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incertae sedis

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SYSTEMATIC DESCRIPTIONS: ORDER DECAPODA
INCERTAE SEDIS

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Family AMAZIGHOPSIDAE
Garassino & Pasini, 2018

[Amazighopsidae GARASSINO & PASINI, 2018, p. 12]

Cephalothorax longer than high; rostrum short; cervical groove deep; surface covered by tiny spines; chelipeds strong, chela can be almost as large as carapace, elements covered in spines, isochelous; uropodal exopod without diaeresis; resembling members of Axiidea. *Upper Cretaceous (Cenomanian–Turonian)*: Morocco.

Amazighopsis GARASSINO & PASINI, 2018, p. 13 [**A. cretatica*, p. 13, fig. 1–6; OD]. Diagnosis as for family. *Upper Cretaceous (Cenomanian–Turonian)*: Morocco.—FIG. 1. **A. cretatica*, holotype, MSNM i27545, scale bar 1 cm (new; photo by A. Garassino, Loma Linda University, California, USA).

INFRAORDER BRACHYURA
incertae sedis

Family CRETAPSARIDAE
**Luque in Luque, Xing, Briggs, Clark,
Duque, Hui, Mai, & McKellar, 2021**

[Cretapsaridae LUQUE IN LUQUE, XING, BRIGGS, CLARK, DUQUE, HUI, MAI, & MCKELLAR, 2021, p. 1]

As for genus.

Cretapsara LUQUE IN LUQUE, XING, BRIGGS, CLARK, DUQUE, HUI, MAI, & MCKELLAR, 2021, p. 1 [**C. athanata*; OD]. Carapace approximately as wide as long; front broad, orbits anterolaterally directed; eyestalks long, eyes large; cervical and branchiocardiac grooves present; third maxillipeds long; sternum wide, pleon extending to approximately sternite 5; chelipeds short; other pereopods

long, slender. *Upper Cretaceous (Cenomanian)*: Myanmar.—FIG. 2. **C. athanata*, holotype, LYAM-9, preserved in amber, scale bar 2 mm (new; photo by J. Luque, Museum of Zoology, Cambridge University, UK, and L. Xing, China University of Geosciences, Beijing, China).

Family MONTEMAGRECHIRIDAE
**Klompaker, Portell, & van der Meij,
2016**

[Montemagrechiridae KLOMPAKER, PORTELL, & VAN DER MEIJ, 2016, p. 8]

As for genus.

Montemagrechirus DE ANGELI & CECCON, 2015, p. 132 [**M. tethysianus*; OD]. Carapace longer than wide, widest at outer-orbital angles; overall smooth; rostrum wide, with two spines axially, serrate on remainder of margin; orbits very deep, directed anterolaterally. *Eocene (Ypresian)*: Italy.—FIG. 3. **M. tethysianus*, holotype, MCV14/02, scale bar 5 mm (new; photo by A. De Angeli, Associazione Amici del Museo Zannato, Montecchio Maggiore, Vicenza, Italy).

UNPLACED AT FAMILY LEVEL

Anaglyptus A. MILNE EDWARDS, 1873, p. 66 [**A. delfortrii*; M, *Anaglyptus sensu* A. MILNE-EDWARDS an unreplaced junior homonym] [*non Anaglyptus* MULSANT, 1839, p. 71 (type, *Leptura mystica* LINNAEUS, 1758, SD DE CHENU, 1860)]. Carapace approximately as long as wide, strongly vaulted; orbits small, completely closed; with elevations ornamenting major regions; protogastric and urogastic regions with granulations on elevations; cardiac and hepatic regions with strong projections; branchial regions with three rounded swellings. Allied with Leucosiidae by A. MILNE EDWARDS. *Miocene*: France. No known illustrations or specimens.

Ancipitecancer PASINI, LUQUE, & GARASSINO, 2020, p. 194 [**A. collinsi*; OD]. Carapace subhexagonal, approximately 50% wider than long, with antero-

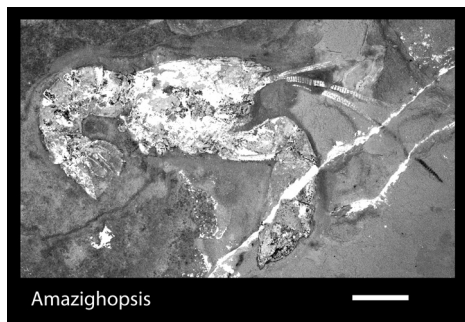


FIG 1. Amazighopsidae (p. 1).



