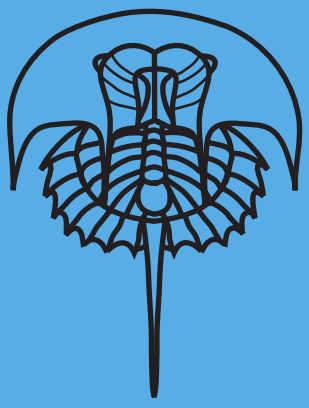

TREATISE ONLINE

Number 142

Part R, Revised, Volume 1, Chapter 8T14: Systematic Descriptions: Superfamily Potamoidea

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2020

KU PALEONTOLOGICAL INSTITUTE
The University of Kansas

Lawrence, Kansas, USA
ISSN 2153-4012
paleo.ku.edu/treatiseonline

PART R, REVISED, VOLUME 1, CHAPTER 8T14: SYSTEMATIC DESCRIPTIONS: SUPERFAMILY POTAMOIDEA

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Assignment of fossil species to genera and their geologic and geographic range follows Klaus and Gross (2010) and Klaus and others (2017).

Superfamily POTAMOIDEA Ortmann, 1896

[*nom. transl.* Bott, 1970a, p. 332 *ex* Potamonidae Ortmann, 1896, p. 445]

Carapace ovate or trapezoidal, carapace smooth or granular; regions poorly defined or moderately defined; wider than long, widest anteriorly; front entire; anterolateral margin convex, with at least one spine; mandibular palp with two or three articles; male and female all pleonal somites free; gonopod 1 strongly chitinized, with terminal and subterminal elements, synovial membrane sometimes present; gonopod 2 at least half as long as gonopod 1. [Emended from Davie, Guinot, & Ng, 2015.] ?*Oligocene*, *Miocene (Burdigalian)–Holocene*.

Family POTAMIDAE Ortmann, 1896

[*nom. correct.* ICZN Opinion 712, 1964, *pro* Potamonidae Ortmann, 1896, p. 445] [=Thelphusidae MacLeay, 1838, p. 63 (suppressed by ICZN, Opinion 712, 1964)]

Carapace ovate or trapezoidal, wider than long, widest about half the distance posteriorly, narrowing posteriorly; regions poorly defined or moderately defined, surface smooth; front generally broadly bilobed, not projected beyond orbits, entire; anterolateral margin with one to three spines; antennular fossae filled by second and third segments of antennae; mandibular palp with three articles; sternum triangular, sternal sutures all interrupted, press-button on sternite 5, sterno-abdominal cavity deep, sternite 8 visible in ventral view; median line on sternites 7 and 8; palp of mandible with simple termination; male pleon triangular, male somites all free; chelipeds heterochelous, short; synovial membrane sometimes present. [Emended from Davie, Guinot, & Ng, 2015.] *Miocene (Burdigalian)–Holocene*.

Subfamily POTAMINAE Ortmann, 1896

[*nom. transl.* Rathbun, 1904, p. 247 *ex* Ortmann, 1896, p. 445]

Anterolateral margin may have one spine, sometimes spine is serrate; mandibular palp with two articles; eighth sternite incompletely separated by median line, fused anteriorly at the suture between sternites 7 and 8 by narrow ridge interrupting median line. [Emended from Yeo & Ng, 2007, Davie, Guinot, & Ng, 2015.] *Miocene (Burdigalian)–Holocene*.

Potamon Savigny, 1816, p. 107 [*P. fluviatile*, p. 107; M; =*Cancer potamios* Olivier, 1804, p. 240, pl. 30,*2*] [=*Thelphusa* Latreille, 1819, p. 500 (type, *Cancer fluviatilis* Herbst, 1785 in 1782–1804, p. 183, M)]. Post frontal crest not continuing to lateral margin, with one or several interruptions, epigastric portion of crest separated from protogastric segment; anterolateral margin with one spine excluding outer-orbital spine. *Miocene–Holocene. Miocene (Burdigalian):* Germany, India. *Miocene (Langhian):* Germany. *Miocene (Serravallian):* Austria, Germany, Slovakia. *Miocene (Tortonian):* Austria, Germany, Slovakia. *Miocene (Messinian):* Italy, Slovakia. *Pliocene:* Austria, Hungary, Slovakia.

