

**TABLE 6. MEASUREMENTS TAKEN ON SPECIMENS OF
CALAPPA ZINSMEISTERI FROM THE
LA MESETA FORMATION†**

Specimen	L1 (mm)	L2 (mm)	L3 (mm)	H1 (mm)	H2 (mm)	H3 (mm)	T (mm)
404877 Right	35.2	28.0	18.3	23.3	7.6	8.6	12.0
404878 Right				23.7	8.4		12.0
404879 Left				24.9	7.9		12.3

†Position and orientation of measurements are illustrated in Figure 14.

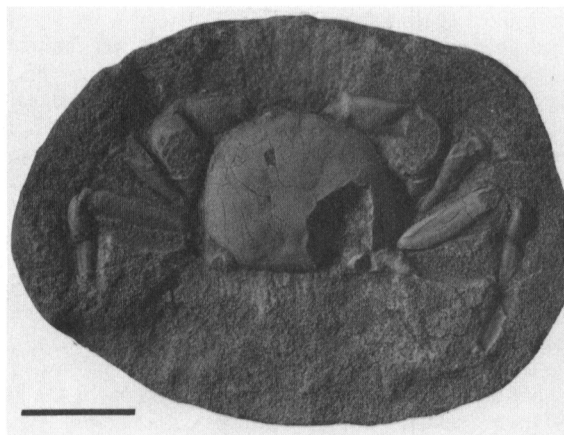


Figure 15. *Chasmocarcinus seymourensis* Feldmann and Zinsmeister. Holotype, USNM 365455. Dorsal aspect of carapace and pereopods. Bar scale = 1 cm.

and serves to distinguish the species from other members of the subfamily (Rathbun, 1937; Sakai, 1976). Species of *Matuta* typically have a longer fixed finger, and the occlusal surface is not as oblique to the long axis of the propodus. In species of *Mursia* and *Cycloes* the fixed finger tends to be elongate and downturned. The lower margin is spinose in many species of *Matuta*, *Paracyclois* and some *Mursia* and is serrate in species of *Acanthocarpus* and *Cycloes*. that surface is smooth or beaded in species of *Calappa*, but not typically spinose.

Prior to this notice, there have been only two references to *Calappa* in Eocene rocks. Bittner (1875) reported *Calappa* sp. from Eocene rocks in the Vicentia region of Italy (Glaessner, 1929, p. 72), and Toniolo (1909) noted *Calappa* sp. in rocks on Mount Staraj, in the Istria. Glaessner (1929, p. 72) concluded that this occurrence was Lutetian in age; however, the reference to age in Toniolo (1909, p. 250) is equivocal. An apparent typographical error in setting the table summarizing the stratigraphic distribution of fossils resulted in no record of occurrence of *Calappa* sp., even though the species is listed in the table. Glaessner (1969, p. R494) questioned Eocene occurrences of the genus and indicated the certain range of the genus to be Oligocene to Recent. Whether or not the Eocene records of *Calappa* cited by Bittner (1875) and Toniolo (1909) are authentic, the occurrence of the genus on Seymour Island represents the southernmost collection site and one of the oldest occurrences. It documents the genus in the Eocene with certainty.

Glaessner (1969, p. R494) reported the geographic range of fossil forms of *Calappa* to include North America, Europe, Central America, Egypt, Burma, and the East Indies. Most of the records are from the Northern Hemisphere and range from Oligocene through Pleistocene. Many, if not most, of the records are derived from identification of chelipeds. Carapace material is more scarce; however, as indicated above, chelipeds are fairly diagnostic and can be identified with confidence.

Modern representatives of *Calappa* have been described from a variety of shelf habitats and are distributed through warm temperate and tropical regions worldwide. Rathbun (1937) recorded collecting sites in North and South America on rocky and sandy substrates varying in depth from sea level to 125 fathoms. Sakai (1979) reported specimens from the western Pacific, referable to the genus, on substrates ranging from hard beaches and coral reefs to soft sand in depths varying from 10 to 150 m. A somewhat wider range of habitats was reported for African specimens (Manning and Holthuis, 1981), owing in large part to records of *C. granulata* (Linnaeus) to depths of 400 to 700 m (p. 52). Nonetheless, the bulk of collections of individuals referred to *Calappa* are from warm, shallow-water, firm substrate habitats. These conditions would seem to define the preferred habitat of *Calappa*.

Superfamily XANTHOIDEA McLeay, 1838
Family GONEPLACIDAE McLeay, 1838
Subfamily CHASMOCARCININAE Serene, 1964

Genus *Chasmocarcinus* Rathbun, 1898
***Chasmocarcinus seymourensis* Feldmann and Zinsmeister, 1984**
Figure 15

Chasmocarcinus seymourensis FELDMANN and ZINSMEISTER, 1984, p. 1056–1058, Figs. 8, 9.

Chasmocarcinus. ZINSMEISTER and FELDMANN, 1984, p. 282; FELDMANN, 1984, p. 16, unnumbered figure; FELDMANN, 1984, cover photograph; FELDMANN and ZINSMEISTER, 1984, p. 507.