FIG 2. Cretapsaridae (p. 1).

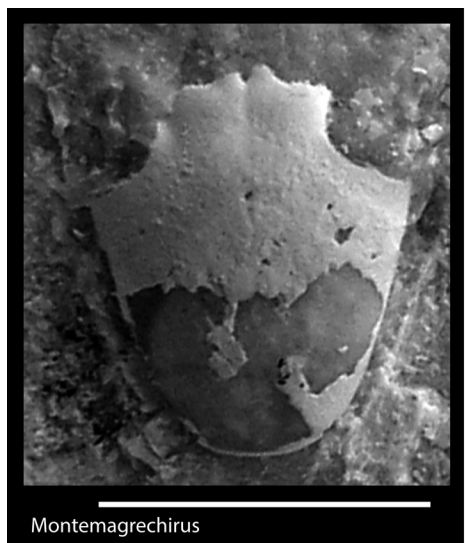


FIG 3. Montemagrechiridae (p. 1).

lateral and posterolateral margins well differentiated and separated by a deep, smooth notch at level of epibranchial region; strong subtriangular extra-orbital spine forwardly directed; anterolateral margins convex with three strongly tuberculate, unequal spines, blunt distally and directed outwards; posterolateral margins nearly straight, smooth; posterior margin strongly concave medially; dorsal regions well delimited by distinct, sinuous, deep branchiocardiac and cervical grooves, and ornamented with large rounded, granulate swellings; a pair of button-shaped tubercles located laterally to intestinal swelling. [PASINI, LUQUE, & GARASSINO, 2020, p. 194.] *Pleistocene*: Italy.—FIG. 4.1. **A. collinsi*, holotype, MUSNAF/GEO/7172, left and middle dorsal carapace, scale bar 1 cm (new; photo by J. Luque, Museum of Zoology, Cambridge University, UK).

Aulacopodia BOSQUET, 1854, p. 125 [**A. riemsdyki*, p. 125, pl. 10, 11; M]. Specimen composed of a carpus, manus, and dactylus of a cheliped; carpus and manus apparently with longitudinal keels; fingers long, slender, with setal pits parallel to occlusal surfaces. Possibly belonging to Etyoidea. [Description based upon original description and illustration and discussion of JAGT, FRAAIJE, & VAN BAKEL (2014, pl. 4, 1–2)].—FIG. 4.2. **A. riemsdyki*, IRScNB T 10660, scale bar 1 cm (new; photo from J. Jagt, Natuurhistorisch Museum Maastricht, Netherlands, & B. van Bakel, Oertijdmuseum, The Netherlands).

Boschettocheles BESCHIN, DE ANGELI, & ZARANTONELLO, 2013, p. 7 [**B. magnum*, p. 7, pl. 1, 1–3; OD]. Large chela, manus with rounded upper and lower margins, proximal margin with rounded knobs at upper and lower corners; fingers short, fixed finger lacking teeth arcuate; movable finger arcuate, with blunt denticles. *Eocene* (*Lutetian*): Italy.—FIG. 4.3. **B. magnum*, holotype, MCZ 3996-I.G.361700 (adapted from Beschin & others, 2013, fig. 3).

Brome MÜNSTER, 1839, p. 47 [**B. ventrosa*, p. 47, pl. 15, 6; SD GLAESSNER, 1969, p. 532]. Of the five pereopods, first longest, all achelate; first antennae long, thick, second antennae longer; carapace bulbous, ovate, with a concave posterior margin, approximately as long as the pleon excluding the large telson. [Based on translation of MÜNSTER, 1839, p. 47.] *Upper Jurassic* (*Tithonian*): Germany.—FIG. 4.4. **B. ventrosa* (Münster, 1839, pl. 15, 6).