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Pleistocene: Hungary, Israel, Slovakia. *Holocene:* southern Europe, Middle East, northern India, North Africa (Holocene range from Cumberlidge, 1999).——Fig. 1,*1a–b*. **P. fluviatile,* USNM 1462694, Holocene, Montenegro, dorsal (*a*) and ventral (*b*) views; scale bars, 1 cm (new).

Acanthopotamon Kemp, 1918, p. 101 [**Paratelphusa martensi* Wood-Mason, 1875; OD]. Anterolateral margins with three or four large spines; upper margin of merus of chelipeds with spine near distal margin. [Emended from Kemp, 1918.] *Pliocene–Holocene. Pliocene:* India. *Holocene:* India, ?Myanmar, Thailand (Holocene range from IUCN).——Fig. 1,*2a–b*. *A. fungosum* (Alcock, 1909), Holocene, India, dorsal (*a*) and ventral (*b*) views; scale bars, 1 cm (new; photos by Darren C. J. Yeo, Lee Kong Chian Natural History Museum, Singapore).

Subfamily POTAMISCINAE Bott, 1970

[Potamiscinae Bott, 1970b, p. 157] [=Sinopotamidae Bott, 1970a, p. 333; =Isolapotamidae Bott, 1970a, p. 333]

Eighth thoracic sternite without transverse ridge between sternite 7 and 8, medial line uninterrupted. [Emended from Yeo & Ng, 2007.] *Pleistocene–Holocene*.

Potamiscus Alcock, 1909, p. 246 [**Potamon (Potamoniscus) annandali;* M] [=*Ranguna* Bott, 1966, p. 481 (type, *Potamon (Potamon) rangoonense* Rathbun, 1904, p. 279, pl. 11,*2,* OD, ICZN Opinion 1640, 1991]. Terminal element of gonopod 1 tapered and separated from penultimate segment by a joint; ventral section of the end wider than the dorsal, so that gonopod 2 channel has moved to dorsal side; exopodite of maxilliped 3 often with severely reduced or no flagellum. [Emended from Bott, 1966.] *Holocene:* Himalayas (Holocene range from Cumberlidge, 1999).——Fig. 1,*3a–b*. **P. annandali,* syntype USNM 42764, Holocene, India, dorsal (*a*) and ventral (*b*) views; scale bars, 1 cm (new).

Geothelphusa Stimpson, 1858, p. 46 [**G. obtusipes,* p. 47; SD Rathbun, 1898, p. 27]. Post frontal crest absent or poorly developed; anterolateral spine small or absent. *Pleistocene–Holocene. Pleistocene:* Japan. *Holocene subfossil:* Japan. *Holocene:* west Pacific coasts.——Fig. 1,*4a–b*. **G. obtusipes,* USNM 20644, Holocene, Japan, dorsal (*a*) and ventral (*b*) views; scale bars, 1 cm (new).

Isolapotamon Bott, 1968, p. 119 [**Potamon anomalus* Chace, 1938, p. 14; OD]. Carapace wider than long; epigastric and postorbital cristae well developed, separate; anterolateral margin convex, serrated; outer-orbital angle usually broadly triangular, epibranchial tooth present; exopod of third maxilliped very broad, especially proximally, outer margin distinctly convex outward; distal tip reaches or slightly exceeds half-length of merus; flagellum distinct, longer than width of merus; male pleon distinctly triangular, lateral margins of last segment convex or almost straight; telson triangular; gonopod 1 slender, elongated; terminal segment subequal to or longer than subterminal segment, slender, tip often dilated; gonopod 2 slender, elongated; distal segment distinct, subequal to half-length of basal segment. [Emended from Ng & Tan, 1998.] *Holocene:* Borneo: Brunei, Indonesia (Kalamantan), Malaysia (Sabah, Sarawak); Philippines (Holocene range from Ng & Tan, 1998).——Fig. 1,*5a–b*. **I. anomolus*, USNM 96334, Holocene, Borneo, dorsal (*a*) and ventral (*b*) views; scale bars, 1 cm (new).

