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Systematic Descriptions: Additions to Superfamilies
of Eubrachyura, exclusive of Thoracotremata

Carrie E. Schweitzer, Rodney M. Feldmann,
and Hiroaki Karasawa

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PART R, REVISED, VOLUME 1, TREATISE ONLINE 183:
SYSTEMATIC DESCRIPTIONS: ADDITIONS TO
SUPERFAMILIES OF EUBRACHYURA, EXCLUSIVE OF
THORACOTREMATA

CARRIE E. SCHWEITZER,¹ RODNEY M. FELDMANN,² and HIROAKI KARASAWA³

[¹Department of Earth Sciences, Kent State University at Stark, cschweit@kent.edu; ²Department of Earth Sciences, Kent State University, rfeldman@kent.edu; ³Mizunami Fossil Museum, Japan, gha06103@nifty.com]

Over the course of the intervening years during which a number of Treatise Online chapters on crabs were published, new knowledge has accumulated and reclassifications and new taxa have been recognized within the eubrachyuran superfamilies, exclusive of Thoracotremata. The following are changes in classification and generic and family additions covering 2012 to December 2022. They are updates to the following systematic descriptions chapters: Treatise Online 106, 112, 115, 121, 123, 126, 131, 132, 136, 142, 151, 153, 159, 161, 164, and 165 which will be listed separately at the beginning of References, p. 16.

**Section EUBRACHYURA
de Saint Laurent, 1980**

[DE SAINT LAURENT, 1980, p. 1265]

Carapace well-developed, short, variously shaped, usually well-calcified; epistome short and fused to carapace; thoracic sternites 1–8 fused; pleon reduced, held folded ventrally usually against the sternum, uropods absent; antennular articles folded in Z-shape; one pair of well-developed chelipeds (pereopod 1); four pairs of walking legs (pereopods 2–5) held laterally; female gonopores on sternites 5; male gonopores on pereopod coxae 5 or sternites 8. [Emended from Poore & Ahyong, 2023, p. 422.] *Lower Cretaceous (Berriasian)–Holocene*.

Superfamily AETHROIDEA

Dana, 1851a

[Updates to Treatise Online 123]

Addition to

Family AETHRIDAE Dana, 1851a

Politohepaticus BESCHIN, BUSULINI & TESSIER in BESCHIN, BUSULINI, FORNACIARI, PAPAZZONI, & TESSIER, 2018, p. 170 [**P. zorzini*; OD]. Carapace ovate, widest in anterior one-third; front nearly straight with slight axial notch; orbits shallow; anterolateral margins entire; carapace smooth, regions not defined. *Eocene (Priabonian)*: Italy.—FIG. 1. **P. zorzini*, holotype, MCZ 5352, scale bar 1 cm (new; photo by A. Busulini, Museo di Storia naturale, Venezia, Italy).

**Superfamily CALAPPOIDEA
de Haan, 1833 in 1833–1850**

[Updates to Treatise Online 121]

Addition to

Family CALAPPIDAE de Haan, 1833

Carinocalappa BESCHIN, BUSULINI & TESSIER in BESCHIN, BUSULINI, FORNACIARI, PAPAZZONI, & TESSIER, 2018, p. 167 [**C. lineamenta*; OD]. Carapace wider than long; orbits with oblique margins; anterolateral margins with tiny spines, posterolateral corner with long spine; dorsal carapace with transverse keel across epibranchial and metagastric region and one across branchial regions which turns posteriorly and parallels axis. *Eocene (Priabonian)*: Italy.—FIG. 2. **C. lineamenta*, holotype, MCZ 5350, scale bar 1 cm (new; photo by A. Busulini, Museo di Storia naturale, Venezia, Italy).

**Superfamily CANCROIDEA
Latreille, 1802 in 1802–1803**

[Updates to Treatise Online 126]

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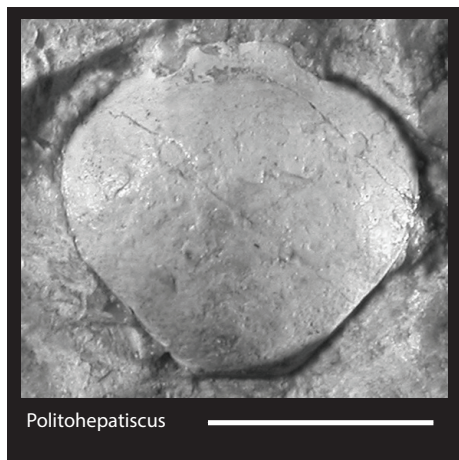


FIG. 1. Aethridae (p. 1).

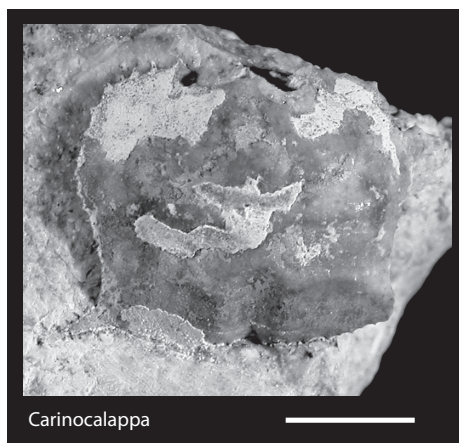


FIG. 2. Calappidae (p. 1).

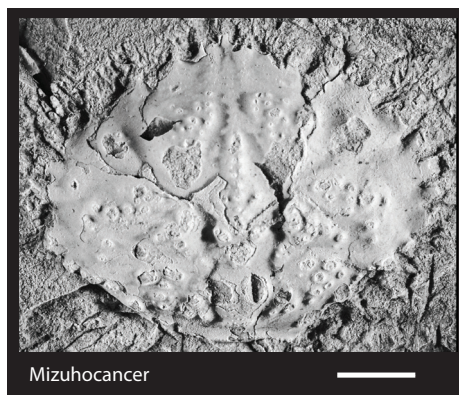


FIG. 3. Cancridae (p. 2).

Addition to

Family CANCRIDAE Latreille, 1802

Mizuhocancer KARASAWA in KARASAWA & TAKAHASHI, 2020, p. 32 [**Cancer? imamurae* IMAIZUMI, 1962, p. 239, pl. 40,18–19; OD]. Carapace transversely ovate, much wider than long, length approximately 75 percent maximum carapace width; front produced beyond orbits, with five frontal spines; inner three spines very closely spaced; medial spine slightly protruded to triangular lateral spines; anterolateral margin strongly convex with nine spines; spines sharp, well separated to bases; second and third, fourth and fifth, sixth and seventh, and eighth and ninth spines paired; posterolateral margin nearly straight granular, rimmed, with five spines; regions well defined, inflated, covered with irregular-sized tubercles; propodus of chelipeds short; lateral surface with three longitudinal rows of short spines; dorsolateral and dorsal margins tubercular ridges. *Miocene*: Japan.—FIG. 3. **M. imamurae* (IMAIZUMI), MFM 83204, scale bar 1 cm (new; photo by H. Karasawa, MFM).

Superfamily CARPILIOIDEA

Ortmann, 1893

[Updates to Treatise Online 112]

Changes to

Family ARABICARCINIDAE Schweitzer & Feldmann, 2017

Family range emended to *Upper Cretaceous (Coniacian–Eocene)*.

Eomatuta DE ANGELI & MARCHIORI, 2009, as described in Treatise Online 115, p. 17 (Superfamily Leucosioidea, Family Matutidae) is now referred to Arabiocarcinidae. See fig. 13,3*a–b* on page 16 of Treatise Online 115.

Additions to

Family CARPILIIDAE Ortmann, 1893

Maurocarpilus OSSÓ, GAGNAISON, & BAILLEUL, 2020, p. 50 [**M. binodosus*, p. 52, fig. 3; OD]. Carapace transversely ovate, wider than long, smooth; vaulted anteriorly; front slightly subtriangular, bilobed, strongly downturned; orbits small, rounded, supra-orbital margin entire, slightly rimmed; anterolateral margin strongly convex, acute, bearing two small spines, anterolateral margin between spines nearly parallel to axis; posterolateral margin concave; regions not defined; branchiocardiac grooves defined by muscle scars. *Eocene (Ypresian)*: Morocco.—FIG. 4,1. **M. binodosus*, holotype, ULB-IV-A(1a), scale bar 1 cm (new; photo by Á. Ossó, Tarragona, Spain).

