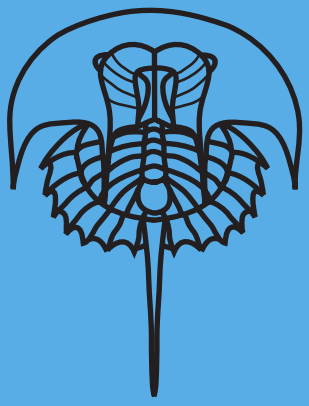

TREATISE ONLINE

Number 181

Part R, Revised, Volume 1: Systematic Descriptions: Additions to Infraorder Brachyura, Section Dromiacea, and Infraorder Glypheidea

Carrie E. Schweitzer and Rodney M. Feldmann

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PART R, REVISED, VOLUME 1, TREATISE ONLINE 181:

SYSTEMATIC DESCRIPTIONS: ADDITIONS TO INFRAORDER BRACHYURA, SECTION DROMIACEA, AND INFRAORDER GLYPHEIDEA

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Over the course of the intervening years since Schweitzer, Feldmann, and Karasawa (2012) was published, new knowledge has accumulated and new taxa have been discovered and recognized. Thus, our understanding of Section Dromiacea has grown. The following are new genera classifications covering 2012 to December 2022. [These are additions to Systematic descriptions: Infraorder Brachyura, Section Dromiacea, *Treatise Online* 51, Schweitzer, Feldmann, & Karasawa, 2012.]

Additions to Family GONIODROMITIDAE Beurlen, 1932

[Goniodromitidae Beurlen, 1932, p. 62] [=Pithonotinae Glaessner, 1933, p. 180]

Biohermia Beschin, Busulini, & Tessier in Beschin, Busulini, Tessier, & Zorzin, 2016, p. 53 [**B. chalmasi,* p. 53, pl. 7,*3*; OD]. Carapace longer than wide, moderately vaulted longitudinally and transversely; rostrum bilobed, orbits oriented anterolaterally; cervical groove deepest axially; postcervical and branchiocardiac grooves weak. *Eocene* (*Ypresian*): Italy.——Fig. 1,*1*. **B. chalmsi,* holotype, VR 93998, scale bar 5 mm (new; photo by A. Busulini, Museo di Storia naturale, Venezia, Italy).

Paradistefania Beschin, Busulini, & Tessier, 2015, p. 56 [**P. piccolii,* p. 56, pl. 1,7; OD]. Carapace wider than long, ovate, regions inflated; rostrum bilobate; anterolateral margins with at least three blunt lobes; posterolateral margin convex; grooves moderately developed; mesogastric, urogastric, and cardiac regions bisected by axial groove. *Eocene* (*Ypresian*): Italy.——Fig. 1,*2*. **P. piccolii,* holotype, MCZ 3512, scale bar 1 cm (new; photo by A. Busulini, Museo di Storia naturale, Venezia, Italy).

Additions to Family PROSOPIDAE Von Meyer, 1860

[*nom. correct.*, Glaessner, 1969, p. 484, *pro* Prosoponiden Von Meyer, 1860, p. 183]

Bajoprosopon van Bakel, Maerten, Jagt, & Fraaije, 2021, p. 7 [**B. piardi,* p. 8, fig. 4; OD]. Carapace longer than wide; ornamented with small, evenly space granules and large swellings on highest parts of regions; cervical, postcervical, and branchiocardiac grooves deep; mesogastric region with one large swelling on anterior process and two ovate swellings posteriorly; protogastric and mesogastric regions undifferentiated, with three large swellings; metagastric region with elongate swellings on either side of axis; epibranchial region with at least three large swellings; cardiac region anteriorly inflated; remainder of branchial region without large swellings. *Middle Jurassic* (*Bajocian*): France.——Fig. 2,*1*. **B. piardi,* holotype, MAB k.3764, scale bar 5 mm (new; photo by B. W. M. Van Bakel, Oertijdmuseum, Boxtel, The Netherlands).

Europrosopon Klompmaker, Starzyk, Fraaije, & Schweigert, 2020, p. 21 [**Prosopon aculeatum* Von Meyer, 1857, p. 556; OD] [=*Prosopon verrucosum* Reuss, 1858, p. 11; =*Prosopon barbulescuae* Schweitzer & others, 2018, p. 327, fig. 18]. Carapace slightly longer than wide; widest posteriorly; metagastric region long and wide; urogastric region narrow, bounded by deep postcervical groove. *Upper Jurassic* (*Kimmeridgian*): Germany; *Tithonian*: Austria, Czech Republic, Romania.——Fig. 2,*2*. **E. aculeatum* (Von Meyer), NHMW 2007/0149/0005, scale bar 1 cm (new; photo by R. Feldmann).

Petersbuchia Schweigert, 2023, p. 289 [**P. thauckei;* OD] [*non Petersbuchia* Schweigert, 2021, (unavailable name)]. Carapace rectangular, longer than wide; outer-orbital spine long; surface coarsely granular; rostrum trifid, axially broadly sulcate;

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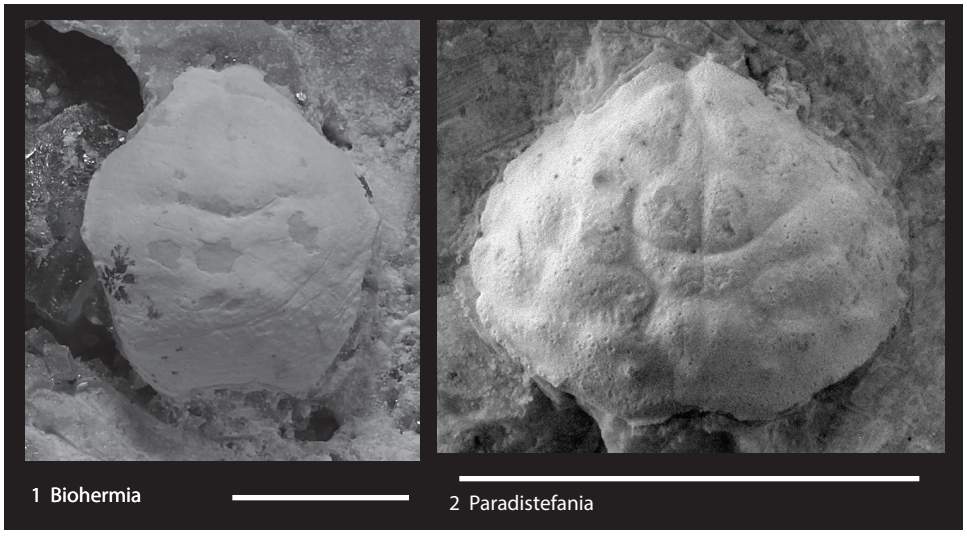

Fig 1. Goniodromitidae (p. 1).

cervical and branchiocardiac grooves deep; protogastric and heaptic regions not well differentiated, with three or four large tubercles. *Upper Jurassic* (*Kimmeridgian*): Germany.——Fig. 2,*3. *P. thauckei,* holotype, SMNS 70622, scale bar 5 mm (new; photo by G. Schweigert, SMNS).

Prosopon Von Meyer, 1835, p. 329 [**P. tuberosum* Von Meyer, 1840, p. 21, pl. 4,31; SD Glaessner, 1929, p. 341]. Carapace longer than wide, widest at approximately midbranchial region; regions well defined by grooves and comprised of greatly inflated swellings; cervical groove concave forward; branchiocardiac groove sinuous; post-cervical groove deep, where present; mesogastric region overall triangular, comprised of three large swellings arranged in a triangular shape; intestinal region long, narrow, distinct; subbranchial region well developed when present; posterior margin biconcave, widely rimmed. [Emended from Schweitzer & Feldmann, 2009.] [Type species is not illustrated because it is known only from drawings; the specimens have apparently been lost (Schweitzer & Feldmann, 2009, p. 67).] *Middle Jurassic–Lower Cretaceous. Middle Jurassic* (*Bathonian*): UK. *Upper Jurassic* (*Kimmeridgian*): Germany, Switzerland; *Tithonian:* Austria, Czech Republic, Romania. *Lower Cretaceous* (*Hauterivian*): France.——Fig. 2,*4. P. mammillatum* Woodward, 1868, cast of holotype SM B2719, Bathonian, UK (England), scale bar 5 mm (new; photo by R. Feldmann).

