

TREATISE ONLINE

Number 52

Part R, Revised, Volume 1, Chapter 8N:

Systematic Descriptions:
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2012

KU PALEONTOLOGICAL
INSTITUTE

The University of Kansas

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

PART R, REVISED, VOLUME 1, CHAPTER 8N:
SYSTEMATIC DESCRIPTIONS:
INFRAORDER BRACHYURA, SECTION HOMOLOIDA

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Section HOMOLOIDA Karasawa,
Schweitzer, & Feldmann, 2011

[Homoloida KARASAWA, SCHWEITZER, & FELDMANN, 2011, p. 545]

Carapace longer than wide, carapace regions moderately to well defined, except Latreilliidae; usually pseudorostral spines present; usually augenrest developed to accommodate eye; epistomial spine present; pereopod 5 usually reduced in size, subdorsal but may be normal size; sternal suture 6/7 complete, separating sternum into two segments; external, paired spermatheca in females; all 7 somites in male and female pleons usually free but can be fusion of female somites; sterno-coxal depression and sterno-pleonal depression present; usually pleonal holding mechanism (homolid press-button) present; female pleonal somite 1 with reduced pleopods; male pleonites 1 and 2 with pleopods with distinct coxae and bases, socket on somite 6 (adapted from KARASAWA, SCHWEITZER, & FELDMANN, 2011, p. 545). *Upper Jurassic (Tithonian)–Holocene.*

Superfamily HOMOLOIDEA
De Haan, 1839

[*nom. transl.* GLAESSNER, 1969, p. 489, *pro* Homoloida DE HAAN, 1839 in 1833–1850, p. 102]

Carapace longer than wide, usually pseudorostral spines present; usually an augenrest developed to accommodate the eye; pereopod 5 subdorsal; sternal suture 6/7 complete, separating sternum into two segments; external, paired spermatheca in females; all 7 somites in male and female pleon usually free but can be fusion of female somites; usually a pleonal holding mechanism (homolid press-button) present; female pleonal somite 1 with reduced pleopods;

male pleonal somites 1 and 2 with pleopods with distinct coxae and bases. *Upper Jurassic (Tithonian)–Holocene.*

Family HOMOLIDAE De Haan, 1839

[*nom. correct.* WHITE, 1847, p. 55, *pro* Homolidae DE HAAN, 1839 in 1833–1850, p. 102; ICZN Opinion 522, 1958, p. 220] [=Thelxiopeidae RATHBUN, 1937, p. 62]

Carapace rectangular or ovate, longer than wide; *linea homolica* well developed; rostrum a single spine or bifid, spine often placed to either side of rostrum (pseudorostral spines); cervical and branchiocardiac grooves well developed; carapace regions well defined; pereopod 5 reduced, subchelate or chelate. *Upper Jurassic (Tithonian)–Holocene.*

Homola LEACH, 1816, p. 324, *nom. conserv.*, ICZN Opinion 522, 1958 [**H. spinifrons*; M; =*Cancer barbatus* FABRICIUS, 1793, p. 460; =*Thelxiope palpigera* RAFINESQUE, 1814, p. 21; =*Cancer cubicus* FORSKÅL, 1775, p. 89 (suppressed by ICZN Opinion 522, 1958); =*Cancer novemdecos* SULZER, 1776, p. 265 (suppressed by ICZN Opinion 522, 1958); =*Dorippe spinosus* RISSO, 1816, p. 34] [=*Thelxiope* RAFINESQUE, 1814, p. 21 (type, *T. palpigera*, M)]. Carapace elongate, rectangular, ornamented with swellings, tubercles, or spines; subhepatic and subbranchial regions usually at right angles to upper surface of dorsal carapace but may be visible dorsally; *linea homolica* distinct; rostrum distinctly bifid or bifid only at tip; cervical groove distinct; branchiocardiac groove always deep near axial regions, U-shaped, anterior segment of U shape may reach lateral margin but does not in all species; carapace with pseudorostral and supraorbital spines, and anterolateral spines on subbranchial region; regions moderately defined by grooves; cardiac region usually with transverse ridge extending laterally onto branchial regions. Fifth pereopods carried subdorsally. [Figures for illustrated species are higher in quality than those available for the type species.] *Eocene–Holocene*: Italy, Mexico (Baja California Sur), United States (Washington), *Eocene*; Indo-Pacific, Mediterranean, western Africa, North America, *Holocene*. — FIG. 1, 1a–b. *H. ranunculus* GUINOT & RICHER DE FORGES, USNM 268911; a, dorsal surface; b, ventral surface, *Holocene*; scale bars = 1 cm (new).

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Feldmann, Rodney M., Carrie E. Schweitzer, & Hiroaki Karasawa. 2012. Part R, Revised, Volume 1, Chapter 8N: Systematic descriptions: Infraorder Brachyura, Section Homoloida. Treatise Online 52:1–12, 6 fig.