Chumaioia HU & TAO, 1996, p. 103 [**C. johnfei*, p. 103, pl. 49, 10; OD]. Carapace ovate, orbit appearing shallow, directed forward; carapace surface deeply punctate, with a reticulate appearance. *Oligocene*: Taiwan.—FIG. 4.5. **C. johnfei*, NMNS 002163-F007911, scale bar 1 cm (new; photo by T.-Y. Chan, National Taiwan Ocean University).

Eoacanthacaris BESCHIN, DE ANGELI, CHECCHI, & ZARANTONELLO, 2016, p. 19 [**E. tethysianus*, p. 19, pl. 1, 1; OD]. Carpus approximately as long as high, longest near upper margin; manus much

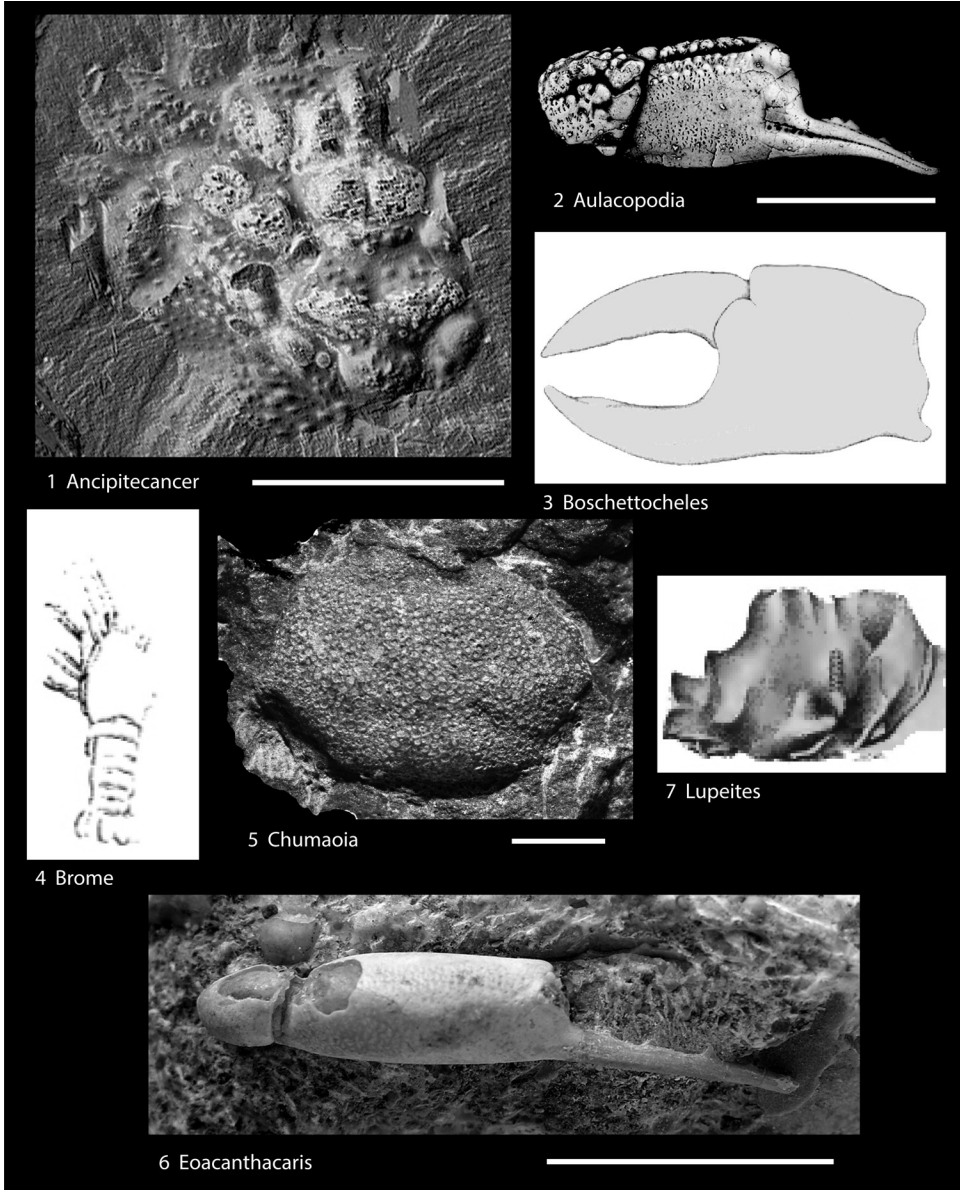


FIG 4. Unplaced at Family Level (p. 1–3).