Additions to Family LONGODROMITIDAE Schweitzer & Feldmann, 2009

[Longodromitidae Schweitzer & Feldmann, 2009, p. 100]

Acareprosopon Klompmaker, 2013, p. 158 [*Pithonoton bouvieri* Van Straelen, 1944, p. 4, pl. I,*2*; OD]. Carapace longer than wide, overall rectangular; front wide, weakly concave axially, rimmed; orbits directed forward, deep, with short anterolaterally directed outer-orbital spine; cervical groove and branchiocardiac grooves deep, postcervical groove short, only developed axially; subhepatic region rounded, bounded by deep grooves. *Lower Cretaceous* (*Albian*)*–Upper Cretaceous* (*Cenomanian*): Spain.——Fig. 3,*1. *A. bouvieri* (Van Straelen), MAB k2920, scale bar 1 mm (new; photo by A. Klompmaker, University of Alabama, Tuscaloosa).

Cuchiadromites Ossó, van Bakel & Ferratges, 2021, p. 2 [**C. jadeae,* p. 2, figs. 2–3; OD]. Carapace at least as long as wide; rostrum poorly known; orbits deep, forward directed, possibly with outer-orbital spine; cervical, postcervical, and branchiocardiac grooves deep; carapace ornamentation consisting of fungiform tubercles that sometimes fuse laterally with one another; protogastric and hepatic regions confluent; cardiac region very large, covered with fused fungiform tubercles. *Lower Cretaceous* (*Aptian*): Spain.——Fig. 3,*2. *C. jadeae,* holotype, MM-CE02057, scale bar 5 mm (new; photo by À. Ossó, Tarragona, Spain).

Levashidromites van Bakel, Mychko, Spiridinov, Jagt, & Fraaije, 2021, p. 5 [**L. cornutus,* p. 5, fig. 4A–D, 7D; OD]. Carapace slightly longer than wide, ornamented with evenly spaced large granules; rostrum unknown; orbits deep, directed forward, with inner orbital spine and stout, anterolaterally directed outer-orbital spine; mesogastric region short, with triangular inflated areas posteriorly and axial groove posteriorly; metagastric region narrow, wide; protogastric and hepatic regions confluent; epibranchial region with a triangular subregion along lateral margin. *Lower Cretaceous* (*Aptian*): Russia.——Fig. 3,*3.*L. cornutus,* holo-

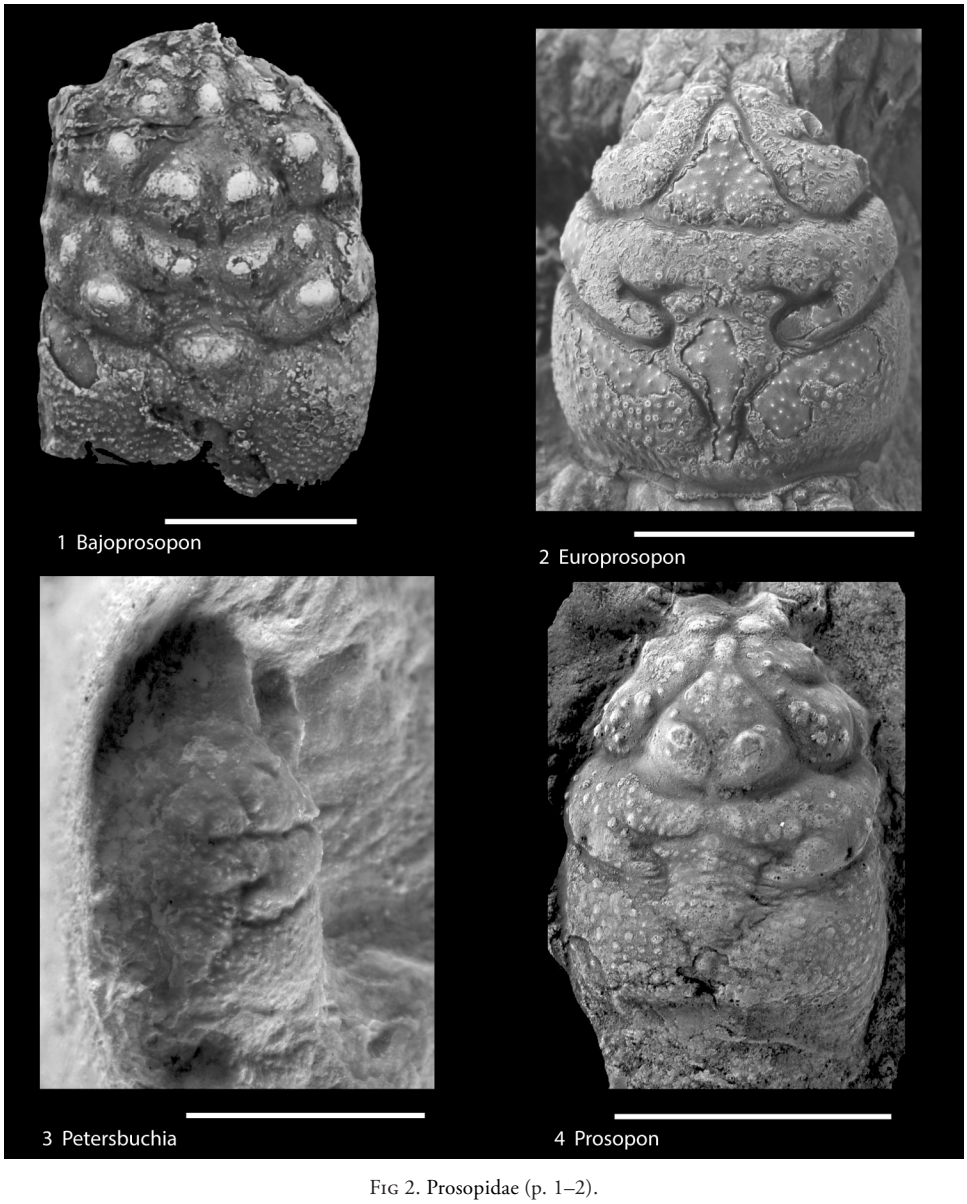

Fig 2. Prosopidae (p. 1–2).

type, MWO 1 9977, scale bar 5 mm (new, photo by E. Mychko, Shirshov Institute of Oceanology, Moscow, Russia).

Navarrara Klompmaker, 2013, p. 155 [*N. betsieae*, p. 155, fig. 4; OD]. Carapace not as wide as long, widest in branchial regions; regions well defined, with widely spaced granules and tubercles; cervical and postcervical grooves deep, epibranchial region short; rostrum possibly bilobed; orbits poorly known. *Lower Cretaceous* (*Albian*): Spain.——Fig. 3,*4*. **N. betsiae,* composite based upon holotype MGSB 77705 and MAB k3004, scale bar 1 mm (new; photo by A. Klompmaker, University of Alabama, Tuscaloosa).

Pilidromia Schweitzer, Feldmann, Lazăr, Schweigert & Franţescu, 2018, p. 325 [**Planoprosopon thiedeae* Schweigert & Koppka, 2011, p. 224, fig. 3A; OD]. Carapace widest at position of outer augenrest angle and epibranchial regions, strongly vaulted longitudinally and transversely; augenrest shallow, bounded by rounded inner and outer swellings on upper margin; metagastric region comprised of two large spherical swellings; protogastric and hepatic regions distinctly differentiated;

