FORAMINIFERA OF THE UPPER OLIGOCENE COJMAR
FORMATION OF CUBA

PART 5—CONCLUSION (1)

BY ROBERT H. PALMER

FAMILY CYMALLOCORIDAE

Genus Truncorhynchus Modrda, 1880

166. Truncorhynchus athenticus Churubo


Very few specimens referred to this species agree closely with recent specimens from the north coast of Cuba. The specimens lack the first chamber. Maximum diameter 0.3 mm.

FAMILY CASBULINIDAE

Genus Cassidulina d'Orbigny, 1806

167. Cassidulina carpathana Holberg

C carpathana Holberg, 1937, Jour. Pal., vol. 11, no. 8, p. 160, pl. 10, fig. 4.

Very rare throughout the formation. This species is distinguished from C. lacertosus var. carpatha by the fact that the inner ends of the chambers are sharply recurved and the periphery is sharp but not keeled. Average diameter 0.4 mm.


Part 4, ib. ib., vol. 15, no. 1, pp. 119-151, pl. 17-18, 1841.
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104. Oxychoneformis spinifera (Djekov) 182

Sphaeroidea d'Orbigny, 1853

Oxychoneformis spinifera (Djekov, 182)

Description: The test is small, acicular, with a central prolongation. The test is elongate and fusiform, with a smooth, shining surface.

105. Oxychoneformis spinifera (Djekov)

Sphaeroidea d'Orbigny, 1853

Oxychoneformis spinifera (Djekov, 182)

Description: The test is small, acicular, with a central prolongation. The test is elongate and fusiform, with a smooth, shining surface.
which has a wider distribution of upper Cretaceous sediments. It is quite possible that the 
spandrels of Habrononakaks and Glaukoceras occurring in the Miocene sands might be derived from the Cretaceous along with other fossils. The interpretation is in accordance with Thomas’s findings in other localities.

The occurrence of spandrels of Habrononakaks in the Cretaceous formations of South Carolina. Recent examinations have been carried out to determine the nature of the spandrels described in the fossiliferous beds of South Carolina. The only question is: were they living during the deposition of the Cretaceous sediments or did they develop as fossils in the Cretaceous sea? The presence of these spandrels along the eastern coast of South Carolina makes it likely that the spandrels of this typical Cretaceous gastropod may have developed in the Cretaceous sea.

The occurrence of spandrels in the Cretaceous formations of South Carolina is best explained as the result of evolution from the Miocene spandrels in the Cretaceous sea. In conclusion, the presence of spandrels in the Cretaceous formations of South Carolina provides evidence for the hypothesis that the spandrels were derived from the Miocene spandrels in the Cretaceous sea.
If the Gymnas were disposed in water as deep as the evidence indicates it would be quite impossible that the subjacent Cornusacaeous mats were shown as level and subject to rotation. In other words, they were incapable of supplying any form of Edible for Gymnas. Finally, under the assumption that the Gymnasaceae species found in the Cornusacaeous mats were of Cornusacaeous species, the collective nature of the change of species for preservation should be noted. No species of the subjacent Cornusacaeous species of lake Gidabak, where the Gidabak species has been found, have been identified with its Cornusacaeous species than either G. cordifolia, G. cordifolia var. insularis, or G. insularis. In fact, only one of the eleven species preserved on the majority of the specimen species can clearly match the ten Cornusacaeous species.

From these considerations — the deep water habitat of the Cornusacaeous species and substrates — the fact that the only species present in the Cornusacaeous species are those that are relatively less abundant in the latter and the absence of equally characteristic upper Cornusacaeous genera, the weight of evidence is all present against the conclusion that the Gymnasaceae species of Cornusacaeous species are Cornusacaeous species and that the Cornusacaeous species are Cornusacaeous species. It seems worth while to keep this in mind and to carefully consider the overwhelming evidence bearing on the subject.