longer than high, with swelling on distal margin; fixed finger long, approximately as long as manus, straight, with five sharp, widely spaced spines on occlusal surface. *Eocene* (*Lutetian*): Italy.—FIG. 4,6. **E. tethysianus*, holotype, MCZ.3912-I.G.361725, scale bar 1 cm (new; photo by A. De Angeli, Associazione Amici del Museo Zannato, Montecchio Maggiore, Vicenza, Italy).

Lupeites FRIČ in FRIČ & KAFKA, 1887, p. 49 [**L. granulatus*, p. 49, pl. 10,8; M]. Fragment of cara-

pace; rostrum with spines; surface of carapace finely granular; a group of transverse grooves present anteriorly. [Extracted from translation of FRIČ & KAFKA, 1887, p. 49.] *Upper Cretaceous* (*Turonian*): Czech Republic.—FIG. 4,7. **L. granulatus* (FRIČ & Kafka, pl. 10,8).

Microcorystes LÖRENTHEY in LÖRENTHEY & BEURLIN, 1929, p. 137 [**M. latifrons*, p. 136, pl. 8,4; M] [non *Microcorystes* FRIČ, 1893, p. 105 (crustacean)]. Carapace tiny, longitudinally ovate; front bilobed,

- orbits directed forward, with two fissures; lateral margins with several spines; carapace regions weakly defined, ornamented with scattered large tubercles. Type and only specimen has been lost, [GLAESSNER, 1969, confirmed by M. HYZNÝ, personal communication, 2023.] *Miocene (Tortonian)*: Hungary.—FIG. 5,1. **N. latifrons* (Lörenthey & Beurlen, 1929, pl. 8,4).
- Nachioides** BESCHIN, BUSULINI, & TESSIER in BESCHIN, BUSULINI, TESSIER, & ZORZIN, 2019, p. 99 [**N. tuberculatus*; OD]. Carapace pentagonal; rostrum bilobed, Protogastric, mesogastric regions strongly inflated; carapace ornamented with evenly spaced tubercles. *Eocene (Priabonian)*: Italy.—FIG. 5,2. **N. tuberculatus*, holotype, VR 19.1829, scale bar 1 cm (new; photo by A. Busulini, Museo di Storia naturale, Venezia, Italy).
- Oedisoma** BELL, 1858, p. 22 [**O. ambiguum*, p. 22, pl. 3,6–7; M]. Carapace ovate, wider than long; branchial regions inflated; epibranchial region arcuate, branchial regions long, inflated. Possibly a weathered specimen of *Portunites* sp., known from the same unit. *Eocene (Ypresian)*: UK (England).—FIG. 5,3. **O. ambiguum* (Bell, 1858, pl. 3,6).
- Palaeoplanes** BESCHIN, BUSULINI, & TESSIER, 2022, p. 82 [**P. veneticus*; OD]. Carapace ovate, smooth; orbits wide, with sinuous upper orbital margin. *Eocene (Ypresian)*: Italy.—FIG. 5,4. **P. veneticus*, holotype, MCZ 7446, scale bar 5 mm (new; photo by A. Busulini, Museo di Storia naturale, Venezia, Italy).
- Paronachioides** BESCHIN, BUSULINI, & TESSIER in BESCHIN, BUSULINI, TESSIER, & ZORZIN, 2019, p. 99 [**P. scaber*; OD]. Carapace pentagonal; rostrum bilobed, orbits directed forward; protogastric, mesogastric regions strongly inflated. *Eocene (Priabonian)*: Italy.—FIG. 5,5. **P. scaber*, holotype, VR 19.1831, scale bar 1 cm (new; photo by A. Busulini, Museo di Storia naturale, Venezia, Italy).
- Prehepatus** RATHBUN, 1935, p. 47 [**P. cretaceus*, p. 47, pl. 11,29–30; OD]. Genus known only from cheliped material; manus stout, ornamented with large tubercles; widening distally; fingers short, stout; movable finger ornamented with small spines on upper surface; fixed finger very short, straight. *Lower Cretaceous–Eocene. Lower Cretaceous (Albian)*: USA (Texas). *Lower Cretaceous (Campanian)*: USA (New Jersey, Mississippi, Tennessee). *Upper Cretaceous (Maastrichtian)*: USA (Mississippi, New Jersey, South Dakota, Tennessee). *Eocene*: Mexico (Baja California Sur).—FIG. 5,6. **P. cretaceus*, holotype, UT 211, Albian, Texas, USA, scale bar 1 cm (Rathbun, 1935, pl. 11,29).