Oscacarpilius ARTAL & VAN BAKEL, 2018, p. 23 [**O. rotundus*, p. 25, fig. 1–2; OD]. Carapace ovate, wider than long, regions not defined; front quadri-lobed including inner orbital angles; orbits circular, deep; anterolateral margin entire, thickened, arcing weakly convexly and then very tightly convexly to

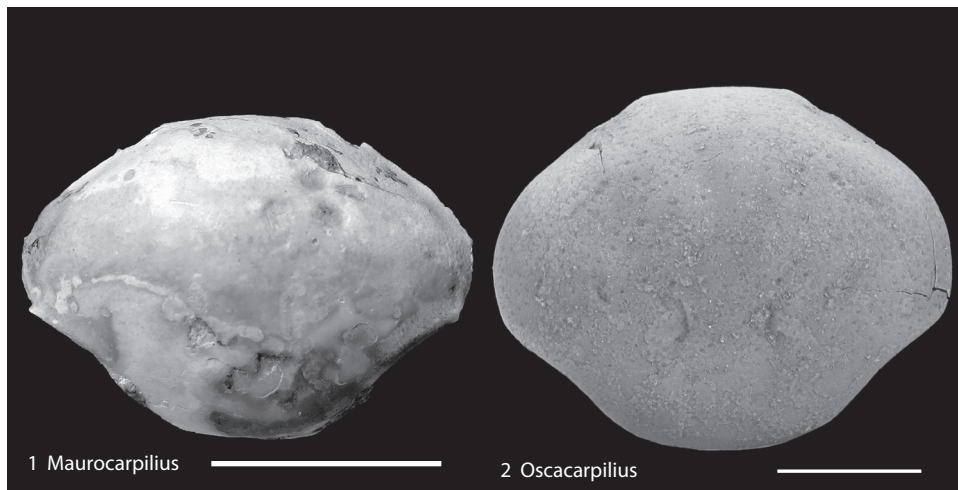


FIG. 4. Carpiliidae (p. 2–3).

the anterolateral angle; posterior margin weakly concave. *Eocene* (*Ypresian*): Spain.—FIG. 4,2. **O. rotundus*, holotype, MGSB 75437, scale bar 1 cm (new; photo by B. W. M. Van Bakel,

Superfamily ERIPHIOIDEA

MacLeay, 1838

[Updates to Treatise Online 132]

Addition to

Family MENIPPIDAE Ortmann, 1893

Cornedozius BESCHIN, BUSULINI, & TESSIER, 2022, p. 72 [*C. laevis*; OD]. Carapace ovate, wider than long, widest in anterior one-quarter; front slightly downturned; anterolateral margin with one or two spines; posterolateral margin much longer than anterolateral margin, weakly convex; chelipeds stout. *Eocene* (*Ypresian*): Italy.—FIG. 5. **C. laevis*, holotype, MCZ 7668, scale bar 1 cm (new; photo by A. Busulini, Museo di Storia naturale, Venezia, Italy).

A new superfamily and family have been erected for a genus that was in Eriphioidea, as below.

Superfamily PSEUDOCARCINOIDEA Ng & Davie, 2020

Diagnosis as for family. *Miocene–Holocene*.

Family PSEUDOCARCINIDAE Ng & Davie, 2020

[Pseudocarcinidae NG & DAVIE, 2020, p. 608]

Carapace wider than long, broadly ovate, regions well defined as broad swellings, epibranchial region large and inflated; front narrow, with four spines; fronto-orbital width narrow; anterolateral margin lobate, with multiple small spines; lower margin of posterior carapace margin with prominent channel which continues along sides of carapace to bases of buccal cavity. [Emended from NG & DAVIE, 2020.] *Miocene–Holocene*.

Pseudocarcinus H. MILNE-EDWARDS, 1834, as described in Treatise Online 132, p. 4 (Superfamily Eriphioidea), was previously in the family Menippidae. It is herein moved to the family Pseudocarcinidae. See Fig. 2,2a–b on page 5 of Treatise Online 132.

Superfamily DORIPPOIDEA

MacLeay, 1838

[Updates to Treatise Online 159]

Addition to

Family DORIPPIDAE MacLeay, 1838

Dorippoides SERÈNE & ROMIMOHTARTO, 1969, p. 8 [**Cancer facchino* HERBST, 1785 in 1782–1790, p. 190, pl. 11,68; OD; =*Dorippe astuta* FABRICIUS, 1798, p. 361]. Carapace wider than long; inner suborbital tooth strong, approximately as large as exorbital tooth; lateral margin without epibranchial tubercles; dorsal surface smooth without tubercles or spines; dactyli of pereopods 2 and 3 without fringes of hairs. *Pliocene*: Indonesia (Java). *Holocene*: Indo-West Pacific Ocean.—FIG. 6. **D. facchino* (HERBST), CBM-ZC 1934, Holocene, Thailand, scale bar 1 cm (new; photo by H. Kato, Natural History Museum and Institute, Chiba, Japan).

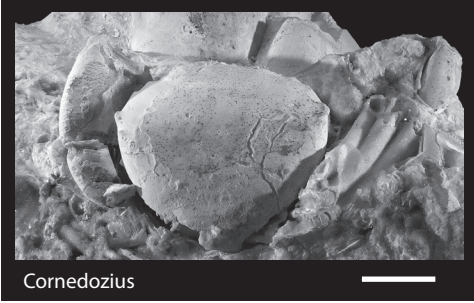


FIG. 5. Menippidae (p. 3).



FIG. 6. Dorippidae (p. 4).

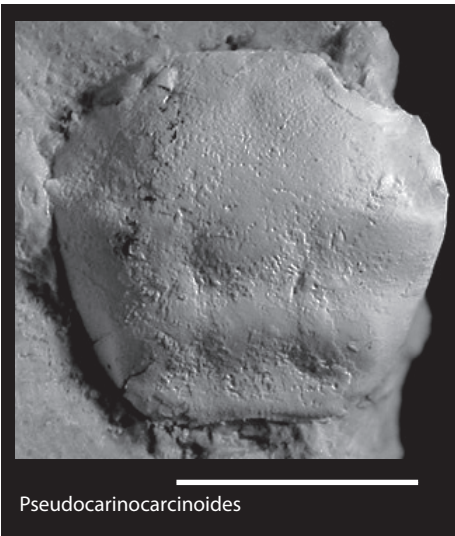


FIG. 7. Carinocarcinoididae (p. 4).

Superfamily GONEPLACOIDEA MacLeay, 1838

[Updates to Treatise Online 164]

Addition to Family CARINOCARCINOIDIDAE Karasawa & Kato, 2003

Pseudocarinocarcinoides BESCHIN, BUSULINI, & TESSIER, in BESCHIN, BUSULINI, TESSIER, & ZORZIN,

2019, p. 134 [**P. karasawai*; OD]. Carapace approximately as wide as long, quadrate; front straight; orbits directed slightly anterolaterally; anterolateral margin short, with three spines; posterolateral margins much longer than anterolateral margins; epibranchial regions forming transverse ridge; transverse ridge on branchial regions and cardiac region. *Eocene* (*Priabonian*): Italy.—FIG. 7. **P. karasawai*, holotype, VR 19.2100, scale bar 5 mm (new; photo by A. Busulini, Museo di Storia naturale, Venezia, Italy).

Addition to Family CHASMOCARCINIDAE Serène, 1964

Propinnotheroides BISHOP & PALMER, 2006, p. 336 [**P. orangeburgensis*; OD]. Carapace rectangular, slightly wider than long; orbits wide, forward directed; carapace surface smooth, weakly oblique keel extending posteriorly and axially on epibranchial area; cardiac region wide, bounded by pits that are probably muscle scars. *Eocene*: USA (South Carolina).—FIG. 8. **P. orangeburgensis*, holotype, ChM PI 18337, scale bar 5 mm (new; photo by M. Gibson, Charleston Museum, South Carolina, USA).