Family POTAMONAUTIDAE Bott, 1970

[Potamonautidae Bott, 1970a, p. 333] [=Deckeniinae Ortmann, 1897, p. 297; =Platythelphusini Colosi, 1920, p. 9; =Hydrothelphusinae Bott, 1955, p. 320; =Globonautinae Bott, 1969, p. 359; Seychellinae Ševčić, 2005, p. 75; former four suppressed as family names under ICZN Article 35.5, see Ng, Guinot, & Davie, 2008]

Carapace ovate, wider than long, widest anteriorly; front entire, downturned over antennular fossae which are filled by second segment of antenna; anterolateral margin with one spine which may be serrate, lateral carinae present; palp of mandible with two segments; third maxillipeds filling entire buccal frame; sternal suture 2/3 and 7/8 complete, 4/5, 5/6, 6/7 incomplete; male pleon triangular, somites all free; median line present on sternites 7 and 8; chelipeds heterochelous; male gonopod 1 longer or shorter than gonopod 2. [Emended from Davie, Guinot, & Ng, 2015.] ?*Oligocene, Miocene–Holocene*.

Subfamily DECKINIINAE Ortmann, 1897

[=Deckenini Ortmann, 1897, p. 297]

Buccal frame narrowing anteriorly; second gonopod in cross section with spoonlike structure at joint between terminal and subterminal segments; terminal article completely surrounding gonopod, without setae (Cumberlidge, von Sternberg, & Daniels, 2008). *Holocene*.

Deckenia Hilgendorf, 1869, p. 2 [**Deckenia imitatrix;* M, ICZN Opinion 73, 1941]. Carapace smooth, ovate, regions undefined, with weak transverse ridges in branchial regions; orbits wide,