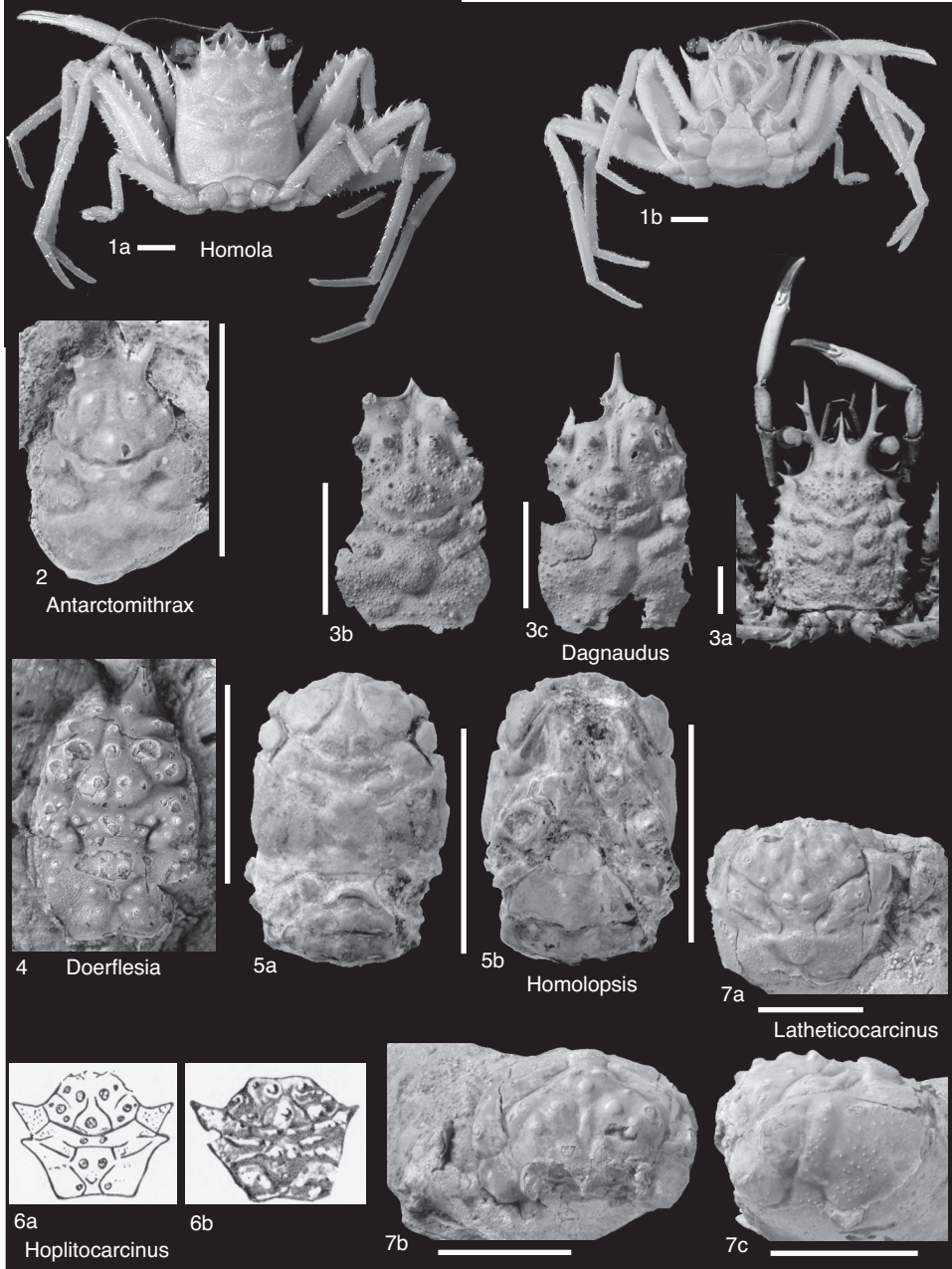


FIG. 1. Homolidae (p. 1–4).

Antarctomithrax FELDMANN, 1994, p. 174 [**A. thomsoni* FELDMANN, 1994, p. 175, fig. 2; OD]. Carapace ovate, longer than wide; rostrum triangular; with stout pseudorostral spines on either side of rostrum; interlineal portion of carapace widening

posteriorly, lateral margins sinuous; protogastric regions inflated, with tubercle anteriorly; hepatic regions bilobed, with tubercles; mesogastric region with short anterior process, widened posteriorly, with central tubercle posteriorly; metogastric region