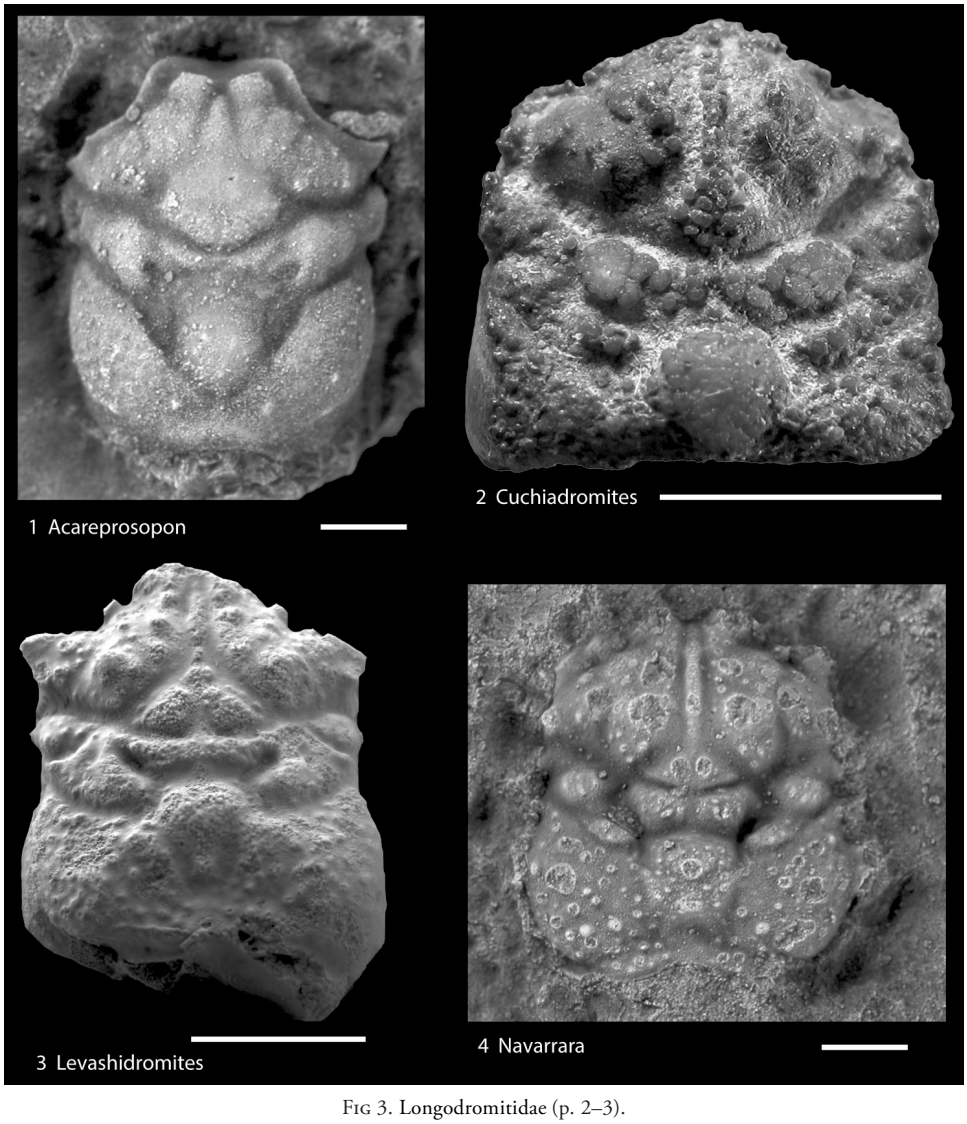

Fig 3. Longodromitidae (p. 2–3).

cardiac region very strongly inflated; branchiocardiac groove strongly obliquely directed posteriorly; carapace strongly deflexed posteriorly. [Schweitzer & others, 2018, p. 325.] *Upper Jurassic* (*Kimmeridgian*): Germany.——Fig 4,*1*. **P. thiedeae* (Schweigert & Koppka), LPBIIIart277, scale bar 1 mm (new; photo by R. Feldmann).

Rosadromites Schweitzer, Feldmann, Rader, & Franţescu, 2016, p. 8 [**R. texensis,* p. 9, fig. 5; OD]. Outer-augenrest spine directed anterolaterally and upward; protogastric region apparently with some tubercles or swellings and well differentiated from inflated hepatic region, distinct within family; metagastric region inflated, short, very wide, comprised of convex forward arcs; intestinal region broadly triangular, granular, depressed below level of cardiac and branchial regions, well marked for family. [Schweitzer & others, 2016, p. 9.] *Lower Cretaceous* (*Albian*): USA (Texas)——Fig. 4,*2*. **R. texensis*, holotype TMM NPL 62676, scale bar 1 cm (new; photo by R. Feldmann).

?Juranecrocarcinus van Bakel, Fraaije, Jagt, & Skupien, 2020, p. 8 [**Nodoprosopon angulosum* Wehner, 1988, p. 59, pl. 4, fig. 7; OD]. Carapace slightly longer than wide, densely granular overall; front wide, with large tubercles axially, axially sulcate; orbits poorly known; anterolateral margins with two triangular spines; mesogastric region narrow; protogastric and hepatic regions not differentiated but comprised of numerous swellings;

mesogastric region wide, with sinuous anterior margin; epibranchial region with three swellings, one narrow and directed at cardiac region. *Upper Jurassic* (*Kimmeridgian*): Germany.——Fig. 4,*3*. **J. angulosum* (Wehner), cast (MAB k.3762) of holotype SNSB-BSPG 2016 XXI 488, scale bar 5 mm (new; photo by B. W. M. Van Bakel, Oertijdmuseum, Boxtel, The Netherlands).

Additions to Family JURELLANIDAE Klompmaker & Robins, 2019

[Jurellanidae Klompmaker & Robins in Robins & Klompmaker, 2019, p. 1136]

Carapace ovate, approximately as wide as long; rostrum wide, downturned, may be short or extending beyond orbits; orbits directed forward, with marginal spine; cervical and branchiocardiac grooves moderately deep or shallow, parallel or subparallel, closely spaced; carapace surface weakly and densely granular where cuticle preserved. *Upper Jurassic* (*Tithonian*).

Jurellana Schweitzer & Feldmann, 2010a, p. 245 [**J. tithonia,* p. 245, fig. 1; OD]. Carapace ovate, approximately 55% maximum carapace width, strongly downturned at 90° angle to dorsal surface; orbits small, shallow, with small, forward-directed outer-orbital spine; fronto-orbital width approximately 80% maximum carapace width; lateral margins convex; notch at intersection of cervical groove, notch followed by blunt projection; cervical groove moderately deep, post-cervical groove weak, branchiocardiac groove very weak. *Upper Jurassic* (*Tithonian*): Austria.——Fig. 5,*1*. **J. tithonia,* holotype, NHMW 1990/0041/2518, scale bar 1 mm (new; photo by R. Feldmann).

Ovalopus Klompmaker & Robins in Robins & Klompmaker, 2019, p. 1136 [**Coelopus hoheneggeri* Moericke, 1889, p. 65, pl. 6,*18*; OD]. Carapace ovate, approximately as wide as long; rostrum, downturned, extending beyond orbits, 33–50% carapace width; orbits directed forward, with marginal spine; cervical and branchiocardiac grooves moderately deep, parallel, closely spaced; carapace surface weakly and densely granular overall. *Upper Jurassic* (*Tithonian*): Austria, Czech Republic, Romania.——Fig. 5,*2a–b*. *O. convexus* Schweitzer & Feldmann, 2010b, holotype, LPBIIIart-068, Tithonian, Romania, *a*, dorsal view, *b*, oblique lateral view, scale bars 5 mm (new; photo by R. Feldmann).

Additions to Family LECYTHOCARIDAE Schweitzer & Feldmann, 2009

[Lecythocaridae Schweitzer & Feldmann, 2009, p. 94]

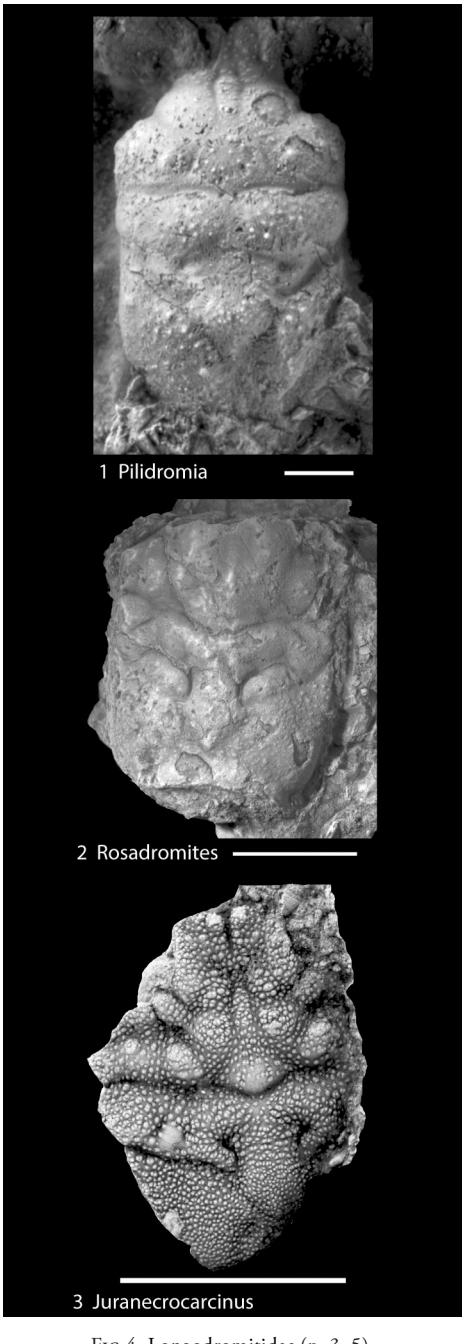

Fig 4. Longodromitidae (p. 3–5).