Additions to Family EURYPLACIDAE Stimpson, 1871

Corallioplax BESCHIN, BUSULINI, TESSIER, & ZORZIN, 2016, p. 144 [**C. exigua*; OD]. Carapace hexagonal, wider than long; front straight, axially sulcate dorsally; orbits rimmed; anterolateral margins short, with four small spines including outer-orbital spine, posterolateral margins longer than anterolateral margins; mesogastric region distinct. *Eocene* (*Ypresian*): Italy.—FIG. 9.1. **C. exigua*, holotype, VR 94540, scale bar 5 mm (new; photo by A. Busulini, Museo di Storia naturale, Venezia, Italy).

Verarena BESCHIN, BUSULINI & TESSIER, in BESCHIN, BUSULINI, TESSIER, & ZORZIN, 2019, p. 117 [**V. katoi*; OD]. Carapace hexagonal, wider than long, widest anterior to mid-length; front axially notched, downturned; anterolateral margins short, with a few spines; posterolateral margins longer than anterolateral margins; posterior margin wide. *Eocene* (*Priabonian*): Italy.—FIG. 9.2. **V. katoi*, holotype, VR 19.1886, scale bar 5 mm (new; photo by A. Busulini, Museo di Storia naturale, Venezia, Italy).

Changes to Family GONEPLACIDAE MacLeay, 1838

Two nomenclatural decisions from Treatise Online 164 need clarification, as follows.

Albaidaplax GARASSINO, PASINI, & CASTRO, 2023: Please note that the date of publication for the genus and species have changed from 2013 to 2023 (Garassino, Pasini, & Castro, 2023).

Astiplax GARASSINO & PASINI, 2013. Please note that the genus and species name are not available under ICZN Article 8.5, 2012).

Ommatocarcinus is updated as follows:

Ommatocarcinus WHITE, 1852, p. 393 [**O. macgillivrayi*, pl. 5, 1; M, ICZN Opinion 85, 1925] [= *Aliaplax* PASINI, GARASSINO, DE ANGELI, & PIZZOLATO, 2020, (type, *A. tyrsenorum*, OD)]. Carapace much wider than long, widest at outer-orbital corner; front narrow, widening distally, T-shaped; orbital margin very long, extending beyond carapace margin in laterally directed outer-orbital spine; lateral margins converging distally, nearly straight; posterior margin straight; carapace regions undefined, transverse keel extending across epibranchial and mesobranchial regions. *Miocene–Holocene*. *Miocene* (*Burdigalian–Messinian*): Australia (New South Wales, South Australia, Victoria). *Miocene*: Taiwan. *Pliocene*: Australia (New South Wales, South Australia, Victoria), New Zealand, Taiwan. *Pleistocene*: Australia, Italy, Japan, New Zealand, Taiwan. *Holocene*: Indo-West Pacific Ocean.—FIG. 10. **O. macgillivrayi*, CBM-ZC 3773, Holocene, Indo-West Pacific Ocean, scale bar 1 cm (photo by H. Kato, Natural History Museum and Institute, Chiba, Japan).

**Addition to
Family LITOCHEIRIDAE
Kinahan, 1856**

Agnocarina BESCHIN, BUSULINI, & TESSIER, 2021, p. 74 [**A. quadriangula*; OD]. Carapace with three broad, transverse ridges; front wide, with convex margin. *Eocene* (*Ypresian*): Italy.—FIG. 11. **A. quadriangula*, holotype, MCZ 7477, scale bar 5 mm (new; photo by A. Busulini, Museo di Storia naturale, Venezia, Italy).

**Addition to
Family MATHILDELLIDAE
Karasawa & Kato, 2003**

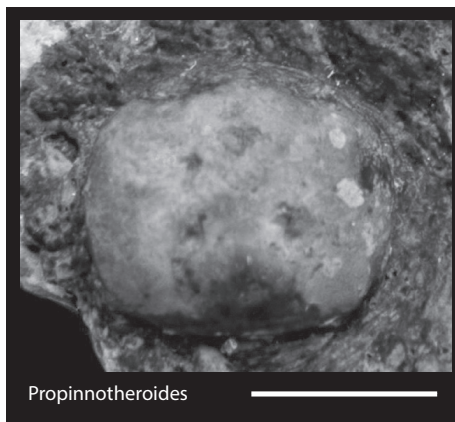


FIG. 8. Chasmocarcinidae (p. 4).

Clampethildella BESCHIN, BUSULINI, & TESSIER, 2021, p. 117 [**C. spinosa*; OD]. Carapace ovate, wider than long, longest at approximately mid-length; front straight with axial notch; orbits weakly rimmed; anterolateral margins with three or so spines; regions moderately defined, protogastric regions and mesogastric region long. *Eocene* (*Ypresian*): Italy.—FIG. 12. **C. spinosa*, MCZ 6206, scale bar 5 mm (new; photo by A. Busulini, Museo di Storia naturale, Venezia, Italy).

**Addition to
Family HEXAPODIDAE Miers, 1886**

Lucahexapus DE ANGELI & CAPORIONDO, 2022, p. 112 [**L. mainensis*; OD]. Carapace rectangular, wider than long; orbits wide, rimmed; lateral margins weakly convex; groove outlining urogastric and cardiac region deep. *Eocene* (*Ypresian*): Italy.—FIG. 13. **L. mainensis*, holotype, MCV.21/043-21.7, scale bar 5 mm (new; photo by A. De Angeli, Associazione Amici del Museo Zannato, Montecchio Maggiore, Vicenza, Italy).

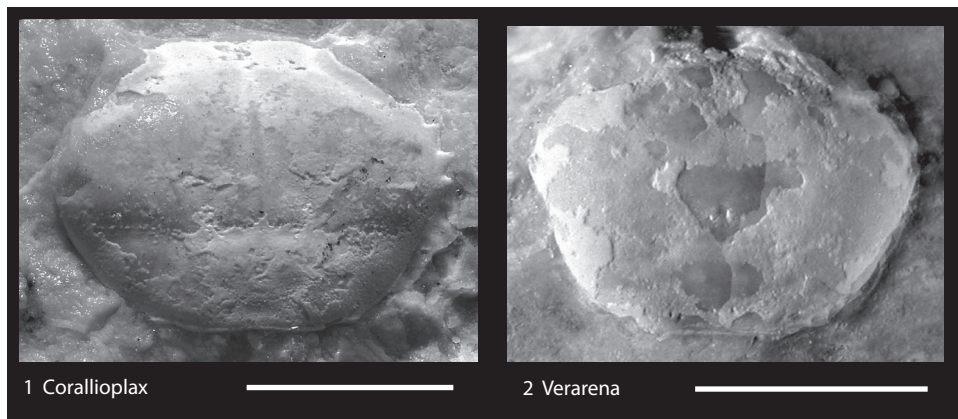


FIG. 9. Euryplacidae (p. 4).

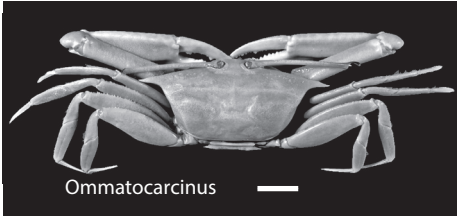


FIG. 10. Goneplacidae (p. 5).

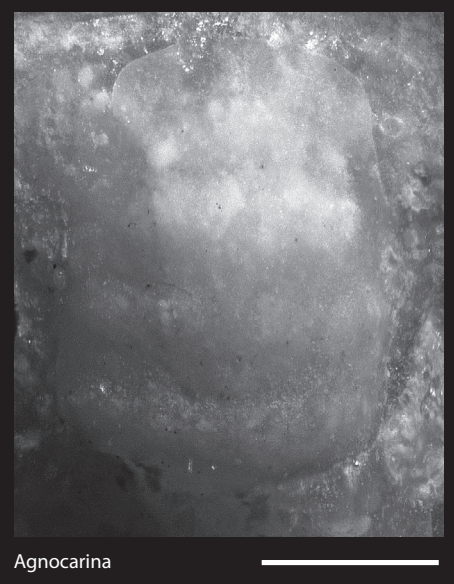


FIG. 11. Litocheiridae (p. 5).

