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Description of two new Cuspidariidae (Bivalvia, Septibranchia) from the Atlantic Ocean

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CANCAP Project/Contributions to the zoology, botany and paleontology of the Canarian-Capeverdian region of the North Atlantic Ocean, No. 23

This paper is based on material collected by an oceanographic survey vessel during the CANCAP expeditions. In the years 1976-1978, 1980, and 1981 the CANCAP I-V expeditions have investigated the zoology, botany and paleontology of the areas surrounding the Canary Islands, Madeira, Porto Santo, the Selvagens Islands, the Azores, and the coasts of Morocco. Cuspidariid bivalves were obtained by taking grab samples, dredging and trawling. The new species here described have been compared to specimens in the following collections: Instituut voor Taxonomische Zoölogie (Zoölogisch Museum), Amsterdam; Koninklijk Belgisch Instituut voor Natuurwetenschappen, Brussels; Natur-Museum Senckenberg, Frankfurt am Main, West Germany; Rijksmuseum van Natuurlijke Historie, Leiden; British Museum (Natural History), London; Muséum National d'Histoire Naturelle, Paris; National Museum of Natural History, Smithsonian Institution, Washington D.C., U.S.A.
Acknowledgements are due to the curators in charge for kindly submitting their material for inspection.

Cuspidaria (Cardiomya) obliqua n. sp. (figs. 1-2)

Diagnosis. — This species is most similar to *Cuspidaria* (*Cardiomya*) *costellata* (Deshayes, 1830). It differs from that species by the more oblique general shape, a smaller relative height, comparatively fainter radiating ridges on the central part of the shell, and (in some specimens) the presence of radiating ridges on the rostrum.

Description. — Shell very oblique, white, moderately convex, posteriorly with a compressed rostrum. The shell is equivalve, having the top approximately on the midline. The broad umbones are inclined slightly backwards and the beaks are incurved anteriorly. The shell margin is regularly curved in front of the midline; the central margin behind the midline is straight or slightly convex. The posterior dorsal margin is concave; the posterior end of the rostrum is rounded.

The sculpture consists of 15-35 radiating ridges, which are indistinct in front of the midline. There are four or five stronger ridges behind the midline, sometimes alternating with weaker ribs. The ribs are indistinct on the rostrum (cf. anterior part of the shell) and sometimes almost absent.

The resilifer is distinctly protruding from the hinge. There is a posterior lateral tooth in the right valve close to the resilifer.

Measurements holotype (left valve): length 7.0 mm, height 4.3 mm.

Soft parts unknown.

Material. — CANCAP V Sta. 10, 37°41′N 25°31′W, depth 150 m (right valve); CANCAP V Sta. 20, 37°16′N 24°44′W, depth 240-245 m (left valve: holotype);

CANCAP V Sta. 47 (2 left valves, 1 right valve), 36°55'N 25°08'W, depth 60-65 m (3 valves). All localities are in the neighbourhood of the Azores; all material is kept in the Rijksmuseum van Natuurlijke Historie [holotype no. 55842; paratypes nos. 55843 (Sta. 10), 55844 (Sta. 42)].

Derivatio nominis. — *obliqua*, Latin for oblique, because of the shape of the shell.

Cuspidaria (Myonera) canariensis n. sp. (figs. 3-5)

Diagnosis. — This species is most similar to *Cuspidaria* (*Myonera*) *atlantica* Allen & Morgan, 1981. It differs from that species in the less slender shape, the presence of an angular concavity at the base of the rostrum and certain characters of the hinge as described below.

Description. — Shell moderately inflated, creamy white, with the rostrum compressed posteriorly. The shell is inequivalve, the posterior ventral margin of the left valve overlapping the right valve, and the posterior dorsal margin of the right valve overlapping the left valve. The broad umbo hardly protrudes beyond the dorsal margin and is directed vertically. The beaks are inclined anteriorly. The margin is evenly rounded in front of the midline. The ventral margin of the rostrum is straight in the left valve and indented in the right valve. The dorsal posterior margin is straight.

The sculpture usually consists of 10-15 (up to 20) concentric lamellae, that are indistinct at the base of the rostrum and absent in the umbonal region. Above the distinct keel between umbo and posteroventral corner the sculpture consists of fibrous lines of growth. A second keel, only present in the right valve, is located just below the posterior dorsal margin. Its presence is connected with the overlap of the posterior dorsal margin.

The anterior hinge margin is smooth in both valves. Cardinal teeth are absent and the resilifer is horizontal with a very small protruding structure posteriorly (fig. 5). Behind the top there is a bulb-like thickening parallel to the hinge margin. The left valve hinge margin is smooth.

Measurements holotype valves: length 4.0 mm, height 2.4-3.0 mm.

Soft parts unknown.