Prolecythocaris Schweigert & Robins, 2016, p. 326 [**P. hauckei,* p. 326, fig. 2A, B; OD]. Carapace wider than long, ornamented with large, widely and evenly spaced granules; rostrum wide, axially sulcate, downturned distally; orbits forward

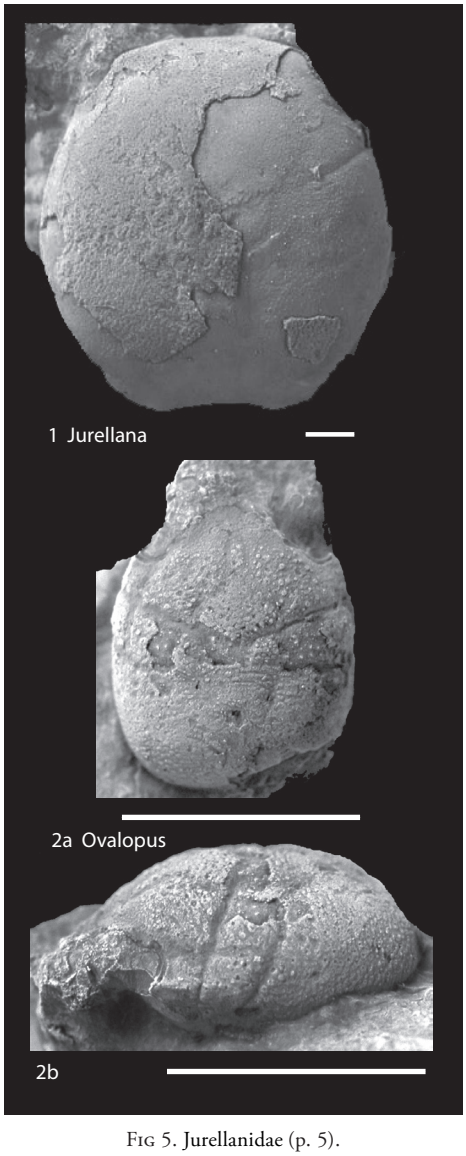

Fig 5. Jurellanidae (p. 5).

directed, rimmed, with at least one fissure, outer-orbital spine directed anterolaterally; anterolateral margin with a few spines; posterolateral margin granular and with one large spine; cervical, post-cervical and branchiocardiac grooves moderately deep; metagastric region short, urogastric region not developed; posterior margin biconvex. *Upper Jurassic* (*Kimmeridgian*): Germany.——Fig. 6. **P. hauckei,* holotype, SMNS 70326/1, scale bar 2 mm (new; photo by G. Schweigert, SMNS).

Additions to HOMOLODROMIOIDEA *incertae sedis*

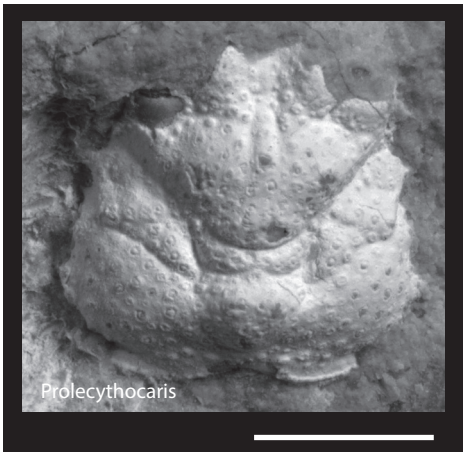

Fig 6. Lecythocaridae (p. 5–6).

Cretamaja Klompmaker, 2013, p. 169 [C. *granulata*, p. 169, fig. 11A–C; OD]. Carapace markedly longer than wide, overall rectangular shape; rostrum poorly known, probably comprised of two spines; orbit rimmed, directed anterolaterally, with outer-orbital spine and orbital fissure; anterolateral margin with one spine; carapace regions moderately defined, overall sparsely granular; mesogastric most inflated, with ovate swellings along posterior margin; metagastric region wider than base of mesogastric region; urogastric region short, narrow; cardiac region triangular; cervical groove moderately deep; postcervical and branchiocardiac grooves more weakly developed. *Lower Cretaceous* (*Albian*): Spain.——Fig. 7,1. **C. granulata*, holotype, MGSB 77706, scale bar 5 mm (new; photo by A. Klompmaker, University of Alabama, Tuscaloosa).

Koskobilius Klompmaker, 2013, p. 170 [**K. postangustus,* p. 170, fig. 11D, E; OD]. Carapace longer than wide, widest at epibranchial region; rostrum, orbits, and margins poorly known; regions moderately inflated, ornamented with tiny granules and isolated swellings; mesogastric region with ovate swellings parallel to posterior margin. Possibly juvenile of *Cretamaja granulata. Lower Cretaceous* (*Albian*): Spain.——Fig. 7,2. **K. postangustus*, holotype, MGSB 77707, scale bar, 1 mm (new; photo by A. Klompmaker, University of Alabama, Tuscaloosa).

Additions to Family BASINOTOPIDAE Karasawa, Schweitzer, & Feldmann, 2011

[Basinotopidae Karasawa, Schweitzer, & Feldmann, 2011, p. 539]

Mclaynotopus Artal, Ferratges, van Bakel, & Zamora, 2022, p. 594 [**M. longispinosus*, p. 595, fig. 3-4; OD]. Carapace longer than wide, widest at approximately midlength; rostrum triangular, downturned; anterolateral margins with three or four

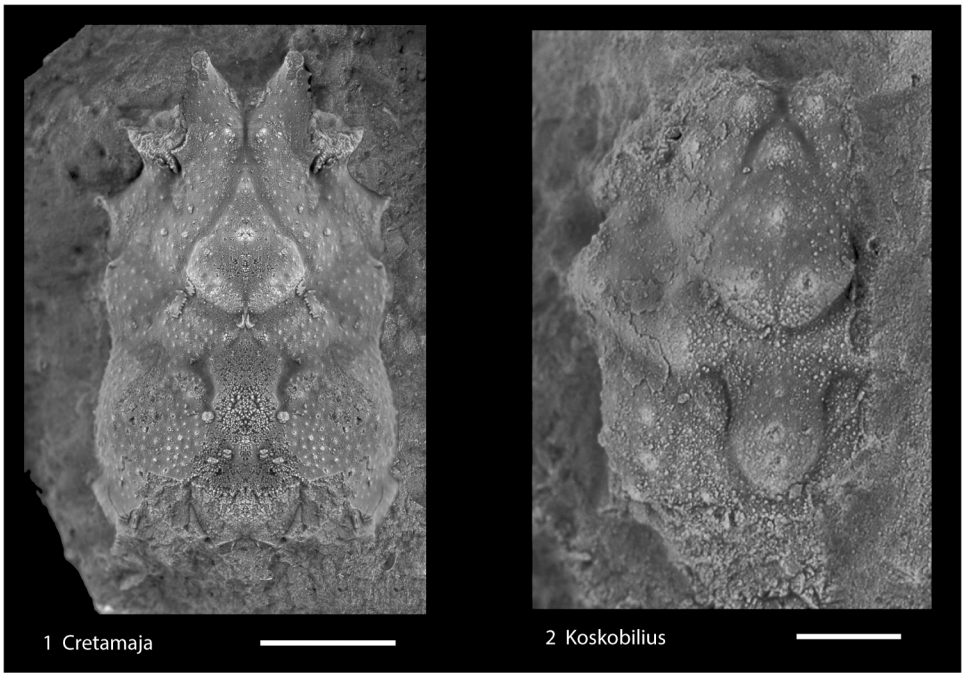

Fig 7. Homolodromioidea *incerta sedis* (p. 6).

spines, last one very long, stout, directed anterolaterally; posterolateral margin with a few spines and granules; carapace regions well defined, ornamented with tubercles on elevated areas; cervical, postcervical, and branchiocardiac grooves deep. *Eocene* (*Ypresian-Lutetian*): Spain. *Lutetian:* Austria. ——Fig. 8. **M. longispinosus,* holotype MGSB 77597, Eocene, Spain, scale bar 1 cm (Artal & others, 2022, fig. 3,*1*).