Type. The holotype and sole specimen, USNM 365455, is deposited in the U.S. National Museum of Natural History, Washington, D.C.

Locality and stratigraphic position. This species was collected from unit II of Elliot et al. (1982) and Unit Telm3 of Sadler (1986, this volume) of the La Meseta Formation at Locality 12 (Fig. 1), Seymour Island, Antarctica.

Remarks. A single specimen of this species was collected by W. J. Zinsmeister during the 1981–1982 expedition. In the 1983–1984 season, and again in 1986–1987, Feldmann visited the type locality and found no additional specimens. If more specimens are present, they would have to be considered extremely rare. Therefore, no new information is available to expand on the description or the statements regarding the ecological setting of this little crab.

Superfamily MAJOIDEA Samouelle, 1819
Family MAJIDAE Samouelle, 1819

Genus ?*Micromithrax* Noetling, 1881

Remarks. Assignment of the sole specimen referable to this taxon is extremely difficult, owing to partial preservation of the material. Pre-

served as a mold of the interior of the cephalothorax, the regions are distinctly defined and can be interpreted readily. However, the anterolateral and fronto-orbital margins are partially missing and difficult to interpret. It is difficult to determine whether the anterolateral margin is denticulate or generally smooth. We interpret it to be smooth, in the absence of evidence to the contrary. It appears that either a short, bifid rostrum is present, or that the rostral region is attenuated, sulcate, and broken. Orbits are either poorly developed or lacking.

Placement in *Micromithrax*, rather than in one of the other closely related genera within the Majidae, was based on the conformation and relative development of the carapace regions and on the general outline. *Micromithrax* tends to have a more circular outline than many other majids that are more strongly attenuated in the frontal region.

The tentative nature of the placement must be emphasized. It is possible, but unlikely, that the specimen belongs to one of the Eocene genera of the Portunidae. For example, *Liocarcinus* Stimpson-Pourtales, 1870, has a groove pattern and conformation of carapace regions very similar to that of the specimen in question, particularly *L. rakosensis* (Lorenthey, in Lorenthey and Beurlen), 1979 (fide Müller, 1984, p. 83, Plate 69, Figs. 2 through 6). This species, however, has a strongly denticulate anterolateral margin which is not likely to be present on the sole specimen from the La Meseta Formation. Furthermore, *L. rakosensis* has a reentrant at the posterolateral corner, as is the case in many portunids. That corner is not modified in *Micromithrax* and is not typically modified in any of the Majidae.

On the basis of the above observations, it seems prudent to refer the specimen questionably to *Micromithrax* until such time as more and better material is available for study.

?Micromithrax minisculus n. sp.

Figure 16

Description. Carapace small, width 5.1 mm, length including rostral region, 5.0 mm, uniformly vaulted transversely and longitudinally, outline hexagonal.

Frontal region attenuated into short, bifid rostral area with axial depression. Fronto-orbital margin nearly straight with no orbital depressions evident; anterolateral and posterolateral margins approximately equally long, straight segments joined at point of greatest carapace width just posterior to midlength; posterior margin about 45 percent total width.

Regions well defined as swollen areas separated by shallow, subtle sulci. Mesogastric region long and slender, merging posteriorly with broad, nearly circular metagastric region. Gastric regions circular with diameter about 25 percent total carapace width. Hepatic regions swollen, triangular, separated from adjacent regions by broad, smooth depressions. Urogastric region three times as wide as long, well defined. Cardiac region circular, vaulted, 30 percent of carapace width. Intestinal region not differentiated. Branchial regions not well differentiated, broadest near cervical groove, narrowing posteriorly.

Surface ornamented by fine pustules, best developed on gastric and hepatic regions, more subtle elsewhere.

Abdomen and appendages unknown.

Type. The holotype and sole specimen of this species USNM 404876, is deposited in the U.S. National Museum of Natural History, Washington, D.C.

Etymology. The trivial name is taken from the Latin word, *minisculus* = rather small, in reference to the diminutive size of the specimen.



Figure 16. *?Micromithrax minisculus* n. sp. Holotype, USNM 404876. Dorsal view of exfoliated carapace. Bar scale = 1 cm.

Location and stratigraphic position. The specimen was collected from unit Telm2 of Sadler (1986) in the Eocene La Meseta Formation at Locality 3, Seymour Island, Antarctica.

Remarks. Little can be added to what has been said above. Comparison of the La Meseta material with fossil and Recent majids confirms that it cannot be referred to a previously described species, and it certainly differs significantly from any of the other decapods from Seymour Island. However, confirmation of the generic placement and elaboration of the morphologic details must await discovery of better specimens. Studies dealing with living majids—for example, Rathbun (1925), Sakai (1976), Manning and Holthius (1981), Williams (1984), and McLay (1985)—confirm that most of these organisms have an attenuated frontal region. The poor preservation of the La Meseta specimen simply does not permit thorough interpretation of that region, and therefore, the placement must remain enigmatic.

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