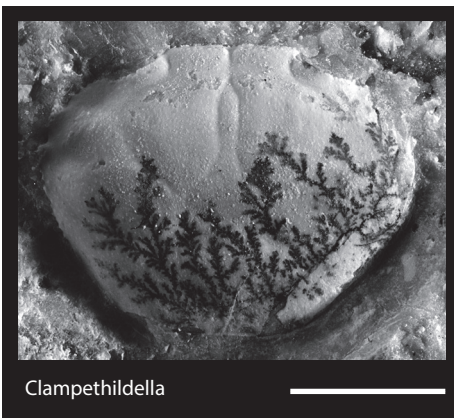


FIG. 12. Mathildellidae (p. 5).

Superfamily LEUCOSIOIDEA Samouelle, 1819

[Updates to Treatise Online 115]

Addition to Family LEUCOSIIDAE Samouelle, 1819

Subfamily EBALIINAE Stimpson, 1871

Aquitainotlos CLUZAUD & OSSÓ, 2022, p. 128 [**A. gaasensis*, p. 129, fig. 4; OD]. Carapace diamond-shaped, widest at anterolateral angle; front narrow, widely bilobate; orbits small, directed forward; anterolateral margins lobate, with three lobes of varying lengths; anterolateral angle composed of a bilobed projection; posterolateral margin with a large central lobate projection; posterior margins with lobe at each angle; carapace surface ornamented with circular densely clustered mushroom-like tubercles, between the circular areas, more widely spaced mushroom-like tubercles, cardiac region especially large and inflated. *Oligocene* (*Rupelian*): France.—FIG. 14. **A. gaasensis*, holotype, MHNbX 2021.29.1, scale bar 5 mm (new; photo by À. Ossó, Tarragona, Spain).

Superfamily MAJOIDEA Samouelle, 1819

[Updates to Treatise Online 136]

Additions to

Family EPIALTIDAE MacLeay, 1838

Paradasygyius GARTH, 1958, p. 80 [**Microorhynchus depressus* BELL, 1835, p. 88; OD]. Carapace obovate, widest in posterior one-third; rostrum short; orbits rimmed; posterior margin with strong axial spine; regions broadly inflated; chelipeds much shorter than other pereiopods. *Miocene*: Venezuela. *Holocene*: eastern tropical Pacific Ocean, Mexico (Gulf of California).—FIG. 15, 1. **P. depressus* (BELL), AHF No. 398, Holocene, Panama, scale bar 1 cm (Garth, 1958, pl. 4,2).

Willinachoides LIMA, AGUILERA, & TAVARES, 2021, p. 347 [**W. santanaei*, p. 349, fig. 8; OD]. Carapace obovate; proto-, meso-, and metagastric regions inflated; cervical groove well marked; boundary between the hepatic and subhepatic regions indistinct; cardiac region strongly inflated, ovate, with a large tubercle centrally; branchial regions strongly inflated; carapace generally ornamented with small, evenly spaced tubercles. *Miocene*: Venezuela.—FIG. 15, 2. **W. santanaei*, holotype, MPEG-2613-1, scale bar 5 mm (new; photo by D. Lima, Universidade Federal Fluminense, Rio de Janeiro, Brazil).

Addition to Family INACHIDAE MacLeay, 1838

Cyrtomaia MIERS in TIZARD, MOSELY, BUCHANAN, & MURRAY, 1885, p. 589 [**C. murrayi*; OD]. Carapace ovate, slightly wider than long; rostrum bifid,

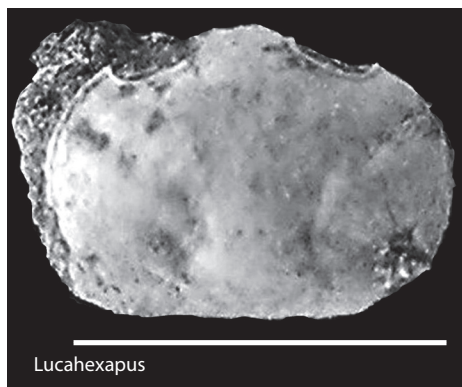


FIG. 13. Hexapodidae (p. 5).

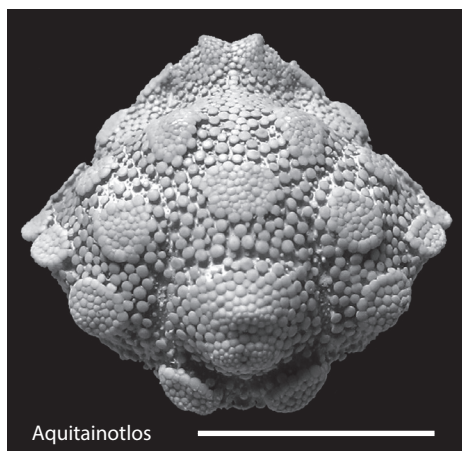


FIG. 14. Leucosiidae (p. 6).

short; orbit with supraorbital eave and postorbital spine; anterolateral margins with a few spines; pereopods 2–5 very long, elements with tiny spines. [Emended from POORE, 2004.] *Pleistocene*: Japan. *Holocene*: Indo-Pacific Ocean, central Pacific

Ocean.—FIG. 16. **C. murrayi*, MNHN-IU-2008-10290, Holocene, Mozambique (photo from MNHN, CC 4.0).

**Addition to
Family INACHOIDIDAE Dana, 1851b**

Subfamily INACHOIDINAE Dana, 1851b

Collodes STIMPSON, 1860, p. 193 [**C. granosus*; M]. Carapace obovate; rostrum short, may be bifid; postorbital spine usually large, triangular, not close to eye and separated from the supraorbital eave by deep, open, marginal fissure; carapace regions moderately defined. [Emended from RATHBUN, 1925.] *Miocene* (*Tortonian–Messinian*): Venezuela. *Holocene*: Central Atlantic Ocean, Caribbean Sea, Pacific Coastal Americas.—FIG. 17. **C. granosus*, USNM 1526201, Holocene, Baja California, Mexico, scale bar 1 cm (new; photo R. Feldmann).

The following family, Macrocheiridae, is now recognized within Majoidea.

**Family MACROCHEIRIDAE
Dana, 1851b**

[*nom transl.* GUINOT & BOUCHARD, 1998, p. 658, ex Macrocheirinae DANA, 1851b, p. 427]

Carapace rounded-pyriform, widening posteriorly; rostrum short or very long, bifid; supraocular eave narrow with long antorbital spine, short intraorbital spine, and long postorbital spine; regions well defined, ornamented with tubercles of varying sizes; hepatic spine well developed; chelipeds isochelous, much longer than pereopods 2–5, which are also very long. [Emended from GUINOT & others, 2022.] *Eocene* (*Priabonian*)–*Holocene*.

Macrocheira DE HAAN, 1839 in 1833–1850, p. 88 [**Maja kaempferi* TEMMINCK, 1836, p. 26; M]



FIG. 15. Epialtidae (p. 6).



FIG. 16. Inachidae (p. 6–7).

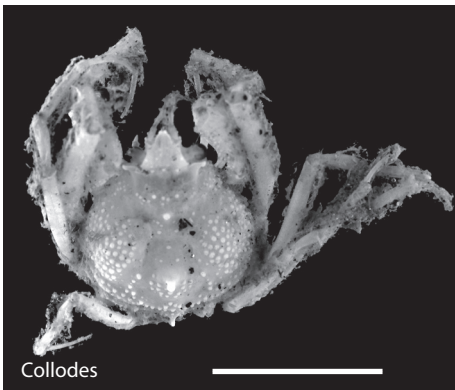


FIG. 17. Inachoididae (p. 7).

[=*Kaempferia* MIERS, 1886, p. 33 (type, *Maja kaempferi*, M)]. Carapace obovate; rostrum short or long, bifid; supraocular cave narrow with long antorbital spine, short intraorbital spine, and long postorbital spine; regions well defined, ornamented with tubercles of varying sized; hepatic spine well developed. *Eocene* (*Priabonian*)–*Holocene*. *Eocene* (*Priabonian*): Oregon, USA. *Eocene*–*Oligocene*: Canada (British Columbia), Japan. *Eocene* (*Priabonian*)–*Miocene*: USA (Washington). *Miocene*–*Pleistocene*: Japan. *Holocene*: Japan, Taiwan. —FIG. 18, 3a–b. *M. longirostra* SCHWEITZER & FELDMANN, 1999, Eocene, Washington, USA; *a*, holotype, CM 39683, dorsal cara-

pace; *b*, paratype, CM 39685, anterior carapace; scale bars 1 cm (new).