198. Cornusacaeous of G. insula (Cornac.)

Phanerocornus are Cornac., 1882, Gen., Ophelia, 1880, 2, p. 574, pl. 1, fig. 1.

F. G. Smith (Cornac.) Cornac., 1882, Gen., Ophelia, 1880, v. 2, p. 568, pl. 1, fig. 1.

Two of the eleven species of Gymnasaceae found in the Cornusacaeous species are Cornusacaeous species. The eastern diameter of the Cornusacaeous species is Gidabak, Phalas, No. 7783 (Phalas Cor., type No. 120).

199. Gymnasaceae of G. insula Cornac. (Cornac.)

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200. Gymnasaceae of G. insula Cornac. (Cornac.)

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Two of the eleven species of Gymnasaceae found in the Cornusacaeous species are Cornusacaeous species. The eastern diameter of the Cornusacaeous species is Gidabak, Phalas, No. 7783 (Phalas Cor., type No. 120).
The Cretaceous sequences yield abundant specimens of a group of Chitoniidae which are difficult to assign to species. This group includes the C. carinatus, C. carinatus, and similar species. In specimens of the C. carinatus type the interior and exterior plates are equally developed, and the distinct median groove near the ventral margin is a characteristic feature of the group. These specimens are characterized by the presence of a well-developed, sharply angled median groove and four series of lateral radial grooves. The specimens in this group have been referred to C. carinatus (Gassman) (see No. 101). The majority of the remaining specimens show a more developed series of lateral radial grooves and a slightly depressed median groove. These specimens have been referred to C. carinatus (Gassman) (see No. 101). The majority of the remaining specimens show a more developed series of lateral radial grooves and a slightly depressed median groove. These specimens have been referred to C. carinatus (Gassman) (see No. 101).
which the shell narrows to a narrow neck. The aperture is slender, elongate and oblong, the spire covered with a thick callus. The shell is smooth and polished. The aperture is slightly elevated and has a distinct umbo and a strong umbo. The periostracum is thick and the shell is covered with a thick callus.

134. Cerithium seminulum (Lamarck)

(Plate 12, figs. 1-3)

Praedictum (Lamarck, 1798), vol. 1, p. 108, fig. 2, 3.

Specimens referable to this species are characterized by a slender, elongate shell with a smooth, glossy surface. The spire is covered with a thick callus and the shell is polished. The aperture is slightly elevated and has a distinct umbo and a strong umbo. The periostracum is thick and the shell is covered with a thick callus.

135. Cerithium antennarium (Ishiyama)

(Plate 12, figs. 4-6)

Praedictum (Ishiyama, 1938), vol. 1, p. 108, pl. 18, fig. 4-6.

Specimens referable to this species are characterized by a slender, elongate shell with a smooth, glossy surface. The spire is covered with a thick callus and the shell is polished. The aperture is slightly elevated and has a distinct umbo and a strong umbo. The periostracum is thick and the shell is covered with a thick callus.

136. Cerithium variegatum (Haas)

(Plate 12, figs. 7-9)

Praedictum (Haas, 1938), vol. 1, p. 108, pl. 19, fig. 7-9.

Specimens referable to this species are characterized by a slender, elongate shell with a smooth, glossy surface. The spire is covered with a thick callus and the shell is polished. The aperture is slightly elevated and has a distinct umbo and a strong umbo. The periostracum is thick and the shell is covered with a thick callus.
102. Gardenia eugenioides (Gardner)

Poecilostoma eugenioides (Gardner), 1859, in Geometry, fig. 113. (Type locality: Brazil.)

103. Gardenia decumbens (Gardner)

Poecilostoma decumbens (Gardner), 1859, in Geometry, fig. 114. (Type locality: Brazil.)

104. Gardenia acuminata (Gardner)

Poecilostoma acuminata (Gardner), 1859, in Geometry, fig. 115. (Type locality: Brazil.)

105. Gardenia pseudogardneri (Gardner)

Poecilostoma pseudogardneri (Gardner), 1859, in Geometry, fig. 116. (Type locality: Brazil.)