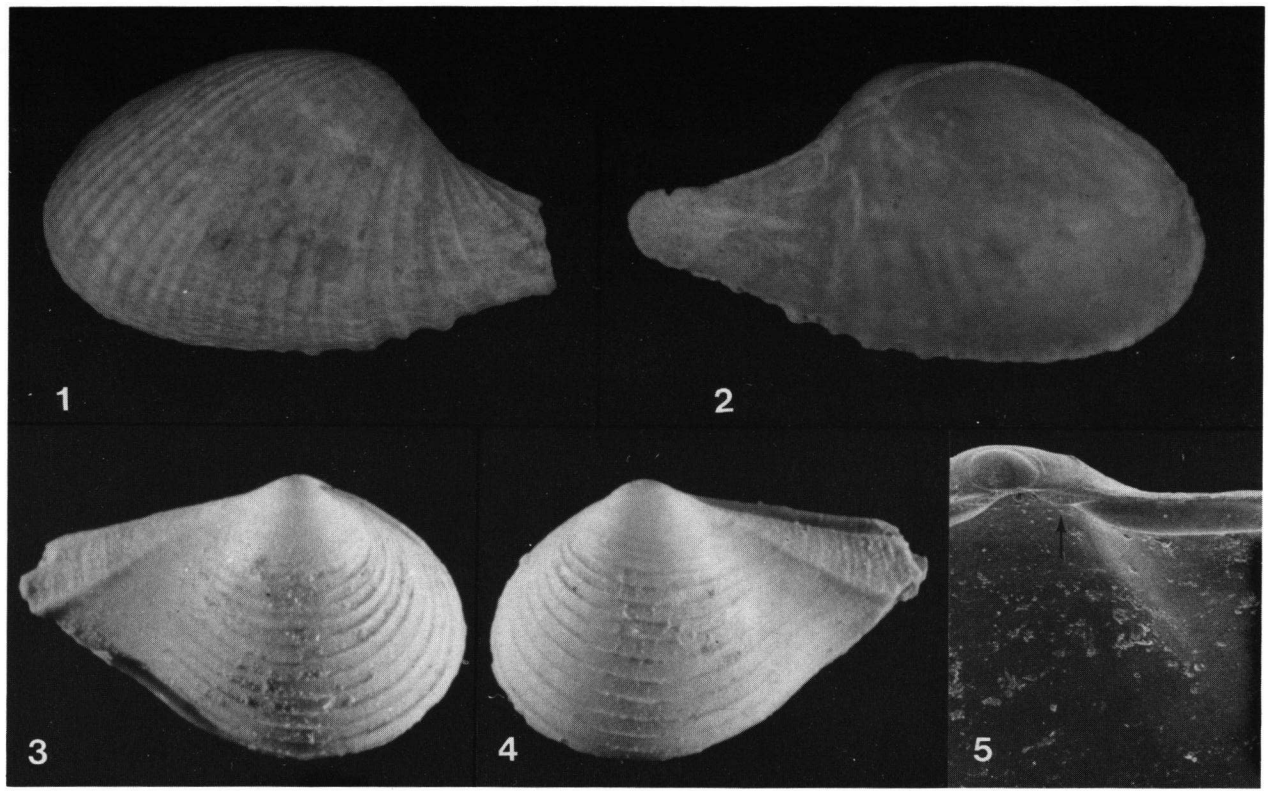
Material. — CANCAP II Sta. 58, 27°58'N 13°24'W, depth 500 m (14 valves, among which the two valves of the holotype); CANCAP II Sta. 66, 28°01'N 13°57'W, depth 886 m (1 valve); CANCAP II Sta. 87, 27°24'N 15°02'W, depth 2300 m (2 valves). All localities are in the neighbourhood of the Canary Islands; all material is kept in the Rijksmuseum van Natuurlijke Historie [holotype no. 55845; paratypes no. 55846 (Sta. 58), 55847 (Sta. 66), 55848 (Sta. 87)].

Derivatio nominis. — *canariensis*, after the type locality.

Discussion. — Eight lots of *Cuspidaria* (*Myonera*) *atlantica* in the Paris museum, identified by Dr. J.A. Allen, have been compared to the above material; it appears that the hinge structures as described for *C. canariensis* n. sp. are absent in these specimens.

REFERENCE

ALLEN, J.A., & R.E. MORGAN, 1981. The functional morphology of Atlantic deep-water species of the families Cuspidariidae and Poromyidae (Bivalvia). — Phil. Trans. R. Soc. London (B) 294: 413-546.



Figs. 1-5. New species of *Cuspidaria*. 1-2. *Cuspidaria* (*Cardiomya*) *obliqua* n. sp., left valve, holotype (RMNH 55842); Azores, depth 240-245 m (CANCAP V Sta. 20). 3-5. *Cuspidaria* (*Myonera*) *canariensis* n. sp.; Canary Islands, depth 500 m (CANCAP II Sta. 58). 3, 4, left and right valve of the holotype (RMNH 55845); 5, SEM photograph showing the hinge-structure mentioned in the text (arrow), paratype (RMNH 55846).