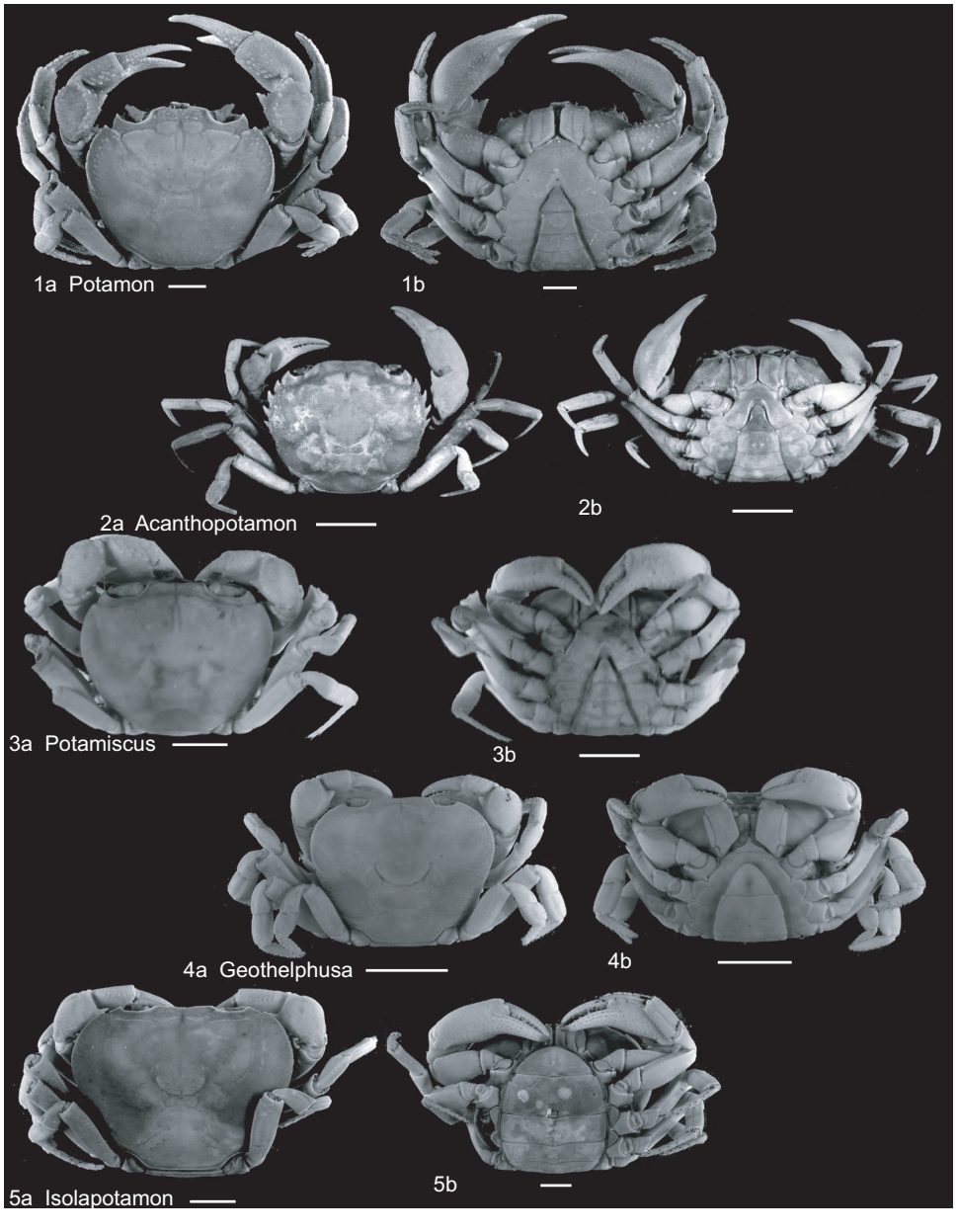

FIG. 1. Potamidae (p. 1–2).

front trilobate, fronto-orbital width occupying nearly entire width of carapace; antennae short and compressed; propodus and dactylus of pereiopods 2–5 flattened; male pleon extending midline of sternite 4, broad, with all somites free. [Emended from NG, ŠTEVČIĆ, & PRETZMANN, 1995.] *Holocene:* Kenya, Malawi, Somalia, Tanzania.——FIG. 2,*1a–b*. **D. imitatrix*, USNM 105058, Holocene, Kenya, dorsal (*a*) and ventral (*b*) views; scale bars, 1 cm (new).

Subfamily HYDROTHELPHUSINAE Bott, 1955

[Hydrothelphusinae BOTT, 1955, p. 320] [=Globonautinae BOTT, 1969, p. 359; =Seychellinae ŠTEVČIĆ, 2005, p. 75]

Male gonopod 2 with terminal article short, curving upward and inward, forming an open groove (CUMBERLIDGE, VON STERNBERG, & DANIELS, 2008). *Holocene*.

Hydrothelphusa A. MILNE-EDWARDS, 1872, p. 2 [**H. agilis;* M] [=*Bottia* PRETZMANN, 1961, p. 162 (type, *Thelphusa madagascariensis* A. MILNE-EDWARDS, 1872, p. 1, OD)]. Carapace flattened, nearly quadrate, regions weakly developed, front produced beyond orbits. [Emended from A. MILNE-EDWARDS, 1872.] *Holocene:* Madagascar.——FIG. 2,*2a–b*. *Hydrothelphusa goudoti* (H. MILNE EDWARDS, 1853), USNM 19542, Holocene, Madagascar, dorsal (*a*) and ventral (*b*) views; scale bars, 1 cm (new).

Subfamily POTAMONAUTINAE Bott, 1970

[Potamonautinae BOTT, 1970a, p. 333] [=Platythelphusini COLOSI, 1920, p. 9]

Male gonopod 2 with setose, spoonlike-structure between last and penultimate articles; terminal article with edges curving inward, forming a closed, dorsal tube (CUMBERLIDGE, VON STERNBERG, & DANIELS, 2008). ?*Oligocene*, *Miocene–Holocene*.

Potamonautidae gen. and sp. indeterminate in MARTIN & TRAUTWEIN (2003). *Miocene–Pliocene:* Kenya.

Potamonautes MACLEAY, 1838, p. 64 [**Thelpheusa* [sic] *perlata* H. MILNE EDWARDS, 1837 in 1834–1840, p. 13; M, ICZN Opinion 73, 1941] [=*Gecarcinautes* BOTT, 1960, p. 15 (type, *G. brincki,* M)] Postfrontal crest complete, intersecting anterolateral margin at position of spine; sternopleonal cavity terminating close to position of sternal suture 3/4; terminal article of male gonopod 1 short; terminal article of male gonopod 2 long. *Miocene–Holocene. Miocene:* Kenya, Uganda. *Holocene:* Africa.——FIG. 2,*3a–b*. **P. perlatus* (H. MILNE EDWARDS), USNM 113370, Holocene, South Africa, dorsal (*a*) and ventral (*b*) views; scale bars, 1 cm (new).

Tanzanonautes FELDMANN, O'CONNOR, STEVENS, GOTTFRIED, ROBERTS, NGASALA, RASMUSSON, & KAPILIMA, 2007, p. 72 [**T. tuerkayi;* OD]. Carapace nearly flat transversely, widest in anterior one-third; postfrontal crest reduced or absent; regions poorly defined; posterolateral margins long, straight. ?*Oligocene:* Tanzania.——FIG. 2,*4a–b*. **T. tuerkayi; 4a*, holotype, RRBP 05177, carapace and left appendage elements, scale bar, 1 cm (FELDMANN & others, 2007, fig 1,*1*); *4b*, paratype, RRBP 03015, right chela, scale bar, 1 cm (FELDMANN & others, 2007, fig. 1,*5*).