- Pseudomicippella** SCHWEITZER, DWORSCHAK, & MARTIN, 2011, p. 362 [**P. granulosa* PELSENEER, 1886, p. 170,6; M] [= *Pseudomicippe* PELSENEER, 1886, p. 170, non *Pseudomicippe* HELLER, 1861, p., (crustacean)]. Movable finger arcuate, with blunt spines on upper surface; appearing to be a small blunt spine on proximal end of occlusal surface; proximal end of finger much higher than distal end; appears similar to calappoid finger. *Upper Cretaceous (Maastrichtian)*: The Netherlands.—FIG. 5,7. **P. granulosa* (Pelseener, 1886, fig. 6).
- Roemerus** BISHOP, 1983, p. 42 [**R. robustus*, p. 42, pl. 3,20–31; OD]. Manus short, approximately as long as high, proximal margin with articulation rim; fixed finger short, approximately half as long as movable finger, extending straight; movable finger arcuate. *Lower Cretaceous (Albian)*: USA (Texas).—FIG. 5,8. **R. robustus*, TMM NPL 69678, inner surface of left chela, scale bar 1 cm (new).
- Vanuachela** KAMMERER, 2006, p. 270 [**Vanua linearius*, p. 375, pl. 56C, 56E; OD] [*Vanua* RATHBUN, 1945, p. 375, non *Vanua* KIRKALDY, 1906, p. 415 (Hemiptera)]. Fragment of carapace, orientation unknown. *Miocene*: Fiji.—FIG. 5,9. **V. linearius*, holotype, USNM 498405, scale bar 1 cm (new).
- Wulaicarcinus** HU & TAO, 1996, p. 126 [**W. micronus*, p. 127, pl. 66,1–2; OD]. Carapace wider than long, margins straight, grooves deep. *Oligocene*: Taiwan.—FIG. 5,10. **W. micronus*, NMNS 002163-F007597, scale bar 1 cm (new; photo by T.-Y. Chan, National Taiwan Ocean University).
- Zannatiois** BESCHIN, BUSULINI, & TESSIER in BESCHIN, BUSULINI, FORNACIARI, PAPAZZONI, & TESSIER, 2018, p. 171 [**Z. vicetinus*; OD]. Carapace approximately as long as wide; regions very well defined and bulbous; protogastric, mesogastric, urogastric regions confluent, ovate, very inflated; hepatic and epibranchial regions at a lower level from central area; posterior margin very narrow, with two tiny spines. *Eocene (Priabonian)*: Italy.—FIG. 5,11. **Z. vicetinus*, holotype, MCZ 5353, scale bar 1 cm (new; photo by A. Busulini, Museo di Storia naturale, Venezia, Italy).

ABBREVIATIONS FOR MUSEUM REPOSITORIES

- IRScNB**: Institut royal des Sciences naturelles de Belgique, Brussels, Belgium
- LYAM**: Longyin Amber Museum, Xishan District, Kunming, China
- MAB k**: Oertijdmuseum, Boxtel, The Netherlands
- MCV**: Museo Civico “D. Dal Lago” di Valdarno, Vicenza, Italy
- MCZ**: Museo Civico “G. Zannato” di Montecchio Maggiore, Vicenza, Italy
- MSNM**: Museo Civico di Storia Naturale di Milano, Italy
- MUSNAF**: Museo di Storia Naturale dell’Accademia dei Fisiocritici, Siena, Italy
- NMNS**: National Museum of Natural Science, Taiwan, Republic of China
- TMM NPL**: Texas Memorial Museum, Non-vertebrate Paleontology, Jackson School of Geosciences, The University of Texas at Austin, USA..
- USNM**: United States National Museum of Natural History, Smithsonian Institution, Washington, D.C., USA

