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CASSIDELLA PANIKKARI N. SP. (FORAM.) FROM THE KERALA SHELF

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ABSTRACT

A new species of the genus *Cassidella* Hofker 1951 is [described and discussed.

INTRODUCTION

During a stay in Cochin in the months of January/February 1965, a series of bottom-samples from the lagoon of Cochin and the nearshore region off Cochin were taken with the kind assistance of the colleagues from the National Institute of Oceanography and the Oceanographic Department of Kerala University. In the nearshore region, a species of the genus *Cassidella* which is obviously a new one, occurs abundantly. We describe it here under the name *Cassidella panikkari* to express our thanks for the kind and prompt assistance given to our studies by Dr. Panikkar and his staff.

Genus *Cassidella* Hofker 1951

Cassidella panikkari n. sp.

Fig. 1 a—e

Holotype : Coll. Geol. Inst. University Kiel Catal. Nr UKG. 2583 Fig. 1

Paratype : 20 specimens, Coll. Geol. Inst. University Kiel, Catal. Nr. UKG. 2584.

Type locality: Sample Nr. 41, 9°57.7' N, 76° 4.4'E, water depth 29 m.

Diagnosis : A slender, twisted *Cassidella* with a small, depressed aperture

Description : The long and slender, often somewhat fusiform, test consists of up to 17 chambers, mostly 14–15 with the initial triserial part increasing rapidly in size, reaching its maximum width in the biserial position, in the middle or upper part of the test. The thin-walled test is smooth and hyaline, finely perforate, with a nonperforate area around the aperture.

In our Stereoscan-microphotographs the wall structure seems to be radial rather than granular, as has been stated for this genus. The sutures are distinct. The loop-like aperture is depressed, with the toothplate, which may be slightly denticulate, protruding from inside. In nearly all studied specimens, the aperture is partially filled by secondary layers of calcite. The tooth-plate is U-shaped and simple, as described by Hofker (1951, p. 264) for this genus. It starts at the upper end of the septal foramen, winding up the chamber wall and becoming U-shaped before the next formed aperture (Fig. 1 d, e).

Measurements: Length—from 0.21 mm. to 0.35 mm; max. breadth—0.07 mm to 0.10 mm; max. thickness—0.05 to 0.07 mm; diameter of proloculus—0.02 mm.

Occurrence: The species is abundant (most living specimens are found in the shelf samples (Nr. 38—42 and Nr. 57—59) with a peak in the depth of about 20—25 meters, where it ranges second or third among the living forms, contributing up to 19.4% to the whole population. The number of living forms in sample 39 i. g. is 57 specimens 10 cm³ sediment. The rate for the empty tests is 19% with a number of 473/10 cm³ sediment in the same sample. The species is very rare in the lagoon samples. Only one sample (Nr. 4) contained 2 living specimens which may have been transported into the lagoon by currents. The number of dead specimens is also very small.

Remarks: *Virgulina fijiensis* Cushman, 1936, p. 49, pl. 7 fig. 9 a—c, is similar, but much bigger (with up to 19 chambers) and more robust. The variation in the outer shape of our species is great. There are long and very slender forms as well as those with broader and lower chambers, resulting in the more fusiform type. The twisting too, is variable. Some specimens are highly twisted in the initial part, later becoming more regularly biserial, whereas others may be twisted throughout (Fig. 1 c).

The species is very interesting, because it resembles closely the forms referred to *Fursenkoina* by Loeblich and Tappan (1961) after the abandonment of *Virgulina* as a foraminiferal genus. It has the same twisted chamber arrangement with the free part of a similar tooth-plate protruding from the aperture. But since Loeblich and Tappan point out that the type species of *Fursenkoina*, *F. squamosa* (d'Orbigny-), definitely has no initial, triserial stage, we cannot include our species in this genus.