Additions to Family DROMIIDAE De Haan, 1933

[*nom. correct.* ICZN Opinion 688, 1964, *pro* Dromiacea de Haan, 1833 in 1833–1850, p. 102; on ICZN Official List, name no. 356; ICZN Opinion 688, 1964]

Alcockdromia McLay, 2020, p. 83 [**Dromia fallax* Latreille in Milbert, 1812, p. 272; OD]. Carapace wider than long, sculptured with deep grooves, unevenly pubescent, shaggy; rostrum median lobe longer than lateral lobes, lateral lobes expanded upturned, forming erect parapet-like rim; anterolateral margin and orbit elevated, with shallow groove behind, with one or two blunt teeth; uropod visible as dorsal plate. [Emended from McLay, 2020, p. 83.] *Upper Pleistocene:* Japan. *Holocene:* Indo-West Pacific Ocean.——Fig. 9,*1*. **A. fallax* (Latreille), USNM 1441126, Holocene, Philippines, scale bar 5 mm (new; photo by R. Feldmann).

Costadromia Feldmann & Schweitzer, 2019, p. 2 [**C. hajzeri,* p. 2, fig. 1; OD]. Carapace slightly wider than long, with granular frontal and orbital ridge, blunt suborbital spine, granular and nodose carapace ornamentation, and three transverse, arcuate granular ridges on meso- and metabranchial regions; cervical, postcervical, and branchiocardiac grooves weak. *Upper Cretaceous* (*Campanian*): USA (New Jersey).——Fig. 9,*2*. **C. hajzeri,* holotype

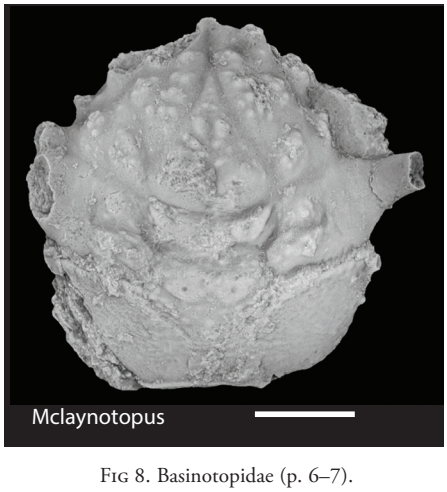

Fig 8. Basinotopidae (p. 6–7).

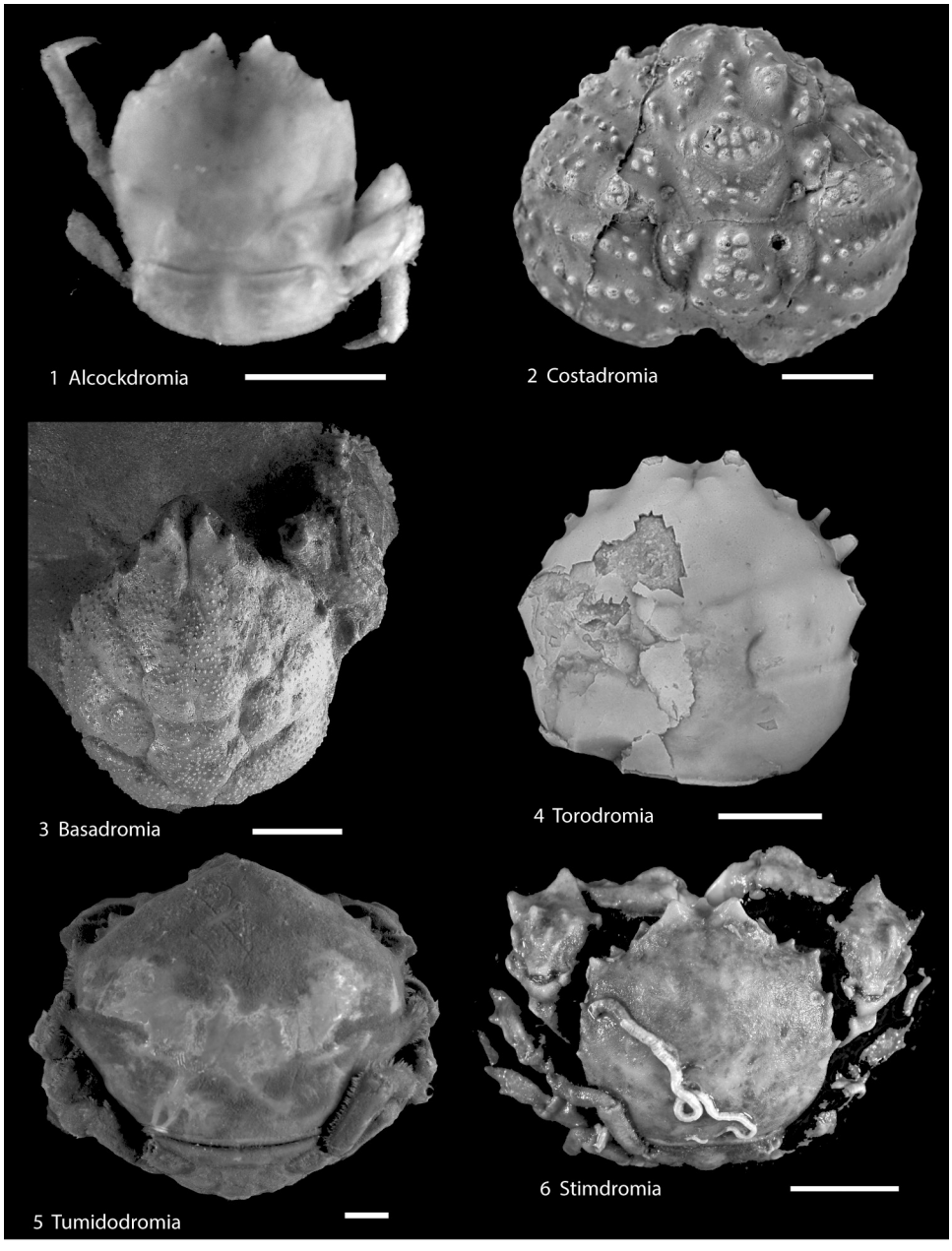

Fig 9. Dromiidae (p. 7–9).

NJSM 24329, scale bar 1 cm (new; photo by R. Feldmann).

Basadromia Artal, van Bakel, Domínguez, & Gómez, 2016, p. 440 [**B. longifrons*, p. 440, fig. 1–4; OD]. Carapace longer than wide, ornamented with widely spaced granules overall; front bifid; orbits small; anterolateral margins with several spines; posterolateral margins granular; carapace regions well defined; protogastric region long, triangular; hepatic region comprised of two large swellings; cervical and branchiocardiac grooves well-defined; postcervical groove absent. *Eocene* (*Priabonian*): Spain.——Fig. 9,*3*. **B. longifrons,* holotype, MPZ2011.185, scale bar, 5 mm (Artal & others, 2016, fig. 1, © Magnolia Press, reproduced with permission from the copyright holder).

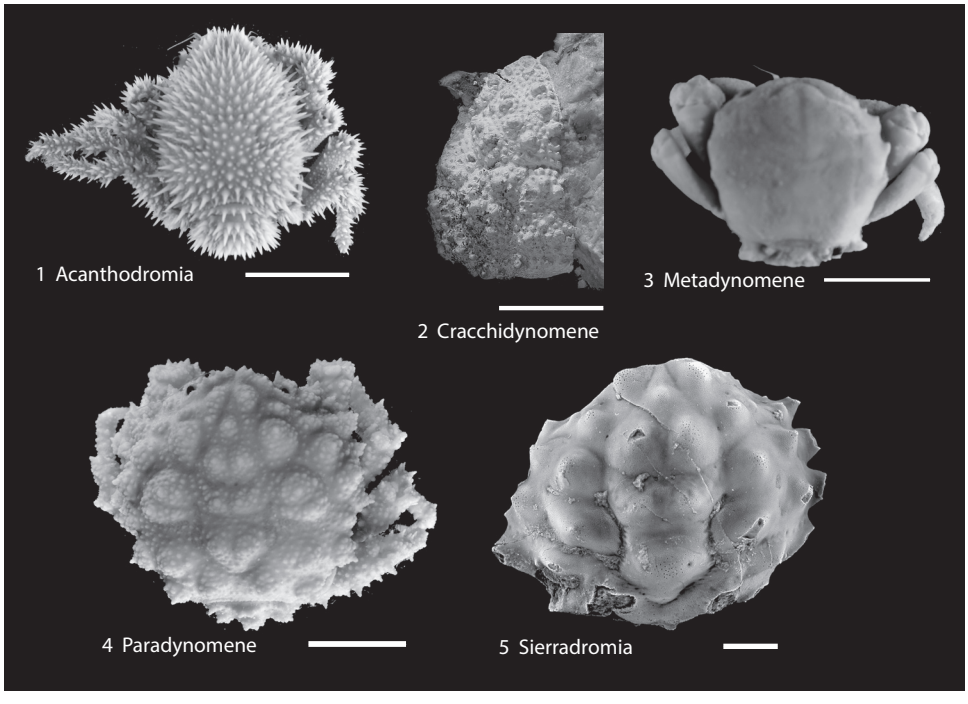

Fig 10. Dynomenidae (p. 9–10).