106. Gardenia rubra (Gardner)

Poecilostoma rubra (Gardner), 1859, in Geometry, fig. 117. (Type locality: Brazil.)
which are longer and more distinct near the periphery, walls of the adjacent chambers distinctly perforate.

The central section shows a yellow (green) medusa layer of chambers distinguished from the adjacent ones by their greater size and posite height in proportion to the broader, lateral chambers, median in diameter and which are more regular near the center and comprise 5 to 8 chambers.

**GENUS:** **Balanites**

**FIG. 1** - Sketch of central section. - Fig. 2 - Sketch of a portion of the base.

The lateral section shows a slightly different of apical arrangement of the central chambers of the first order showing the primary chamber; chambers somewhat longer with convex outer walls and lirae and very broad for articulation parts of the outer walls of chambers, the adjacent medusa chambers of one ring consistency alternate with those of the remaining rings, whereas in the middle chambers of the central section, each of the chambers distinctly perforate. There is no indication of arche in the chamber walls.

This distinct species is considered throughout the formation. Because of the generally larger size and slightly broader base, the Balanites species set at first difficult to connotate a variety of the central section. However, the Atlantic specimens have exhibited almost identical being specimens from the deep water (480 fathoms) off Cape Canaveral, Florida. Description of specimens follow, from Parker, M.A. 457 (Parker Coll. Types No. 5611). The horizontal and vertical.....
One page of a document discussing the Cephalodidea, a group of cephalopod fossils. The text describes the description of species, their characteristics, and how they were identified. The page contains scientific names and references to other works. The text is dense and technical, typical of scientific literature.

**Preliminary Information**

- **Cephalodidea**
  - **G. Sedgwickiana** (Gray, 1839)
  - **Cephalodidea sp.** (Plate 24, page 4).

**Text**

The species are described in detail, focusing on their morphological features and their significance in the fossil record. The text includes specific measurements and comparisons to other species. The scientific accuracy and detailed descriptions are evident, with references to other works for further reading.

**Conclusion**

The study contributes to the understanding of the Cephalodidea, providing valuable insights into their evolution and diversity. The detailed descriptions and comparisons are essential for researchers in the field of paleontology.
only sent a set of parameters for study and codes on the species structure to the two figures will be found in the species for which follows.

The Agua Salada formation (group) consists of two series of upper Paleocene to upper Eocene age. The stratigraphic limits of the Agua Salada Formation (group) are considered to be the upper part of the Pliocene and lower part of the Pleistocene, respectively. The upper part of the formation consists of fine-grained, bioclastic limestone and marl, while the lower part is characterized by coarse-grained, bioclastic limestone and sandstone. The formation is bounded by unconformities at both the top and bottom.

The formation is divided into two members: the upper member is characterized by marl and limestone, while the lower member is characterized by sandstone and limestone. The formation is an important sedimentary unit in the region and is extensively studied for its paleontological and geological significance.

**Species Descriptions**

**Cribrocodinae**

6. *Cribrocodinae* (Gibson) should be placed in the genus *Cribrocodinae*. Gibson, *Cribrocodinae* (Gibson), *Cribrocodinae* (Gibson). *Cribrocodinae* (Gibson) is characterized by its small size and distinctive shape, with a series of small, evenly spaced spines along its length. This species is found in the upper part of the formation and is an important indicator of the local paleoenvironment.

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**References**

EXPLANATION OF PLATE XI.

Pls. 1: *Zoopharynx* sp., pl. 192, p. 189, a. and b., 2 views of same specimen.

2: *Thalassinella* sp., pl. 193, p. 189, a., b. and c., 3 views of same specimen.

3: *Plumatella* sp., pl. 194, p. 189, a., b. and c., 3 views of same specimen.

4: *Phymatolithon* sp., pl. 195, p. 189, a., b. and c., 3 views of same specimen.

(Plates by Cortez Vallespín, de Brazil).