- wide, with pair of tubercles; urogastric region depressed, narrow; cardiac region triangular, with long lateral extensions directed onto branchial regions; cervical groove deep, broadly concave forward; branchiocardiac groove extending anteriorly along lateral extensions of cardiac region, arcing anteriorly into very deep postcervical groove. *Eocene*: Antarctica (Peninsular).—FIG. 1, 2. **A. thomsoni*, BAS. In. 2403, holotype, dorsal carapace excluding extralinear flanks, scale bar = 1 cm (Feldmann, 1994, fig. 2).
- Dagnaudus** GUINOT & RICHER DE FORGES, 1995, p. 415 [**Latreillopsis petterdi* GRANT, 1905, p. 317, pl. 10, 2; OD]. Rostrum a single long spine; with long spines situated distal to rostrum, with tiny spinelets; very large augenrest protected by subhepatic spines; lateral margins spinose; cervical and branchiocardiac grooves subparallel; *linea homolica* sinuous, entirely visible dorsally; walking legs much longer than chelipeds. *Oligocene–Holocene*: Australia, *Oligocene–Miocene*: Australia, *Holocene*.—FIG. 1, 3*a*. **D. petterdi* (GRANT), C38, dorsal carapace and chelipeds, Holocene, off Cape Everard, Victoria, Australia, scale bar = 1 cm (Jenkins, 1977, fig. 3I).—FIG. 1, 3*b–c*. *D. pritchardi* (JENKINS), lower Oligocene, South Australia, Australia; *b*, holotype, P15631, dorsal carapace; *c*, paratype P15632, dorsal carapace; scale bars = 1 cm (Jenkins, 1977, fig. 3A–3B).
- Doerflesia** FELDMANN & SCHWEITZER, 2009, p. 185 [**D. ornata* FELDMANN & SCHWEITZER, 2009, p. 186, fig. 2; OD]. Obovate interlineal carapace element with moderately convex *linea homolica*, two prominent anterodorsally directed pseudorostral spines; apparently lacking supraorbital spines; complex, tuberculate hepatic regions; mesogastric region markedly bilobed posteriorly; metagastric and urogastric regions joined axially by a large boss and separated by shallow grooves laterally; cardiac region broadly separated from posterior border by elongate intestinal region; cervical groove deep, composed of three arcs; branchiocardiac groove weaker than cervical groove; postcervical groove discontinuous, forming deep, arcuate margins of urogastric region. *Upper Jurassic (Tithonian)*: Austria, Czech Republic.—FIG. 1, 4. **D. ornata*, plaster cast of holotype, NHMW 2007z0149/0015, Austria, dorsal carapace excluding extralinear flanks, scale bar = 1 cm (Feldmann & Schweitzer, 2009, fig. 2.1).
- Homolopsis** BELL, 1863, p. 22 [**H. edwardsi* BELL, 1863, p. 23, pl. 5, 1–2; M]. Carapace longer than wide (width measured between *lineae homolicae*), widest about half the distance posteriorly at marked lateral extension of carapace, granular, ornamented with large tubercles; rostrum poorly known, sulcate, apparently with two small pseudorostral protuberances; orbit without supraorbital spine; regions very well marked by deep grooves; protogastric and hepatic regions separated by deep oblique groove that does not extend to posterior margin of protogastric region; cervical groove well developed, sinuous; branchiocardiac groove beginning at margin of metagastric region, curving axially, very deep anteriorly, arcing laterally and extending to lateral margin, where it intersects *linea homolica* and continues onto subbranchial region; cardiac region narrow, with central swelling, distinctly separated from branchial regions by deep groove; subhepatic region with large subhepatic spine; subbranchial region with very large, stout anterolateral spine situated adjacent to epibranchial region. [Figures for illustrated species are higher in quality than those available for the type species.] *Lower Cretaceous (Hauterivian)–Upper Cretaceous (Maastrichtian)*: France, *Hauterivian*; Japan, *Aptian*; France, United Kingdom, *Albian*; northern Australia, United Kingdom, *Cenomanian*; United States (South Dakota), *Turonian*; Germany, *Santonian*; Chile, *Maastrichtian*.—FIG. 1, 5*a–b*. *H. chilensis* FÖRSTER & STINNESBECK, BSP 1987 IV I, holotype; *a*, dorsal carapace, including extralinear flanks; *b*, ventral surface, Maastrichtian, Chile; scale bars = 1 cm (new).
- Hoplitocarcinus** BEURLEN, 1928, p. 154 [**H. johannesboehmi* BEURLEN, 1928, p. 154, fig. 3–4; OD]. Cervical and branchiocardiac grooves deep; apparently with long branchial spines; large tubercles on protogastric, metagastric, hepatic, and cardiac regions. *Upper Cretaceous (Coniacian–Santonian)*: Germany.—FIG. 1, 6*a–b*. **H. johannesboehmi*, line drawing and photo, no scales (Beurlen, 1928b, fig. 3–4).
- Latheticocarcinus** BISHOP, 1988, p. 378 [**L. shapirovi* BISHOP, 1988, p. 378, fig. 1E–1H, 1J, 1M; OD] [= *Eohomola* COLLINS & RASMUSSEN, 1992, p. 16 (type, *E. adelphina* COLLINS & RASMUSSEN, 1992, p. 16, fig. 8A–8C, OD); = *Metahomola* COLLINS & RASMUSSEN, 1992, p. 18 (type, *Homolopsis punctata* RATHBUN, 1917, p. 388, pl. 33, 1–3, OD)]. Carapace longer than wide (width measured between *lineae homolicae*), typically widest just posterior to intersection of cervical groove and *linea homolica* but relatively uniformly wide throughout entire length, surface granular, ornamented with discrete, large tubercles; rostrum bifid or singular, sulcate; often with small pseudorostral spines; usually with supraorbital spine; protogastric, hepatic, mesogastric, and cardiac regions ornamented with large tubercles; grooves defining lateral margins of mesogastric region deeply incised; cervical groove very deeply incised, arcuate, U-shaped, not typically sinuous, separating the carapace into distinctive anterior and posterior portions; branchiocardiac groove very deep anteriorly, beginning about midway between *linea homolica* and axis, extending axially, curving around and extending laterally to intersect *linea homolica*; *linea homolica* very well developed, subhepatic and subbranchial regions rarely preserved; cardiac region with two swellings positioned one beside another, sometimes with lateral ridges extending onto cardiac regions; cardiac region not well differentiated from branchial regions by deep groove. [Figures for illustrated species are higher in quality and illustrate morphology not exposed on images of

the type species.] *Lower Cretaceous (Albian)–Paleocene (Danian)*: United Kingdom, *Albian*; United Kingdom, United States (Texas), *Cenomanian*; Japan, *Turonian*; Canada (British Columbia), *Santonian*; Denmark, Germany, United States (New Jersey, South Dakota), *Campanian*; Denmark, The Netherlands, United States (South Dakota, Wyoming), *Maastrichtian*; Denmark, *Danian*.—FIG. 1, 7a–c. *L. punctata* (RATHBUN), UT 173524, Campanian–Maastrichtian, South Dakota; a, dorsal carapace with extralinear flanks; b, anterior view; c, lateral view of extralinear flank; scale bars = 1 cm (new).