Additions to

Family MAJIDAE Samouelle, 1819

[Updates to Treatise Online 136]

Subfamily MITHRACINAE MacLeay, 1838

Amphithrax WINDSOR & FELDER, 2017, p. 232 [**Cancer aculeatus* HERBST, 1790 in 1782–1790, p. 248, pl. 19,104; OD]. Carapace obovate, widest approximately 66% the distance posteriorly, lateral margins of axial regions well defined by grooves, carapace surface with flattened densely spaced tubercles; rostrum short, bilobed; anterolateral and posterolateral margins spinose; chelae short, stout, smooth, manus and carpus spinose. *Pliocene*–*Pleistocene*: Caribbean Sea. *Holocene*: Caribbean Sea, northern and eastern South America. —FIG. 18, 2. **A. aculeatus* (HERBST), MNHN-IU-2016-4196, *Holocene*, Caribbean Sea (photo by L. Corbari, MNHN).

Mithrax LATREILLE, 1817, p. 23 [**Cancer hispidus* HERBST, 1790 in 1782–1790, p. 245; SD RATHBUN, 1925, p. 379]. Carapace obovate, nearly diamond shaped, widest in mid-branchial regions, lateral margins convex, surface ornamented with tubercles, sometimes densely; rostrum short, bifid; supraorbital cave thick, with triangular antorbital projection; intercalated spine reduced; postorbital spine short; hepatic region and branchial region with stout lateral spines; cervical groove deep;

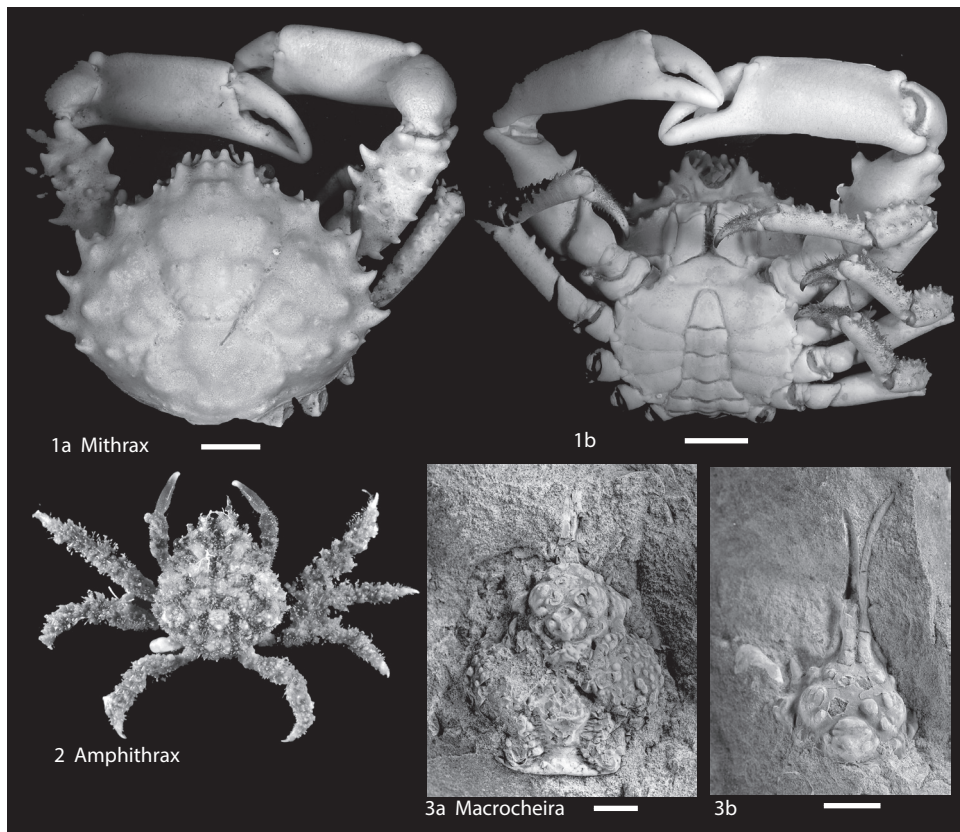


FIG. 18. Majidae and Macrocheiridae (p. 7–9).

chelipeds stout, other pereopods short. *Miocene–Pleistocene*: Jamaica. *Pliocene–Pleistocene*: Cuba. *Holocene*: Caribbean Sea, southwestern Atlantic Ocean.—FIG. 18, 1a–b. **M. hispidus* (HERBST), USNM 21605, Holocene, Bermuda, dorsal (a) and ventral (b) views, scale bars 1 cm (new, photo by R. Feldmann).

**Addition to
Family OREGONIIDAE Garth, 1958**

Platymaia MIERS in TIZARD, MOSELY, BUCHANAN, & MURRAY, 1885, p. 590 [**P. wyvillethomsoni*; M]. Carapace ovate, vaulted, with spines and setae, not well calcified; rostrum with two spines; one post-orbital spine; pereopods long, spinose, pereopods 2–4 longest. [Emended from POORE, 2004.] [The extinct species now referred to as *Platymaia* had previously been placed in a different genus. The move to *Platymaia* makes this the first notice in the fossil record.] *Oligocene (Rupelian)–Miocene (Burdigalian)*: Russia. *Holocene*: Australia, Indian Ocean, Southeast Asia.—FIG. 19. *P. alcocki* RATHBUN, 1916, MNHN-IU-2008-10364, Holocene, Mozambique (photo from MNHN, CC 4.0).

**Superfamily
PARTHENOPOIDEA
MacLeay, 1838**

[Updates to Treatise Online 131]

**Family PARTHENOPIDAE
MacLeay, 1838**

**Additions to
Subfamily PARTHENOPINAE MacLeay, 1838**

Agolambrus TAN & NG, 2007, p. 100 [**Lambrus agonus* STIMPSON, 1871, p. 131; OD]. Carapace subcircular, wider than long, regions moderately inflated, surface with widely spaced tubercles; orbits circular; rostrum short, trifid; anterolateral margins composed of two convex arcs, one short and anterior to intersection with cervical groove, second strong, large, arcing into anterolateral corner; branchial region with diagonally directed inflated region, may have a row of tubercles; moderate to large spine on posterolateral margin; spines at posterior corners. *Miocene*: Venezuela. *Holocene*:



FIG. 19. Oregoniidae (p. 9).

Caribbean Sea, northern South America, east coastal USA.—FIG. 20, 1. **A. agonus* (STIMPSON), USNM 1505015, Holocene, USA (Florida), scale bar 1 cm (new, photo by R. Feldmann).

Parthenopoides MIERS, 1879, p. 672 [**Lambrus massena* ROUX, 1830 in 1828–1830, p. 101, pl. 23; OD]. Carapace triangular; front wide, triangular, axially sulcate; branchial regions separated from axial regions by very deep grooves; anterolateral and posterolateral margins spinose. *Miocene* (*Langhian–Serravallian*): Austria, Hungary, Spain. *Holocene*: Mediterranean Sea.—FIG. 20, 3. **P. massena* (Roux), MNHN-IU-2019-559, Holocene, Mediterranean Sea, scale unknown (photo by Z. Duris, MNHN).

Tutankhamen RATHBUN, 1925, p. 530 [**Mesorhoea cristatipes* A. MILNE EDWARDS, 1880, p. 5; OD]. Carapace triangular, front trilobed; anterolateral margin serrate; axial regions inflated, ornamented with tubercles; branchial regions with oblique keel extending from posterolateral margin to mesogastric region. *Oligocene*: Australia (South Australia). *Holocene*: Caribbean Sea.—FIG. 20, 4. **T. cristatipes* (A. MILNE EDWARDS), Holocene, Caribbean Sea (A. Milne Edwards, 1880 in 1873–1881, pl. 31A, 6).