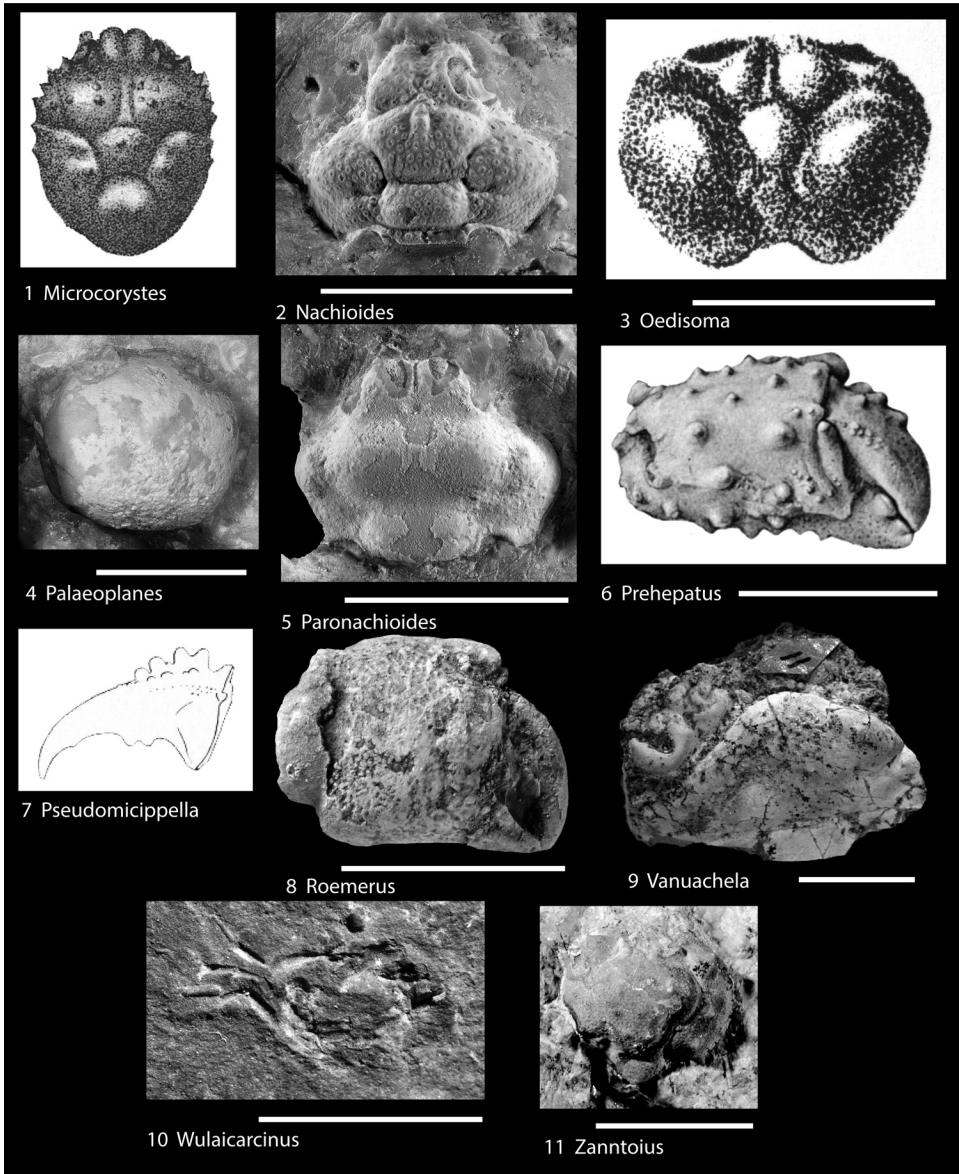


FIG 5. Unplaced at Family Level (p. 3–4).

UT: Jackson School Museum of Earth History, Non-Vertebrate Paleontology, University of Texas, Austin, Texas, USA

VR: Museo di Storia naturale di Verona, Italy

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