Lignihomola COLLINS, 1997, p. 63 [**Prosopon etheridgei* WOODWARD, 1892, p. 303; OD]. Carapace well preserved with extralinear flanks in place, rounded-pyriform, about as wide as long, including flanks, widening distally, widest in posterior third; moderately vaulted transversely, strongly vaulted longitudinally, particularly in anterior half. Rostrum axially sulcate, downturned, rimmed, with pseudorostral spines, about 14 percent maximum carapace width including flanks. Orbits shallow, forward directed, fronto-orbital width, excluding augenrests, about 30 percent maximum carapace; augenrest entirely extralinear, shallow, bounded by upper and lower spines on subhepatic region. Extralinear lateral margin spinose anteriorly, diverging posteriorly, posteriorly nodose, posteriorly convex; posterior margin very broad, about half carapace width, straight, rimmed. Mesogastric region with lanceolate anterior process, broadly triangular posteriorly with three nodes; protogastric region broadening laterally, separated from hepatic region by shallow groove; metagastric region lunate, as broad as mesogastric; cardiac region pentagonal, inflated, highest point on carapace; intestinal region long, triangular. Cervical groove well developed, concave on intralinear portion, convex forward on extralinear flank; postcervical groove distinct, curving anteriorly, intersecting cervical groove at lateral margin of metagastric region; branchiocardiac groove, deep, convex forward, curves anteriorly on extralinear flank and joins cervical groove. Epibranchial region inflated laterally, with fingerlike projection directed at cardiac region; remainder of branchial region coarsely granular, undifferentiated. Third maxilliped elongate, lying in two planes, nearly closing buccal frame, which is straight sided, narrowing anteriorly. Pleon of probable female with somite 1 narrow, with axial tubercles; somite 2 wider than somite 1, with tubercles; somites 3–5 uniformly wide, somite 6 narrower; telson small, triangular; axis of all somites with tubercles, all somites free. Pereiopods 4 and 5 reduced in size, subdorsal. *Lower Cretaceous (Albian)*: Australia (central Queensland).—FIG. 2, 1. **L. etheridgei* (WOODWARD), BMNH 36264, dorsal carapace, including extralinear flanks, scale bar = 1 cm (new).

Londinimola COLLINS & SAWARD, 2006, p. 69 [**L. williamsi* COLLINS & SAWARD, 2006, p. 69, pl. 1, 1a, 2; OD]. Carapace including extralinear flanks

longer than wide, quadrate in cross section transversely, nearly flat longitudinally, maintaining nearly uniform width throughout length, slightly narrowing anteriorly; regions prominent, bearing long, sharp spines; rostrum sulcate, downturned; orbits forward directed with inner- and outer-orbital spine, the latter of which is distal to *linea homolica*; *linea homolica* smoothly convex longitudinally; hepatic regions tiny; subhepatic region large, bearing five spines; cervical and branchiocardiac grooves moderately defined, extending onto extralinear flanks, two grooves merge on flank at posterior level of subhepatic region; branchial regions with small and large granules between spines, anterior regions only with spines. *Eocene (Ypresian)*: United Kingdom.—FIG. 2, 2. **L. williamsi*, BMNH IC 453, holotype, dorsal carapace including extralinear flanks, scale bar = 1 cm (new).

Navarrahomola ARTAL & others, 2012, p. 405 [**N. hispanica*; OD]. Carapace excluding extralinear flanks longer than wide; regions well defined by deep grooves; mesogastric region wide posteriorly, with axial ridge, granular otherwise, with scabrous ornamentation posteriorly; protogastric-hepatic area separated into three regions anterior to posterior; urogastric region narrow and very wide; branchial region finely granular, with beaded rim parallel to anterior and axial margin; *lineae homolicae* not known due to breakage of carapace; rostrum and orbits unknown. *Lower Cretaceous (Albian)–Upper Cretaceous (Cenomanian)*: Spain.—FIG. 2, 3a–b. **N. hispanica*; a, holotype, dorsal carapace, MGSB 28147; b, paratype, dorsal carapace, MABk 3203; scale bars = 1 cm (Artal & others, 2012, fig. 3.1, 3.3, reproduced by permission of Editor in Chief of the Revista Mexicana de Ciencias Geológicas).

Paromola WOOD-MASON in WOOD-MASON & ALCOCK, 1891, p. 267 [**Dorippe cuvieri* RISSO, 1816, p. 35; M]. Carapace ovate; rostrum a single spine; pseudorostral spines slightly longer than rostrum, with a spinelet; lateral margins with numerous spines, including a very long subhepatic spine; cervical and branchiocardiac grooves deep; *linea homolica* slightly sinuous to convex. [Fossil species illustrated in place of the type species.] *Oligocene–Holocene*: Argentina, *Oligocene*; West Africa, Madagascar, Spain, Chile, Japan, Australia, Melanesia, United States (Hawaii), *Holocene*.—FIG. 2, 4a–b. *P. vetula* CRAWFORD, MPB 4011A, holotype, *Oligocene*, Argentina; a, dorsal carapace, including left extralinear flank and appendages (Crawford, 2008, fig. 2.1); b, left lateral view of extralinear flank; scale bars = 1 cm (new, courtesy of R. Crawford).

Paromolopsis WOOD-MASON in WOOD-MASON & ALCOCK, 1891, p. 268 [**P. boasi*; M]. Carapace urn shaped, transversely flattened, widest across branchial region, ornamented with supra-orbital, subhepatic, and anterolateral spines anteriorly, length about 90 percent total carapace width. Carapace regions well defined anteriorly and laterally, carapace smooth posteriorly. Rostrum simple, composed of single, triangular, weakly upturned

