: A revised first appearance date for primary freshwater crabs (Brachyura: Trichodactylidae). *Crustaceana* 90:953–967.
- Latreille, P. A. 1825. Encyclopédie Méthodique. Histoire Naturelle. Entomologie, ou Histoire Naturelle des Crustacés, des Arachnides et des Insectes. Vol. 10. Agasse. Paris. 832 p.
- Magalhães, Célio, & Michael Türkay. 1996. Taxonomy of the neotropical freshwater crab family Trichodactylidae I. The generic system with description of some new genera (Crustacea: Decapoda: Brachyura). *Senckenbergiana biologica* 75 (1/2):63–95.
- Milne-Edwards, Alphonse. 1869. Révision des genres *Trichodactylus*, *Sylviocarcinus* et *Dilocarcinus* et description de quelques espèces nouvelles qui s'y rattachent. *Annales de la Société Entomologique de France (série 4)* 9:170–178.
- Milne Edwards, Henri. 1853a. Mémoire sur la famille des Ocypodiens. Suite. *Annales des Sciences Naturelles, Zoologie (série 3)* 20:163–228, pl. 6–11.
- Milne Edwards, Henri. 1853b. Notes sur quelques crustacés nouveaux ou peu connus conservés dans la collection du Muséum d'Histoire naturelle. *Archives du Muséum d'Histoire naturelle* 7:145–192 pl. 9–16.
- Ng, P. K. L., Danièle Guinot, & P. J. F. Davie. 2008. *Systema Brachyurorum: Part I. An annotated check-list of extant brachyuran crabs of the world*. *Raffles Bulletin of Zoology (supplement)* 17:1–286.
- Ortmann, A. E. 1893. Abtheilung: Brachyura (Brachyura genuina Boas), II. Unterabtheilung: Cancroidea, 2. Section: Cancrinea, 1. Gruppe: Cyclometopa. Die Decapoden-Krebse des Strassburger Museums, mit besonderer Berücksichtigung der von Herrn Dr. Döderlein bei Japan und bei den Liu-Kiu-Inseln gesammelten und zur Zeit im Strassburger Museum aufbewahrten Formen, VII. Theil. *Zoologische Jahrbücher (Systematik, Geographie und Biologie der Thiere)* 7:411–495, pl. 17.
- Pretzmann, Gerhard. 1968. Die Familie Trichodactylidae (Milne-Edwards, 1853) Smith 1870 (Vorläufige Mitteilung). *Entomologische Nachrichtenblatt* 15 (7–8):70–76.
- Pretzmann, Gerhard. 1978. Neue Süßwasserkrabben aus den Anden. *Sitzungsberichte der Österreichischen Akademie der Wissenschaften mathematische-naturwissenschaftliche Klasse, abteilung 1, Biologie, Mineralogie, Erdkunde, und Verwandte Wissenschaften* 187(6–10):163–170, pl. 1–13.
- Smalley, A. E., & Gilberto Rodríguez. 1972. Trichodactylidae from Venezuela, Colombia, and Ecuador (Crustacea: Brachyura). *Tulane Studies in Zoology and Botany* 17(3–4):41–55.
- Smith, S. I. 1870. Notes on American Crustacea. Number 1. Ocypodoidea. *Transactions of the Connecticut Academy of Arts and Sciences* 2:113–176, pl. 1–5.
- Stimpson, William. 1861. Notes on certain decapod crustacea. *Proceedings of the Academy of Natural Sciences of Philadelphia* 1861:372–373.