ABBREVIATIONS FOR MUSEUM REPOSITORIES

RRBP: Rukwa Rift Basin Project, Ohio University, Athens, Ohio, USA

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

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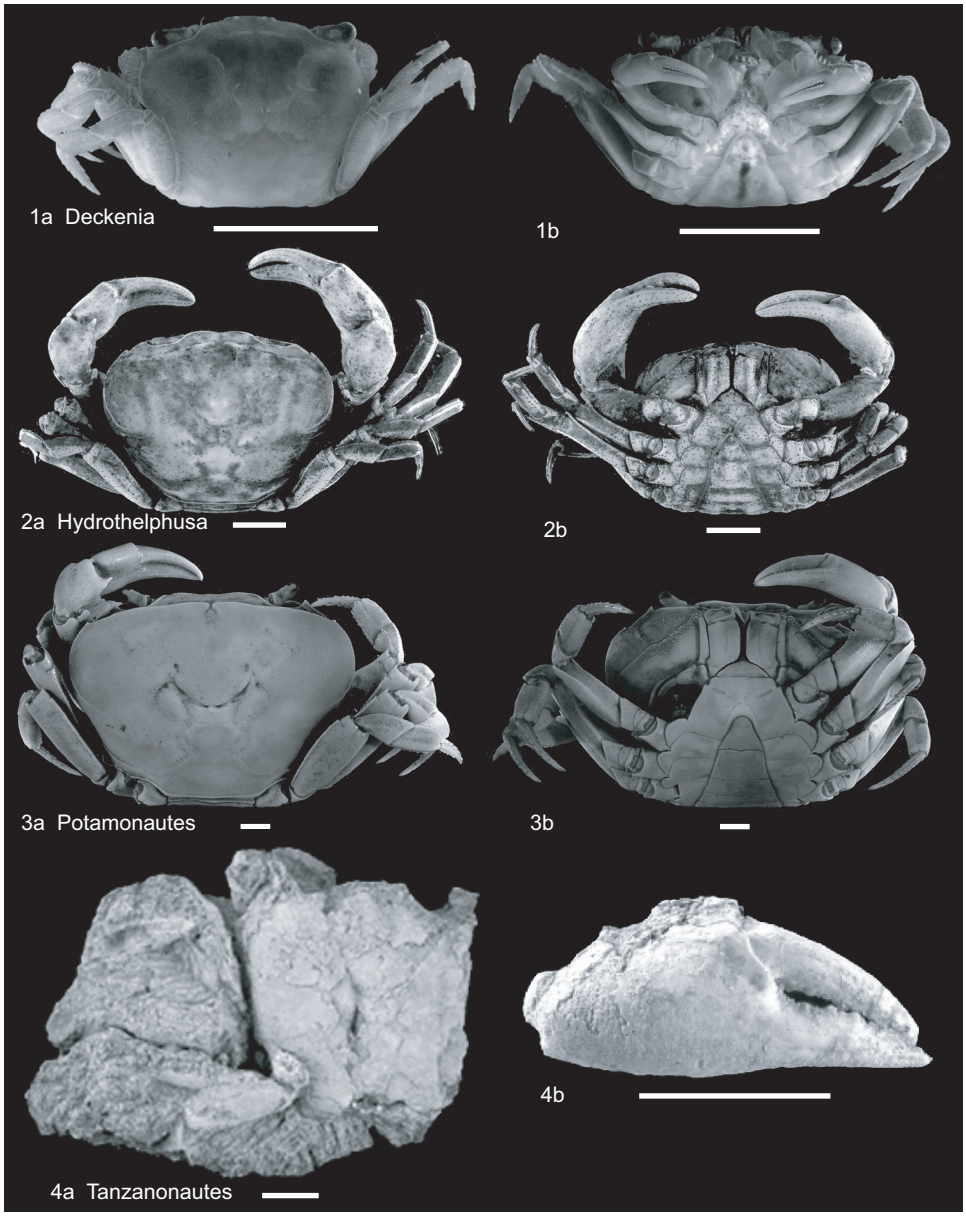

FIG. 2. Potamonautidae (p. 2–4).

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