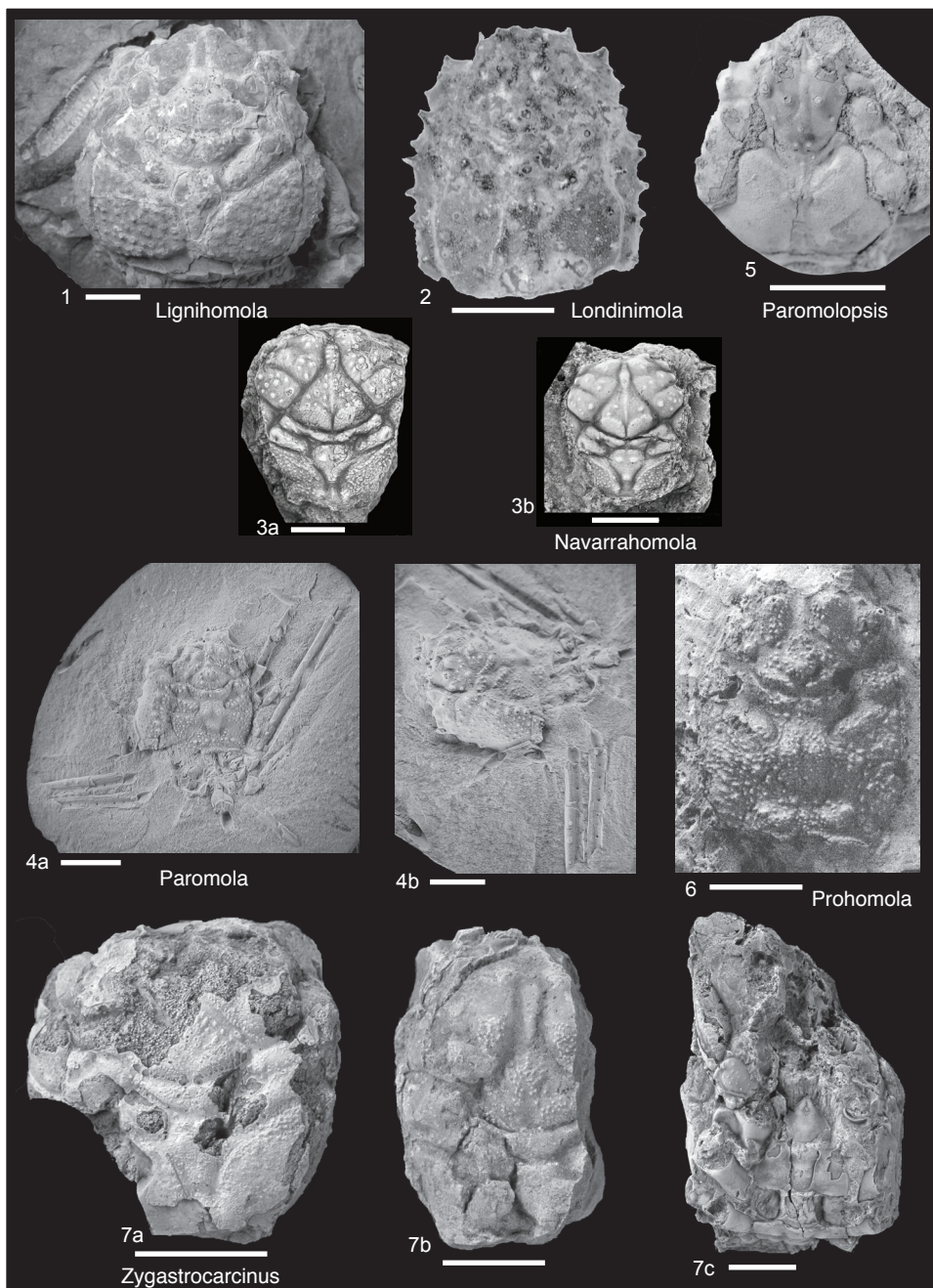


FIG. 2. Homolidae (p. 4–6).

spine. Orbits poorly defined. Eyes hemispherical, basal article short. *Linea homolica* well developed, following margin of protogastric regions and urogastric region, then extending laterally and intersecting lateral margin well short of poste-

rior margin of dorsal carapace. Posterior margin rimmed, concave. Mesogastric region well defined; urogastric region very narrow, bounded anteriorly and posteriorly by closely spaced cervical and branchiocardiac grooves; cardiac region very

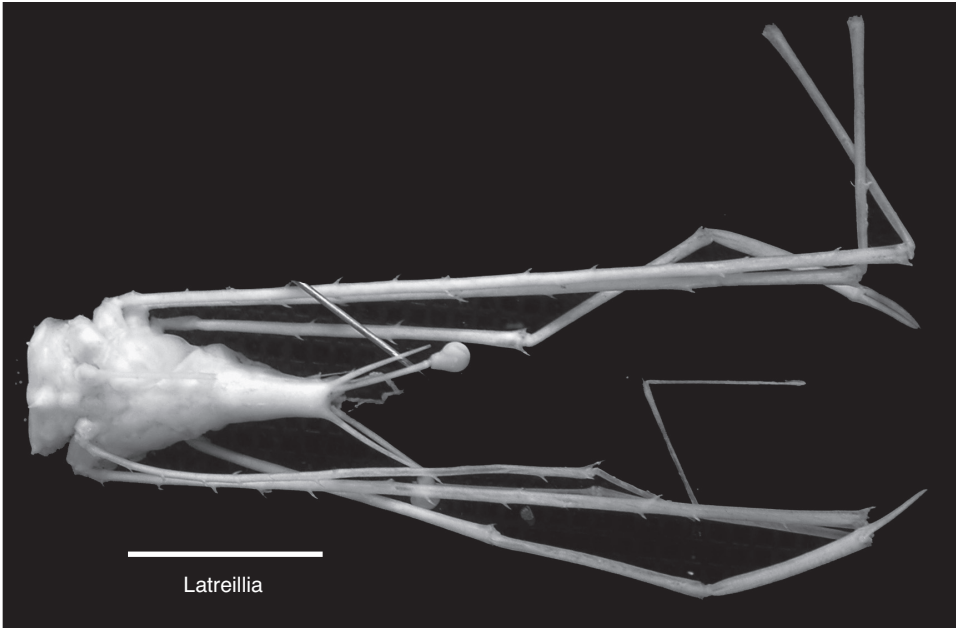


FIG. 3. Latreillidae (p. 7).

small, weakly pentagonal; branchial regions weakly inflated, smooth; cervical and branchiocardiac grooves well defined. [The fossil species is illustrated herein in place of the type species.] *Miocene–Holocene*: United States (Oregon), *Miocene*; Indo-Pacific Ocean, *Holocene*.—FIG. 2,5. *P. piersoni* SCHWEITZER & others, UWBM 97178, holotype, Langhian, Oregon, dorsal carapace including extralinal flanks, scale bar = 1 cm (Schweitzer & others, 2004, fig. 4.2).