Additions to Subfamily DALDORFIINAE Ng & Rodríguez, 1986

Aragolambrus FERRATGES, ZAMORA, & AURELL, 2019, p. 306 [**A. collinsi*, p. 307, fig. 4; OD]. Carapace triangular, wider than long, widest in posterior one-third; axial regions inflated and bounded by deep grooves; dorsal surface covered with irregularly spaced, irregularly sized tubercles; rostrum short, downturned, sulcate; protogastric region strongly inflated, with large central tubercle; mesogastric, urogastric, and cardiac regions confluent; branchial region with oblique wide ridge extending onto carapace from strong posterolateral spine. *Eocene* (*Ypresian*): Spain.—FIG. 20, 2. **A. collinsi*, holotype, MPZ-2019/210, scale bar 1 cm (new; photo by S. Zamora, Instituto Geológico y Minero de España, Zaragoza, Spain).

Superfamily PILUMNOIDEA Samouelle, 1819

[Updates to Treatise Online 161]

Additions to Family PILUMNIDAE Samouelle, 1819 Subfamily EUMEDONINAE Dana, 1852

Nicolisia BESCHIN, BUSULINI & TESSIER in BESCHIN, BUSULINI, TESSIER, & ZORZIN, 2019, p. 132 [**N. antiqua*; OD]. Carapace angular; rostrum projected well beyond orbits, frontal margins arcuate, extending into a small spine at anterior corner; lateral margins sinuous; protogastric and metagastric regions inflated; carapace broken posterior to metagastric region. *Eocene* (*Priabonian*): Italy.—FIG. 21, 1. **N. antiqua*, holotype, VR 19.1832, scale bar 1 cm (new; photo by A. Busulini, Museo di Storia naturale, Venezia, Italy).

Subfamily PILUMNINAE Samouelle, 1819

Montemagrecarcinus DE ANGELI & CECCON, 2020, p. 130 [**M. efremi*; OD]. Carapace wider than long, hexagonal, regions very well defined; front with six spines excluding inner orbital angle, middle four broadly triangular and of same size, outermost two tiny and developed as spines on inner orbital angle; orbital margin with two fissures; anterolateral margin with several spines; posterolateral margin straight, granular; carapace surface sparsely ornamented with tubercles and granules. *Eocene* (*Ypresian*): Italy.—FIG. 21, 2. **M. efremi*, holotype MCV 19/05, scale bar 1 cm (new; photo by A. De Angeli, Associazione Amici del Museo Zannato, Montecchio Maggiore, Vicenza, Italy).

Addition to Superfamily PORTUNOIDEA Rafinesque, 1815

[Updates to Treatise Online 151]

Addition to Family CARCINIDAE MacLeay, 1838

Subfamily POLYBIINAE Paul'son, 1875

Olicarcinus BESCHIN & CHECCHI, 2018, p. 28 [**O. trevisani*; OD]. Carapace slightly wider than long, widest at approximately mid-length; front with four lobes including inner orbital lobes; orbits with two fissures; anterolateral margin straight, oblique with five spines including outer-orbital spines; posterior margin convex; protogastric, mesogastric, cardiac, and branchial regions with dense clusters of variably sized granules; branchial region with granular sinuous keel parallel to axis. *Eocene* (*Lutetian*): Italy.—FIG. 22. **O. trevisani*, holotype, MCZ 5747, scale bar 1 cm (new; photo by A. De Angeli, Associazione Amici del Museo Zannato, Montecchio Maggiore, Vicenza, Italy).

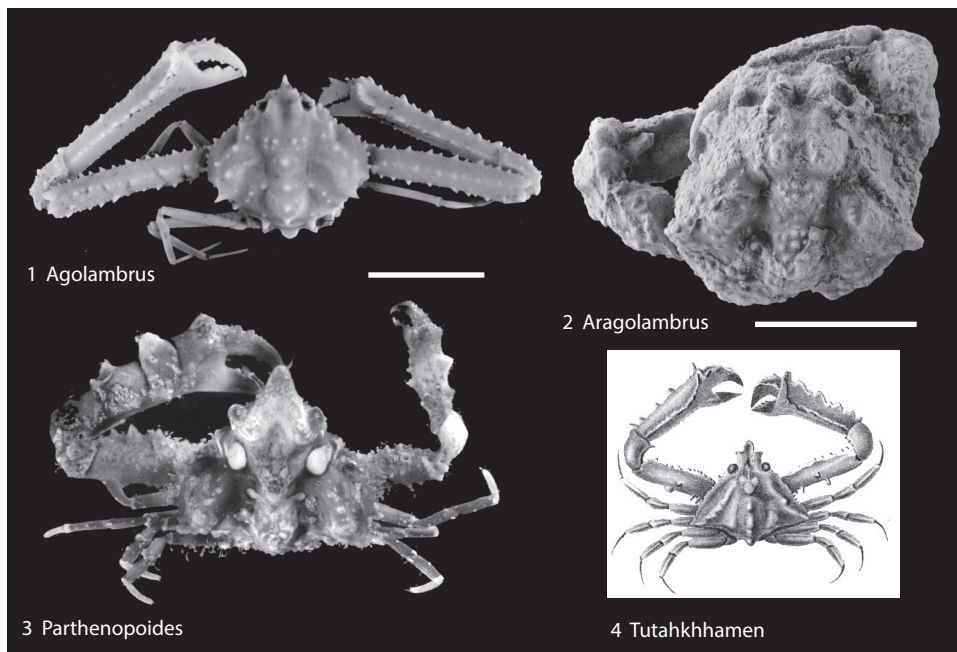


FIG. 20. Parthenopidae (p. 9–10).

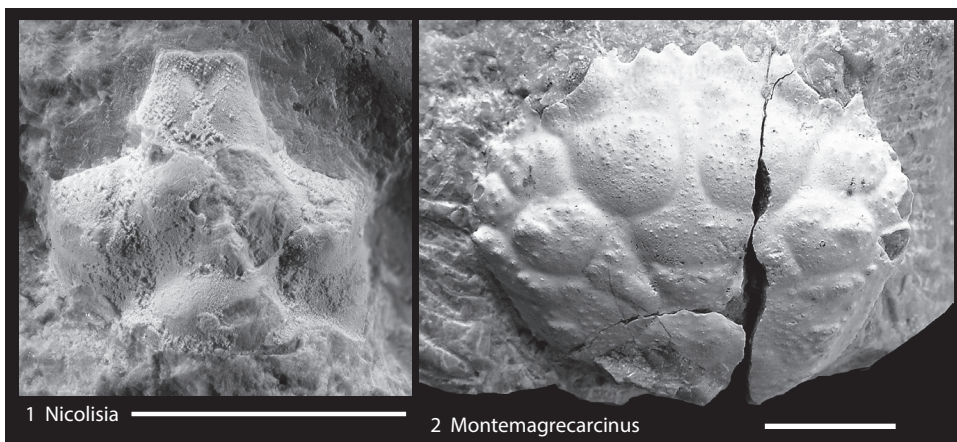


FIG. 21. Pilumnidae (p. 10).

**Addition to
Family LONGUSORBIIDAE Karasawa,
Schweitzer, & Feldmann, 2008**

Binkhorstia NOETLING, 1881, p. 365 [**Dromilites ubaghsi* VAN BINKHORST, 1857, p. 109, pl. 5, fig. 3; M]. Carapace square, transversely and longitudinally flattened; front narrow proximally, widening distally, steeply downturned, rimmed, axially sulcate; fronto-orbital width approximately 80% maximum carapace width; orbits directed forward, upper orbital margin biconcave, inner concavity

with upturned rim; outer concavity with two shallow fissures; outer-orbital spine large, directed forward; lower orbital margin smooth, visible in dorsal view; anterolateral and posterolateral margins confluent; posterolateral corner and posterior margin with rim; posterior margin weakly concave; regions well defined; male sternum circular, widest at sternite 5; sternites 1–3 fused with an incomplete notch between 3/4; sternite 4 widening posteriorly, with triangular axial depression forming beginning of straight sided sterno-abdominal cavity; sternite 8 apparently not visible in ventral view; male pleonal

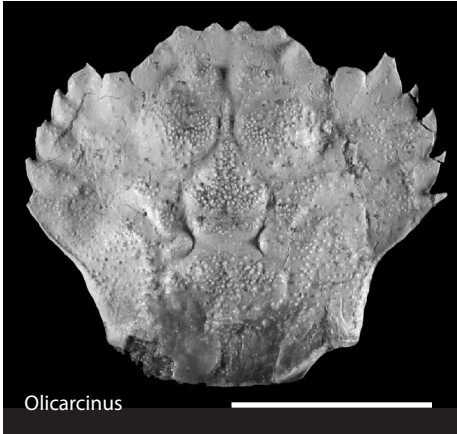


FIG. 22. Carcinidae (p. 10).