Stimdromia McLay, 1993, p. 167 [**Dromia lateralis* Gray, 1831, p. 40; OD]. Carapace approximately as wide as long, pentagonal, inflated, smooth; rostrum bilobed with subrostral axial lobe; anterolateral margins with spines; chelipeds and pereiopods 2–3 with large, strong tubercles (adapted from Poore & Ahyong, 2023). *Eocene* (*Bartonian*): Italy. *Holocene:* Indo-Pacific Ocean.——Fig. 9,*6*. **S. lateralis* (Gray), USNM 17048, Holocene, Australia, scale bar 1 cm (new; photo by R. Feldmann).

Torodromia Artal, Ferratges, van Bakel, & Zamora, 2022, p. 597 [**T. elongata,* p. 498, fig. 5.1–5.3; OD]. Carapace approximately as wide as long; front with two long spines and tiny axial spine; anterolateral margins with four spines, last one very stout; posterolateral margins with one spine; carapace regions smooth; cervical and branchiocardiac grooves moderately developed. *Eocene* (*Ypresian*): Spain.——Fig. 9,*4*. **T. elongata,* holotype, MGSB77595, scale bar 5 mm (Artal & others, 2022, fig. 5,*1*).

Tumidodromia McLay, 2009, p. 19 [**Cancer dormia* Linnaeus, 1763, p. 413; OD] [=*Cancer dormitator* Herbst, 1790, p. 250, pl. 18.*103;* =*Dromia rumphii* Fabricius, 1798, p. 92]. Carapace wider than long, transversely ovoid, tomentose; rostrum with median lobe short, lateral lobes triangular, longer than median lobe; anterolateral margin with teeth; thoracic sternite 4 anterior section tapering anteriorly; episternites with rounded tip; anterior and lateral sections poorly differentiated, uropod visible as dorsal plate. [Emended from McLay, 2009, p. 19.] *Middle Pleistocene:* Japan. *Holocene:* Indo-West Pacific Ocean.——Fig. 9,*5*. **T. dormia* (Linnaeus), USNM 47873, Holocene, Hawaii, scale bar 1 cm (new).

Additions to Family DYNOMENIDAE Ortmann, 1892

[Dynomenidae Ortmann, 1892, p. 541]

Acanthodromia A. Milne Edwards, 1880, p. 31 [**A. erinacea;* M]. Carapace longer than wide, front triangular; carapace surface covered in densely spaced spines; lateral margins spinose; grooves net well visible due to spines; pereiopods also covered with densely spaced spines. *Eocene* (*Ypresian*): Italy. *Holocene:* Caribbean Sea, Mexico, Indo-Pacific Ocean, Japan, Philippines.——Fig. 10,*1*. **A. erinacea,* USNM 1297428, Holocene, Caribbean Sea, scale bar 1 cm (new; photo by R. Feldmann).

Cracchidynomene Beschin, Busulini, Tessier, & Zorzin, 2016, p. 65 [**C. areolata,* p. 65, pl. 7,*7*; OD]. Carapace apparently longer than wide, densely granular between large regional swellings. *Eocene* (*Ypresian*): Italy.——Fig. 10,*2*. **C. areolata,* holotype, VR 94012, scale bar 5 mm (new; photo by A. Busulini, Museo di Storia naturale, Venezia, Italy).

Metadynomene McLay, 1999, p. 516 [**Dynomene devaneyi* Takeda, 1977, p. 31, figs. 1–3; OD].

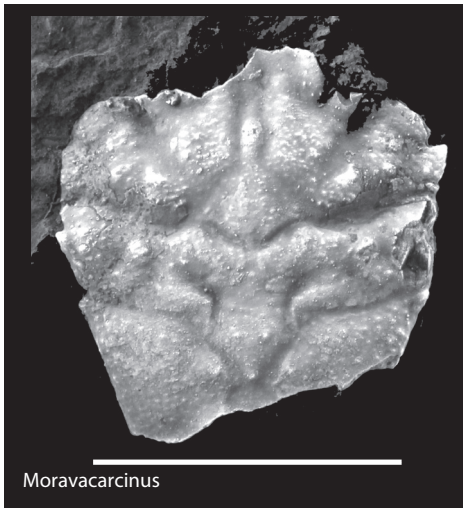

Fig 11. Dromiacea Uncertain (p. 10).

Carapace approximately as long as wide; front broadly triangular, orbits widely rimmed; regions generally smooth; anterolateral margins entire or with small spines; cervical, postcervical and branchiocardiac grooves well marked. *Eocene* (*Ypresian*): Italy. *Holocene:* Indo-Pacific Ocean.——Fig. 10,*3*. *M. tanensis* (Yokoya, 1933), USNM 282754, Holocene, New Caledonia, scale bar 1 cm (new; photo by R. Feldmann).

Paradynomene Sakai, 1963, p. 231 [**P. tuberculata,* p. 231, fig. 8; OD]. Carapace longer than wide, surface densely granular overall; front broad, triangular, with spines; orbits rimmed; lateral margins with several granulate spines; regions well defined, with large tubercles centrally in each; pereiopods and chelae densely granular. *Eocene* (*Ypresian*): Italy. *Holocene:* Indo-Pacific Ocean.——Fig. 10,*4*. **P. tuberculata,* USNM 291445, Holocene, Guam, scale bar 1 cm (new; photo by R. Feldmann).

Sierradromia Artal, Ferratges, van Bakel, & Zamora, 2022, p. 604 [*S. gladiator,* p. 605, fig. 11; OD]. Carapace somewhat longer than wide; rostrum unknown; anterolateral margins with at least three stout spines; posterolateral margin with at least two stout spines; carapace regions well defined, with large, punctate swellings centrally in each. *Eocene* (*Ypresian*): Spain.——Fig. 10,*5*. **S. gladiator,* holotype MGSB75454, scale bar 1 cm (Artal & others, 2022, fig. 11,*1*).

Additions to Family SPHAERODROMIIDAE Guinot & Tavares, 2003

[*nom. transl.* Schweitzer & Feldmann, 2010c, p. 417, *pro Sphaerodromiinae* Guinot & Tavares, 2003, p. 102]

Basidromilites Artal, Ferratges, van Bakel, & Zamora, 2022, p. 598 [**B. glaessneri,* p. 600, fig. 5.4–5.9; OD]. Carapace approximately as wide as long; rostrum poorly known, apparently with some swellings; anterolateral margins with three or four spines; anterior carapace regions with sparse tubercles; cervical and branchiocardiac grooves well defined. *Eocene* (*Ypresian*): Spain. *Lutetian:* Italy, Spain.——Fig. 11. *B. glaessneri,* holotype, MGSB77599, Ypresian, Spain, scale bar 1 cm (Artal & others, 2022, fig. 5,*4*).

DROMIACEA FAMILY UNCERTAIN

Subfamily MORAVACARCININAE van Bakel, Fraaije, Jagt, & Skupien, 2020

[Moravacarcininae van Bakel, Fraaije, Jagt, & Skupien, 2020, p. 3]

Diagnosis as for type genus. *Lower Cretaceous* (*Berriasian*).

Moravacarcinus van Bakel, Fraaije, Jagt, & Skupien, 2020, p. 3 [**M. stramberkensis,* p. 4, fig. 2; OD]. Carapace approximately as wide as long, regions well-defined, covered with irregularly sized and spaced granules; rostrum wide, axially sulcate, apparently concave at tip; orbits wide, with two fissures bounding intra-orbital spine, outer-orbital spine short, triangular; anterolateral margins with three spines; protogastric and hepatic regions well-differentiated; epibranchial region differentiated into subregions; cervical groove and branchiocardiac groove well-developed; post-cervical groove weaker. *Lower Cretaceous* (*Berriasian*): Czech Republic.——Fig. 11. **M. stramberkensis,* holotype, MAB k.3622, scale bar 1 cm (new; photo by B. W. M. Van Bakel, Oertijdmuseum, Boxtel, The Netherlands).