Prohomola KARASAWA, 1992, p. 1250 [**Homolopsis japonicus* YOKOYAMA, 1911, p. 12, pl. 3,4; OD]. Carapace cuneate, widest in branchial regions; rostrum a single triangular spine; pseudorostral spines short, stout, directed anterolaterally; cervical groove very deep; branchiocardiac groove slightly less deep; regions well defined; protogastric and hepatic regions with large tubercles; metagastric region notably short, wide; distinct, spherical swellings in intestinal area. [Figures for the illustrated species are higher in quality and more accessible than those for the type species.] *Eocene*: United States (South Carolina); Japan, *Lutetian–Bartonian*.—FIG. 2,6. *P. katunai* BLOW & MANNING, USNM 484533, holotype, dorsal carapace excluding extralinal flanks, Eocene, South Carolina, scale bar = 1 cm (new).

Zygastrocarcinus BISHOP, 1983, p. 900 [**Z. griesi* BISHOP, 1983, p. 901, fig. 2, 3A–3K; OD]. Carapace slightly longer than wide; ornamented with large tubercles that may themselves be granular; extralinal areas typically well preserved; subhepatic regions highly inflated; rostrum downturned;

cervical and branchiocardiac grooves deep, about equally developed; cardiac region long, narrow; carapace widest in posterior one-third; male pleonal somites apparently all free; telson with sinuous lateral margins, with longitudinal depression near tip; somite 5 widest, somites narrowing anteriorly; merus of pereopods with spines. [Figures for illustrated species are higher in quality than those for the type species and illustrate well-preserved morphology.] *Lower Cretaceous (Albian)–Upper Cretaceous (Maastrichtian)*: United States (Montana, Wyoming), *Albian*; United States (Montana), *Campanian*; United States (South Dakota), *Maastrichtian*.—FIG. 2,7a–c. *Z. waagei* FELDMANN, SCHWEITZER, & GREEN, Albian, Wyoming; *a*, holotype, YPM 220105, dorsal carapace, including anterior portion of left extralinal flank; *b*, paratype, YPM 220103, partial dorsal carapace with well-preserved anterior regions; *c*, paratype, YPM 220104, female pleon and bases of pereopods; scale bars = 1 cm (Feldmann, Schweitzer, & Green, 2008, fig. 1A, 1C, 1F).

Family LATREILLIIDAE Stimpson, 1858

[*nom. correct.* STEBBING, 1902, p. 23, *pro* Latreillidae STIMPSON, 1858, p. 226; ICZN Opinion 712, 1964, p. 341]

Carapace triangular, narrowed and much extended anteriorly into so-called gastric neck; *linea homolica* absent; cervical and branchiocardiac grooves weak; carapace

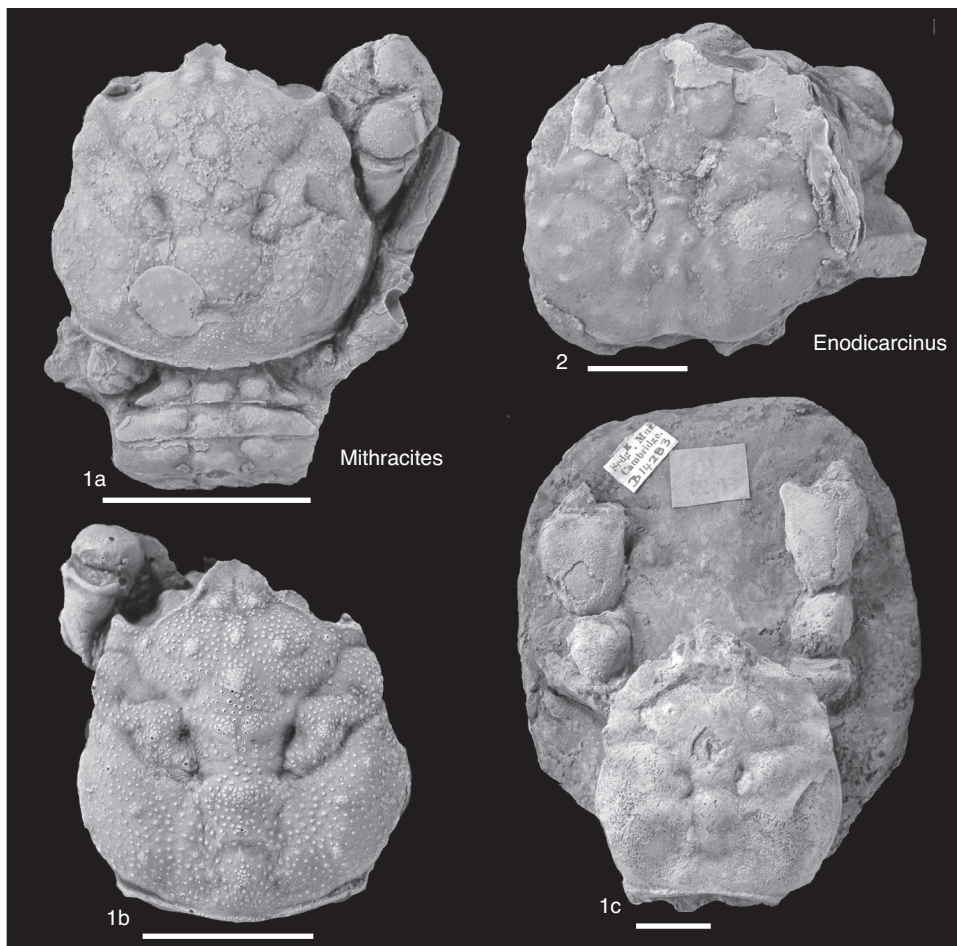


FIG. 4. Mithracitidae (p. 8).

regions poorly developed, sometimes with a spine in mesogastric region and sometimes with branchial spines; eyestalks long; rostrum short, downturned; pseudorostral spines long; male pleon straight; female pleonal somites 4–6 fused, somites may have spines; female with paired spermatheca; pereiopods very long, slender; pereiopod 5 with or without setae (adapted from KARASAWA, SCHWEITZER, & FELDMANN, 2011, p. 546). *Holocene*: Tropical and subtropical cosmopolitan.