FIG. 23. Longusorbiidae (p. 11–12).

somites free, appearing to completely fill space between coxae of fifth pereopods. *Upper Cretaceous (Maastrichtian)*: Belgium, Netherlands.—FIG. 23.**B. ubaghsi* (VAN BINKHORST), KSU D 2905, Maastrichtian, Netherlands, scale bar 1 cm (new).

Addition to
Family PORTUNIDAE Rafinesque, 1815
Subfamily PORTUNINAE Rafinesque, 1815

Agnonectes BESCHIN, BUSULINI, & TESSIER, 2021, p. 72 [**A. curvus*; OD]. Carapace transversely ovate, much wider than long; front with at least six spines; orbit with two fissures bounding a short spine; anterolateral margins with seven spines of varying sizes; epibranchial region arcuate; proto-

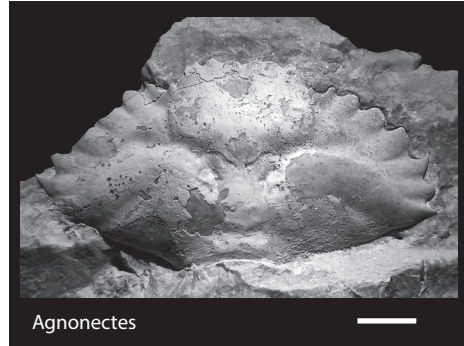


FIG. 24. Portunidae (p. 12).

gastric regions strongly inflated. *Eocene (Ypresian)*: Italy.—FIG. 24.**A. curvus*, holotype, MCZ 7487, scale bar 1 cm (new; photo by A. Busulini, Museo di Storia naturale, Venezia, Italy).

Addition to
PORTUNOIDEA *incertae sedis*

Romualdocarcinus PRADO & LUQUE IN PRADO, LUQUE, BARRETO, & PALMER, 2018, p. 744 [**R. salesi*; OD]. Carapace sub-rectangular, approximately as long as wide, widest anterior to carapace mid-length and to epibranchial spine; fronto-orbital margin nearly as wide as carapace maximum width; rostrum bifid, extending well beyond outer orbital spine, bearing a pair of short lateral spines at anterior third; orbits wide, directed forward, with two short open fissures; outer orbital spine well developed; anterolateral margin shorter than posterolateral margin, with three short, triangular spines excluding the outer orbital spine, first two spines the largest, epibranchial spine weakly developed, directed laterally; carapace regions well defined as broad, inflated areas. *Lower Cretaceous (Aptian, Albian)*: Brazil.—FIG. 25.**R. salesi*, holotype, DGEO-CTG-UFPE-8122, scale bar 2 mm (new; photo by J. Luque, Museum of Zoology, Cambridge University, UK).

Superfamily POTAMOIDEA
Ortmann, 1896

[Updates to Treatise Online 142]

Addition to
Family POTAMIDAE Ortmann, 1896
Subfamily POTAMINAE Ortmann, 1896

Alontecarcinus DE ANGELI & CAPORIONDO, 2019, p. 10 [**A. buratoi*; OD]. Carapace ovoid, widest in anterior one-third, front straight, orbits wide, sinuous, with intra-orbital projection and short outer-orbital spine; regions moderately defined, elongate region extending from epibranchial into

hepatic area; lateral margins smooth. *Eocene* (*Bartonian*): Italy.—FIG. 26. **A. buratoi*, drawing of holotype, IGVR 19.38, scale bar 1 cm (adapted from De Angeli & Caporiondo, 2019, fig. 3A).

Superfamily PSEUDOZIOIDEA Alcock, 1898

[Updates to Treatise Online 165]

Addition to

Family PSEUDOZIIDAE Alcock, 1898

Mainyozius DE ANGELI & BELLIN, 2022, p. 94 [**M. bituberculatus*; OD]. Carapace ovate, generally smooth, regions not defined, strongly vaulted anteriorly; front downturned at edge, very weakly sinuous; orbits rimmed; anterolateral margin initially straight, with two small spines at antero-lateral corner; posterolateral margin straight. *Eocene* (*Lutetian*): Italy.—FIG. 27. **M. bituberculatus*, holotype, MCV.21/045-21.40, scale bar 1 cm (new; photo by A. De Angeli, Associazione Amici del Museo Zannato, Montecchio Maggiore, Vicenza, Italy).

Superfamily RETROPLUMOIDEA Gill, 1894

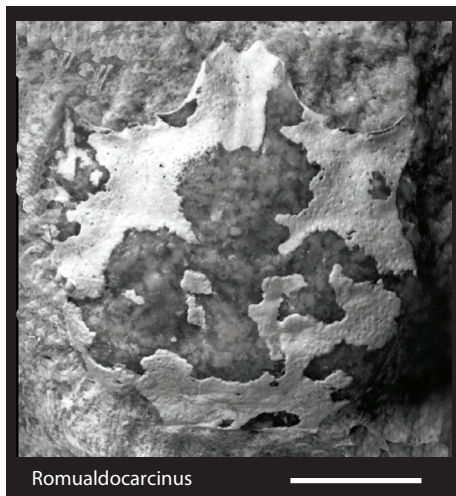
[Updates to Treatise Online 106]

A new family has been recognized within Retroplumoidea.

Family ARCHAEOPIDAE Karasawa, Kishimoto, Ohara & Ando, 2019

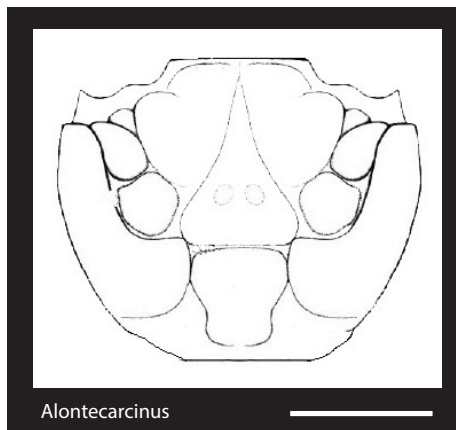
[Archaeopidae Karasawa, KISHIMOTO, OHARA, & ANDO, 2019, p. 52]

Carapace subquadrate, somewhat wider than long; front narrow, produced beyond orbits, downturned, axially sulcate; orbits very wide, sinuous, rimmed, continuing to divergent lateral margin of front, terminating in sharp, anterolaterally directed post-orbital spine, with a shallow notch laterally; infraorbital spines well developed, projected beyond outer-orbital spines; lateral margins weakly convex, diverged posteriorly, bearing short spines at approximately mid-length; dorsal surface with well-defined regions; protogastric regions with straight or arcuate ridge; mesogastric regions with transverse ridges; mesobranchial regions with oblique, discontinuous swellings; sternum wide, widest at sternite 5; sternal sutures 3/4, 4/5, 5/6, and 6/7 incomplete; sternites 6 and 7 with median sulcus; sternites 8 apparently



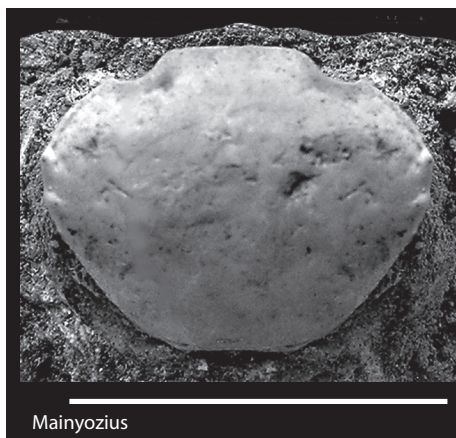
Romualdocarcinus

FIG. 25. *Portunoidea incertae sedis* (p. 12).