Additions to DROMIACEA *incertae sedis*

Glyptodynomene Van Straelen, 1944, p. 10 [**G. alsasuensis,* p. 10, pl. 1, fig. 4; M]. Carapace wider than long, hexagonal, sides high; orbits closely spaced, carapace highly domed over orbits; front downturned between orbits; anterolateral margin flared, rimmed; cervical groove deep, broadly concave forward; postcervical groove deep, discontinuous; protogastric and hepatic regions with marginal, longitudinal swellings; posterior margin broad, rimmed. *Upper Cretaceous:* Spain.——Fig. 12,*1*. **G. alsasuensis,* KSU D 1156, scale bar 1 cm (new; photo by R. Feldmann).

Polycnemidium Reuss, 1859, p. 7 [**Dromilites pustulosus* Reuss, 1845, p. 15, pl. 7, fig. 26, 29, pl. 11, fig. 23; M]. Carapace wider than long, length approximately three-quarters maximum length, maximum width approximately at mid-length, flattened transversely and longitudinally; regions defined by swellings, entire surface granular; front downturned, axially keeled; orbits directed forward,

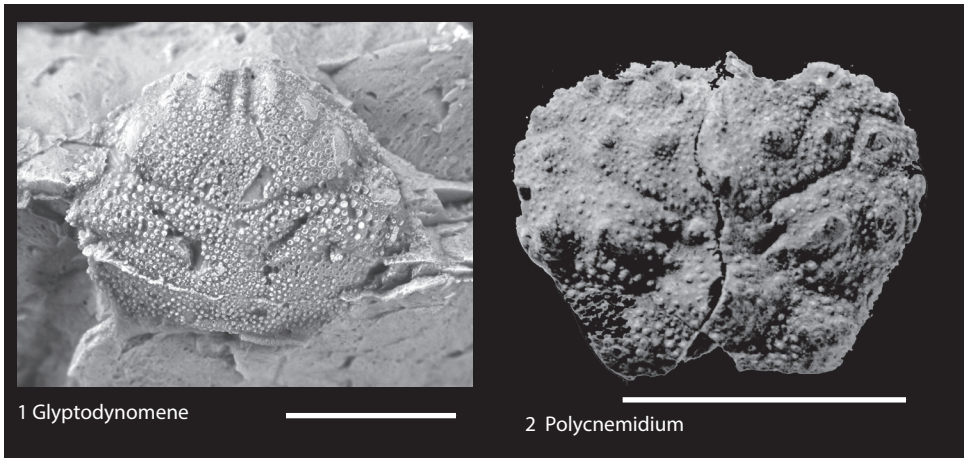

Fig 12. Dromiacea *incertae sedis* (p. 10–11).

lower orbital visible in dorsal view, upper-orbital margin upturned, outer-orbital angle with weak projection; fronto-orbital width approximately half maximum carapace width; anterolateral and posterolateral margins confluent, small projections on anterolateral portion, one large projection at point of maximum width; posterior margin with granular rim; epigastric regions with oblique slit-like depressions not extending through cuticle; mesogastric region long, slender; with prominent axial node posteriorly; metagastric region weakly defined by cervical and concave forward postcervical groove; cardiac region transversely ovoid with central node; intestinal region broad, short; protogastric region with two tubercles arranged transversely, inner-most largest; hepatic region small, triangular, granular; cervical groove extending from margin anteromesially to inner hepatic region, curving concave-forward around posterior margin of mesogastric region; post-cervical groove short, concave-forward, continuous across axis; epibranchial region with two small tubercles arrayed in oblique line; mesobranchial region with two prominent tubercles arrayed transversely; metabranchial region uniformly inflated. *Upper Cretaceous* (*Coniacian*): Czech Republic.——Fig. 12,*2*. **P. pustulosus* (Reuss), holotype, NHMW 1864 XII 666, scale bar 1 cm (new; photo by R. Feldmann).

ADDITIONS TO INFRAORDER GLYPHEIDEA

Over the course of the intervening years since Feldmann, Schweitzer, and Karasawa (2015) was published, new knowledge has accumulated and new taxa have been discovered and recognized. Thus, our understanding of Infraorder Glypheidea has grown. The following are changes in ranges and occurrences of genera as well as new genera classifications covering 2012 to December 2022. [These are changes and additions to Systematic descriptions: Infraorder Glypheidea, *Treatise Online* 68, Feldmann, Schweitzer, & Karasawa, 2015.]

Changes and Additions to Family ERYMIDAE Van Straelen, 1925

[*nom. correct.* Glaessner, 1929, p. 405, *pro* Erymaidae Van Straelen, 1925, p. 232] [=Enoploclytiidae Devillez, Charbonnier & Barriel, 2019, p. 380]

The following five genera have changes in ranges and occurrences due to several species being moved. Their descriptions remain as presented in Systematic descriptions: Infraorder Glypheidea.

Eryma [Von Meyer, 1840]. *Lower Jurassic–Upper Cretaceous. Lower Jurassic* (*Pliensbachian*): France; *Toarcian:* France, Germany, UK (England). *Middle Jurassic* (*Aalenian*): France; *Bajocian:* Germany, Italy; *Bathonian:* France, Italy; *Callovian:* France, Germany, Russia. *Upper Jurassic* (*Oxfordian*): France, Germany, Russia, UK (England), USA (Utah). *Upper Jurassic* (*Kimmeridgian*): France, Germany, Madagascar; *Tithonian:* France, Germany, Italy,

Russia. *Lower Cretaceous* (*Hauterivian–Berriasian*): France, UK (England); *Hauterivian:* Germany. *Barremian:* Japan. *Upper Cretaceous* (*Cenomanian*): Japan, Lebanon. *Upper Cretaceous:* USA (Alabama, North Carolina).

Enoploclytia [M'Coy, 1849]. *Upper Jurassic–Eocene. Upper Jurassic* (*Kimmeridgian*): France. *Lower Cretaceous* (*Berriasian–Hauterivian*): France; *Barremian:* France; *Albian:* Germany, USA (Texas). *Upper Cretaceous* (*Cenomanian*): USA (Texas); *Coniacian:* Germany; *Santonian:* Germany, Madagascar. *Campanian:* Germany, Madagascar, Mexico (Coahuilla), Spain, USA (Alabama, Tennessee); *Maastrichtian:* Canada (British Columbia), Germany, Mexico (Coahuilla), UK (England), USA (Alabama). *Eocene* (*Bartonian*): Spain.

Palaeastacus [Bell, 1850]. *Lower Jurassic–Upper Cretaceous. Lower Jurassic* (*Hettangian–Toarcian*): Germany; *Sinemurian:* Italy; *Pliensbachian:* France, Germany. *Middle Jurassic* (*Aalenian*): Switzerland; *Callovian:* USA (Wyoming). *Middle Jurassic:* France. *Upper Jurassic* (*Oxfordian*): France; *Kimmeridgian:* Germany. *Tithonian:* Germany. *Lower Cretaceous:* Antarctica; *Valanginian:* France; *Aptian:* Australia (Queensland); *Albian:* Australia (Queensland), Canada (British Columbia), UK (England). *Upper Cretaceous* (*Cenomanian*): France, Germany, UK (England); *Coniacian–Maastrichtian:* UK (England). *Campanian:* USA (Texas). *Upper Cretaceous:* USA (Alabama).

Pustulina [Quenstedt, 1857]. *Middle Jurassic–Upper Cretaceous. Middle Jurassic* (*Bajocian*): Germany; *Callovian:* Switzerland. *Upper Jurassic* (*Oxfordian*): France; *Kimmeridgian:* France; *Tithonian:* Germany. *Lower Cretaceous* (*Berriasian*): France; *Valanginian:* France, Madagascar; *Hauterivian:* France, Madagascar; *Albian:* UK (England). *Upper Cretaceous* (*Cenomanian*): Lebanon, UK (England), USA (California); *Campanian–Maastrichtian:* Canada (British Columbia).

Stenodactylina [Beurlen, 1928]. *Lower Jurassic–Upper Cretaceous. Lower Jurassic* (*Hettangian–Sinemurian*): France; *Toarcian:* France, Germany. *Middle Jurassic* (*Aalenian*): France, Germany, UK (England); *Bajocian–Bathonian:* Canada (British Columbia); *Callovian:* France. *Upper Jurassic* (*Oxfordian*): UK (England); *Kimmeridgian:* Germany, Madagascar; *Tithonian:* Czech Republic, Germany, Madagascar. *Lower Cretaceous* (*Berriasian*): France. *Upper Cretaceous* (*Coniacian*): USA (Texas); *Campanian:* Madagascar.