Latreillia ROUX, 1830 in 1828–1830, unnumbered page, pl. 22 [*L. elegans*; M]. Description as for family, propodus of pereiopod five more than half

length of carpus, pereiopod five with setae. *Holocene*: Tropical and subtropical cosmopolitan.—
FIG. 3. *L. elegans* ROUX, 1830 in 1828–1830, dorsal carapace and appendages, USNM 152218, scale bar = 1 cm (new).

Family MITHRACITIDAE ŠTEVČIĆ, 2005

[Mithracitidae ŠTEVČIĆ, 2005, p. 23]

Carapace about as wide as long or somewhat longer than wide, widest in branchial regions; *linea homolica* absent; rostrum triangular, simple; orbits narrow, deep, directed forward; augenrest bounded by supra, outer, and subaugenrest spines; lateral margins sinuous, with spines anterior to intersection of cervical groove, convex posterior to it;

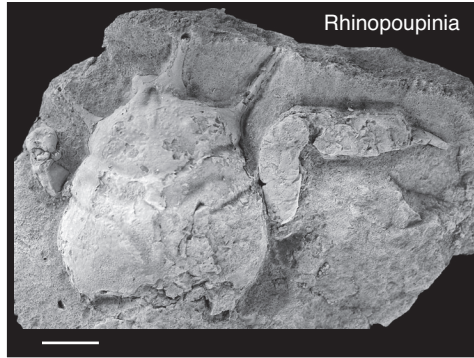


FIG. 5. Poupiniidae (p. 8–9).

posterior margin convex, rimmed; cervical and branchiocardiac grooves well developed; sternum narrow, with deep sterno-pleonal depression; female pleonal somites with 4–6 fused or 5–6 fused; pereopods 4 and 5 subdorsal (adapted from KARASAWA, SCHWEITZER, & FELDMANN, 2011, p. 547). *Lower Cretaceous (Aptian)*.

Mithracites GOULD, 1859, p. 237 [**M. vectensis* GOULD, 1859, p. 237, fig. 1–3; M]. Carapace about as wide as long, widest in branchial regions; rostrum triangular simple; orbits narrow, deep, directed forward; augenrest bounded by supra, outer, and subaugenrest spines; lateral margins sinuous, with spines anterior to intersection of cervical groove, convex posterior to it; posterior margin convex, rimmed; cervical and branchiocardiac grooves well developed; sternum narrow, with deep sterno-pleonal cavity; female pleonal somites with 4–6 fused or 5–6 fused; pereopods 4 and 5 subdorsal. *Lower Cretaceous (Aptian)*: United Kingdom.—FIG. 4, 1a–b. **M. vectensis*; a, cast of BMNH In. 28832, female, dorsal carapace and portion of abdomen; b, cast of BMNH In. 28835, very well preserved dorsal carapace; scale bars = 1 cm (Schweitzer & Feldmann, 2011, fig. 1.1, 1.3).—FIG. 4, 1c. ?*M. vectensis*, SM B 14283, dorsal carapace and isochelous first pereopods, scale bar = 1 cm (Schweitzer & Feldmann, 2011, fig. 1.2).

Enodicarcinus SCHWEITZER & FELDMANN, 2011, p. 3 [**E. atherfieldensis* SCHWEITZER & FELDMANN, 2011, p. 3, fig. 2; OD]. Carapace slightly longer than wide, flattened both transversely and longitudinally; augenrest deep, small; lateral margins convex; protogastric regions small; axial regions narrow, small, urogastric with transverse ridge, intestinal region flattened; epibranchial region broadly arcuate; posterior margin biconvex. *Lower Cretaceous (Aptian)*: United Kingdom.—FIG. 4, 2. **E. atherfieldensis*, holotype, SM B 14277, dorsal

carapace, scale bar = 1 cm (Schweitzer & Feldmann, 2011, fig. 2).

Family POUPINIIDAE Guinot, 1991

[Poupiniidae GUINOT, 1991, p. 580]

Carapace longer than wide, large in overall size, widened posteriorly; large augenrest; small pseudorostral spines; without flanks, not covering coxae of pereopods; *linea homolica* absent; cervical and branchiocardiac grooves moderately defined; all female pleonal somites free (adapted from KARASAWA, SCHWEITZER, & FELDMANN, 2011, p. 547). *Upper Cretaceous (Maastrichtian)–Holocene*.

Rhinopoupinia FELDMANN, TSHUDY, & THOMSON, 1993, p. 30 [**R. bicornis* FELDMANN, TSHUDY, & THOMSON, 1993, p. 30, fig. 23–24; OD]. Carapace ovate, inflated, bulbous, about as long (length not including rostrum = 37.2, length including rostrum = 50.8) as wide (37.7) not including rostrum, widening posteriorly (length to position of maximum width = 30.5, not including rostrum). Rostrum broad at base (rostral width = 11.0), with two very long spines projected anterolaterally and upward. A moderate distance from rostrum (width between spines = 25.0) lie very long anterolateral spines that extend almost to length of rostrum. Lateral margins convex, sinuous, incised where intersected by cervical and branchiocardiac grooves. Posterior margin apparently biconvex for insertion of P5. Mesogastric region with short anterior process, very wide posteriorly, with longitudinal groove posteriorly. Protogastric and hepatic regions confluent, with central tubercle. Metogastric region very short, wide, almost keel-like. Urogastric region short, depressed. Cardiac region broad, triangular, apex directed posteriorly; intestinal region depressed, poorly defined. Epibranchial region