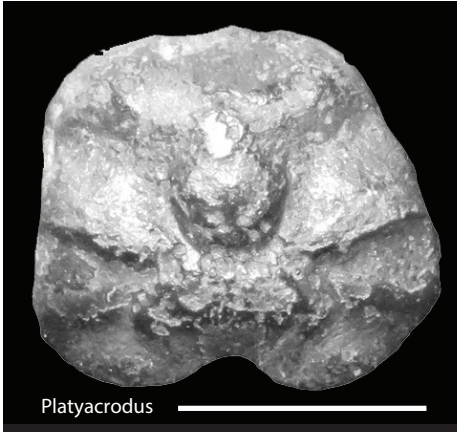
Alontecarcinus

FIG. 26. Potamidae (p. 12–13).



Mainyozius

FIG. 27. Pseudoziidae (p. 13).



Platyacrodus

FIG. 28. Retroplumidae (p. 14).



Vicetitrapezia

FIG. 29. Vicetitrapeziidae (p.14).



Braggitrapezia

FIG. 30. Trapeziidae (p. 14–15).

small; sterno-pleonal cavity of male deep, well defined; pleon of male narrow with free somites; pleon of female wider than that of male with free somites; pereopods 1 with sexually dimorphic chelae. Chelae of male subequal, dissimilar in shape; chelae of female slightly subequal, similar in shape. [Emended from Karasawa & others, 2019.]

Archaeopus RATHBUN, 1908, as described in Treatise Online 106, p. 1 (in family Retroplumidae) is now referred to the family Archaeopidae. See fig. 2, *I* on p. 3 of Treatise Online 106.

Addition to Family RETROPLUMIDAE Gill 1894

Platyacrodus AMEGHINO, 1935, p. 648 [**P. unicus*, p. 648, fig. 2–5; M] [This is a newly resurrected, overlooked genus placed within Retroplumidae by BOGAN, AGNOLIN, & EZCURRA, 2019]. Carapace rectangular, with transverse ridges on hepatic, epibranchial, and branchial regions; mesogastric and cardiac regions well defined. May be a synonym of *Costacopluma*. [BOGAN, AGNOLIN, & EZCURRA, 2019.] *Paleocene (Danian)*: Argentina.—FIG. 28. **P. unicus*, holotype, MACN-A 12701, scale bar 5 mm (Bogan, Agnolin, & Ezcurra, 2019, fig. 3A).

Additions to Superfamily TRAPEZIOIDEA Miers, 1886

[Updates to Treatise Online 153]

A new family and genus have been erected within Superfamily Trapezioida.

Family VICETITRAPEZIIDAE Beschin, Busulini, & Tessier, 2021

[Vicetitrapeziidae BESCHIN, BUSULINI, & TESSIER, 2021, p. 104]

As for genus. *Eocene (Ypresian)*.

Vicetitrapezia BESCHIN, BUSULINI, & TESSIER, 2021, p. 106 [**V. exaltissimo*; OD]. Appearing to be front, broken orbits, and partial anterior of carapace; originally described rotated 180 degrees. *Eocene (Ypresian)*: Italy.—FIG. 29. **V. exaltissimo*, holotype, MCZ 6194, scale bar 1 cm (new; photo by A. Busulini, Museo di Storia naturale, Venezia, Italy).

Addition to Family TRAPEZIIDAE Miers, 1886

Braggitrapezia DE ANGELI & CAPORIONDO, 2020, p. 122 [**B. alessandroi*; OD]. Carapace octagonal, smooth; front wide sinuous, with four lobes; orbits rectangular, directed anterolaterally; anterolateral

margins parallel to axis, lobate; posterolateral margin straight. *Eocene (Ypresian)*: Italy.—FIG. 30. **B. alessandroi*, holotype, MCV 19/04, scale bar 1 cm (new; photo by A. De Angeli, Associazione Amici del Museo Zannato, Montecchio Maggiore, Vicenza, Italy).

Superfamily Xanthoidea MacLeay, 1838

[Updates to Treatise Online 153]

Addition to Family Pseudorhombilidae Alcock, 1900

Scopolius ŠTEVČIĆ, 2011, p. 137 [**Xanthias nuttingi* RATHBUN, 1898, p. 271, pl. 4,1; OD]. Carapace subovate, longitudinally vaulted, flattened transversely, anteriorly ornamented with scabrous granules; regions well defined; front bilobed; anterolateral margin with four spines including outer-orbital spine; small portion of sternite 8 visible in ventral view; chelae large. [Emended from RATHBUN, 1898, p. 271.] [Newly recognized fossils have been added to this genus, hence its addition to this Update.] *Pliocene*: Jamaica. *Holocene*: Caribbean Sea, Gulf of Mexico.—FIG. 31. **S. nuttingi* (RATHBUN), scale bar 5 mm (Rathbun, 1930, fig. 74).

Addition to XANTHOIDEA indeterminate

Collinscarcinus ARTAL & VAN BAKEL, 2020, p. 20 [**C. obliquesulcatus*; OD]. Carapace ovate, wider than long, anterior one-third of carapace strongly vaulted; ornamented overall with dense, irregularly spaced and shaped tubercles; front narrow; fronto-orbital width narrow; carapace regions well defined by deep, narrow grooves. Possibly Tumidocarcinidae. *Eocene (Ypresian)*: Spain.—FIG. 32. **C. obliquesulcatus*, holotype, MGSB 75421, scale bar 1 cm (new; photo by B. W. M. Van Bakel, Oertijd museum, Boxtel, The Netherlands).

ABBREVIATIONS FOR MUSEUM REPOSITORIES

- AHF: Allan Hancock Foundation Crustacea Collection, Los Angeles County Museum, California
 CBM: Natural History Museum and Institute, Chiba, Japan
 CHM: Charleston Museum, Charleston, South Carolina, USA
 IGVR: Museo di Storia Naturale di Verona
 KSU D: Decapod Comparative Collection, Department of Geology, Kent State University, Kent, Ohio, USA
 MCV: Museo Civico “D. Dal Lago” di Valdagno, Vicenza, Italy
 MCZ: Museo Civico “G. Zannato” di Montecchio Maggiore, Vicenza, Italy

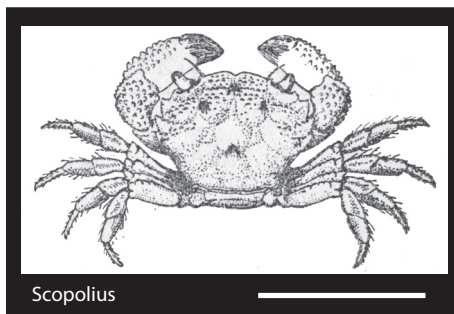


FIG. 31. Pseudorhombilidae (p. 15).

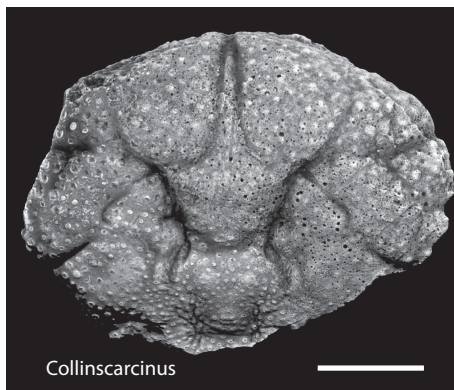


FIG. 32. Xanthoidea indeterminate (p. 15).

- MFM: Mizunami Fossil Museum, Mizunami, Gifu, Japan
 MGSB: Museo Geológico del Seminario de Barcelona, Barcelona, Spain
 MHBNx: Muséum d'Histoire naturelle de Bordeaux, France
 MNHN: Muséum National d'histoire naturelle, Paris, Crustacean Collection, France
 MPEG: Museu Paraense Emílio Goeldi (Brazil)
 MPZ: Museo de Ciencias Naturales de la Universidad de Zaragoza, Spain
 MNHD: Natural History Museum of Denmark, Copenhagen, Denmark
 ULB: UniLasalle paleontological collections, Beauvais, France
 VR: Museo di Storia naturale di Verona, Italy

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