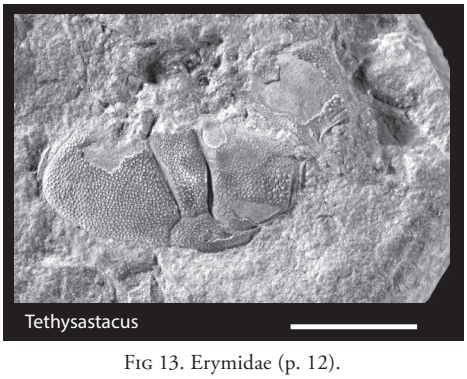

Fig 13. Erymidae (p. 12).

Addition:

Tethysastacus Devillez, Charbonnier, Hyžný, & Leroy, 2016, p. 536 [**Eryma tithonia* Van Straelen, 1936, p. 8, pl. 2,*1–2*; OD]. Cephalothorax elongate, ornamented with rounded or elongate tubercles overall; orbital margin rimmed, rim extending along anteriormost ventral margin of cephalothorax; cervical groove very deep; hepatic and antennal grooves moderately deep; postcervical groove deep, more or less parallel to cervical groove; inferior groove concave anteriorly. *Lower Cretaceous* (*Valanginian*): France.——Fig. 13. **T. tithonia* (Van Straelen), holotype, MNHN.F.J03351, scale bar 1 cm (new; photo by S. Charbonnier, MNHN).

Changes and Additions to Family MECOCHIRIDAE Van Straelen, 1925

[Mecochiridae Van Straelen, 1925, p. 215]

The following two genera have changes in ranges and occurrences. Their descriptions remain as presented in Systematic descriptions: Infraorder Glypheidea.

Huhatanka [Feldmann & West, 1978]. *Lower Cretaceous* (*Berriasian–Valanginian*): Argentina; *Albian* USA (Kansas).

Meyeria [M'Coy, 1849]. *Upper Jurassic* (*Oxfordian*): France. *Lower Cretaceous* (*Berriasian–Hauterivian*): UK (England); *Barremian:* Lebanon; *Aptian:* Mexico (Puebla), Spain; *Albian:* Iran. *Upper Cretaceous* (*Campanian*): Antarctica; *Upper Cretaceous:* Canada (British Columbia).

Additions:

Atherfieldastacus Simpson in Robin, Charbonnier, Merle, Simpson, Petit, & Fernandez, 2016, p. 11 [**Meyeria magna* M'Coy, 1849, p. 334; OD]. Cephalothorax long, with rounded ventral margins; rostrum short, with at least one keel in gastric region; cervical groove terminating well dorsal to ventral margin; cephalothorax surface covered by scabrous ridges with a pore centrally, directed forward. *Lower Cretaceous* (*Valanginian*), Germany, South Africa, UK (England); (*Hauterivian*): South Africa; (*Aptian*): Mexico (Chihuahua); Spain. (*Albian*): China, UK (England).——Fig. 14,*1*. **A. magna* (M'Coy), MNHN B14169, Aptian, UK

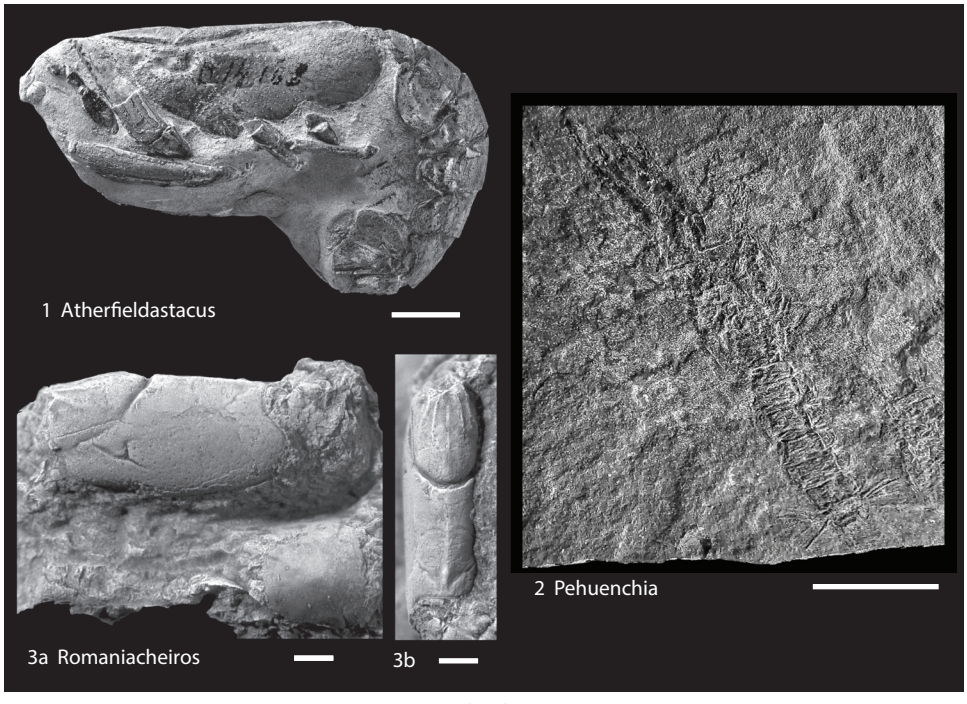

Fig 14. Mecochiridae (p. 12–13).

(England), scale bar 1 cm (photo by P. Massicard, Project RECOLNAT, MNHN).

Pehuenchia Rusconi, 1948, p. 4 [**P. tellecheai*, p. 4, fig. 1–2; OD]. First pereiopods elongate; pleonal somites heavily ornamented, terga and pleura clearly separated by ridge; pleura rounded; telson rectangular, with rounded termination. [Schweitzer, Feldmann, & Casadío, 2022, p. 294.] *Upper Jurassic–Lower Cretaceous* (*Tithonian-Berriasian*): Argentina.——Fig. 14,*2. **P. tellecheai,* holotype, MOZ 3578, scale bar 1 cm (new, photo by S. Casadío, Universidad Nacional de Río Negro, General Roca, Argentina).

Romaniacheiros Franţescu, Feldmann, Schweitzer, Lazăr, & Stoica, 2018, p. 48 [**R. lophia,* p. 49, fig. 2; OD]. Carapace tiny, with well-developed cervical, antennal, hepatic, and inferior grooves; branchiocardiac groove well defined anteriorly, becoming obscure posterodorsally and moderately marked across dorsal axis; postcervical groove absent; median carina granular in cephalic region; thoracic extension of median carina prominent, terminating in intestinal tubercle; pleonal pleura smooth with no clear demarcation between tergum and pleuron. [Franţescu & others, 2018, p. 48.] *Upper Jurassic* (*Kimmeridgian–Tithonian*): Romania.——Fig. 14,*3a–b *R. lophia,* holotype, LPBIIIart 169, scale bar 1 cm (new).

ABBREVIATIONS FOR MUSEUM REPOSITORIES

BSPG: Bayerische Staatsammlung für Paläontologie und historische Geologie München (Munich), Germany

KSU D: Decapod Comparative Collection, Department of Geology, Kent State University, Kent, Ohio, USA

LPB: Laboratory of Paleontology, Department of Geology and Paleontology, University of Bucharest, Romania

MAB k: Oertijdmuseum, Boxtel, The Netherlands

MCZ: Museo Civico "G. Zannato" di Montecchio Maggiore, Vicenza, Italy

MGSB: Museo Geológico del Seminario de Barcelona, Barcelona, Spain

MM-CE: Museo Marítimo del Cantábrico, Santander, Cantabria, Spain

MNHN: Muséum National d'histoire naturelle, Paris, Collection de Paléontologie, France

MOZ: Collection of Paleontología Invertebrados del Museo de Historia Natural de Mendoza, Argentina.

MPZ: Museo Paleontológico de la Universidad de Zaragoza, Spain

MWO: Museum of the World Ocean, Kaliningrad, Russia

NHMW: Naturhistorisches Museum Wien (Natural History Museum of Vienna), Austria

NJSM: New Jersey State Museum, Trenton, New Jersey, USA

SM B: Sedgwick Museum, Cambridge University, UK

SMNS: Staatliches Museum für Naturkunde, Stuttgart, Germany

TMM: UT, University of Texas at Austin, Texas, USA

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

VR: Museo di Storia naturale di Verona, Italy

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