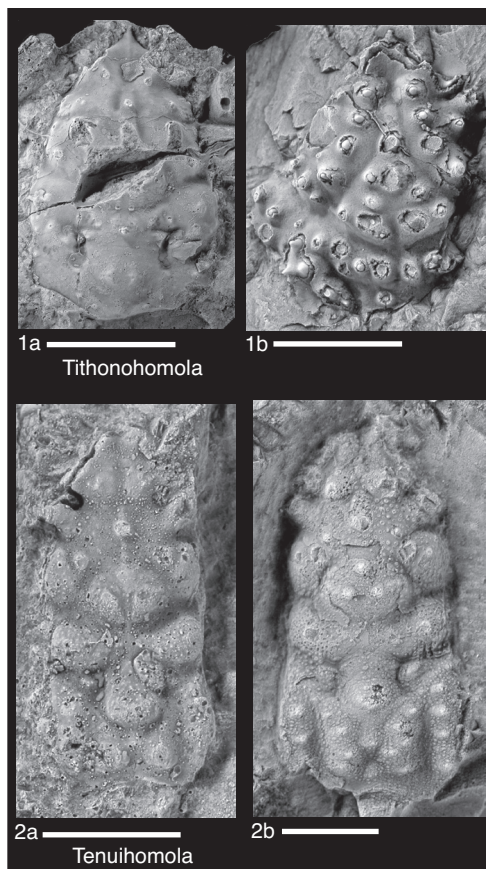


FIG. 6. Tithonohomolidae (p. 9–10).

inflated into keel anteriorly that is continuous with metagastric region, with fingerlike projection extending toward cardiac region. Remainder of branchial region undifferentiated, broadly inflated. P5 apparently subdorsal. P1 moderate in length, with moderate sized chela. *Upper Cretaceous (Maastriichtian)*: West Antarctica (Peninsular).—FIG. 5. **R. bicornis*, holotype, USNM 457696, dorsal carapace and right cheliped, scale bar = 1 cm (Karasawa, Schweitzer, & Feldmann, 2011, fig. 7).

Family TITHONOHOMOLIDAE Feldmann & Schweitzer, 2009

[Tithonohomolidae FELDMANN & SCHWEITZER, 2009, p. 194]

Interlineal portion of carapace longer than wide; *linea homolica* present, extralinear regions of cephalothorax not known. Rostrum broad and tapering or downturned and blunt. Orbits directed antero-

laterally, with two prominent orbital eaves. Regions well defined, tumid, often tuberculate or nodose (adapted from KARASAWA, SCHWEITZER, & FELDMANN, 2011, p. 547). *Upper Jurassic (Tithonian)*.

Tithonohomola GLAESSNER, 1933, p. 182 [**Oxythyreus armatus* BLASCHKE, 1911, p. 150; OD]. Interlineal portion of carapace about 60 percent as wide as long, triangular, widening to maximum width in branchial region. Extralinear regions of carapace not known. Rostrum broad at base, tapering to point, axially sulcate. Orbits with two prominent orbital eaves that may be nodose, eaves curved anterolaterally, narrowly separated. Axial regions well defined by grooves, bearing relatively coarse nodes. Cardiac region nearly circular, bearing two nodes arrayed transversely and extending nearly to posterior margin. Lateral regions less well differentiated, bearing coarse nodes. Posterior margin sinuous. *Upper Jurassic (Tithonian)*: Austria, Czech

- Republic.—FIG. 6,1a. **T. armata* (BLASCHKE), cast of holotype, NHMW 1908/0009/0294, intralinear portion of dorsal carapace, Czech Republic, scale bar = 1 cm (Feldmann & Schweitzer, 2009, fig. 4.1).—FIG. 6,1b. *T. tuberculata* FELDMANN & SCHWEITZER, holotype, NHMW 1990z0041/4001, Austria, intralinear portion of dorsal carapace, scale bar = 1 cm (Feldmann & Schweitzer, 2009, fig. 4.2).
- Tenuihomola** FELDMANN & SCHWEITZER, 2009, p. 198 [**Prosopon longum* MOERICKE, 1889, p. 59, pl. 6,11; OD]. Interlineal portion of carapace elongate-rectangular, approximately 50 percent as wide as long, slightly wider in branchial region; regions bulbous. Extralinear portion of cephalothorax unknown. Rostrum moderately broad, termination bilobed, blunt, downturned, axially sulcate. Orbits with two prominent orbital eaves about as long as wide, broadly separated by deep reentrants. Axial and lateral regions well defined by grooves. Cardiac region ovoid, lacking nodes. Metabranched region with two broad, elongate ridges. *Upper Jurassic (Tithonian)*: Austria, Czech Republic.—FIG. 6,2a. **T. longa* (MOERICKE), cast of holotype BSP AS III 321, intralinear portion of dorsal carapace, Czech Republic, scale bar = 1 cm (Feldmann & Schweitzer, 2009, fig. 5.1).—FIG. 6,2b. *T. ortwini* FELDMANN & SCHWEITZER, holotype NHMW 2007z0149/0017, intralinear portion of dorsal carapace, Austria, scale bar = 1 cm (Feldmann & Schweitzer, 2009, fig. 5.4).
- ### ABBREVIATIONS FOR MUSEUM REPOSITORIES
- BAS**: British Antarctic Survey, Cambridge, UK
BMNH: The Natural History Museum, London, UK
BSP: Bayerische Staatssammlung für Paläontologie und historische Geologie, München (Munich), Germany
C, P: South Australian Museum, Adelaide, Australia
MPB: Museo Paleontológico de Bariloche, San Carlos de Bariloche, Río Negro, Argentina
NHMW: Naturhistorisches Museum Wien (Natural History Museum of Vienna), Austria
SM B: Sedgwick Museum, Cambridge University, UK
USNM: United States National Museum of Natural History, Smithsonian Institution, Washington, D.C., USA
UT: University of Texas at Austin, Texas, USA
UWBM: Burke Museum of Natural History and Culture, University of Washington, Seattle, Washington, USA
YPM: Yale Peabody Museum of Natural History, New Haven, Connecticut, USA
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