The type species of *Cassidella*, *Cassidella tegulata* (Reuss), which has an initial triserial chamber arrangement, is much less twisted and the tooth-plate

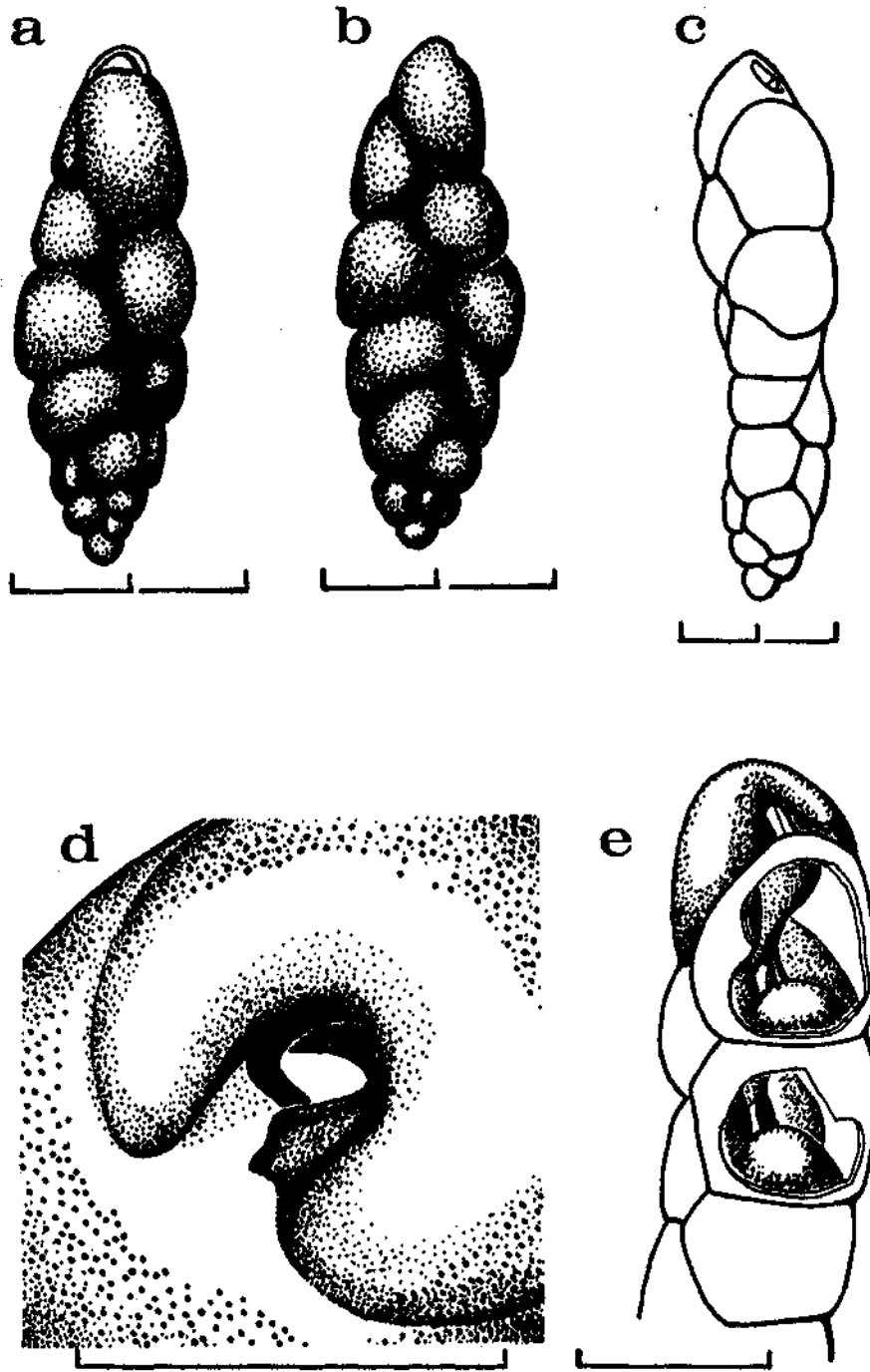


Fig. 1. a-e *Cassidella panikkari* n. sp. Scale: Each part = 50 micron.
 a, b. Holotype, both sides. c. Long and very twisted form. d. Aperture with tooth-plate. Specimen with broken chambers, showing the tooth-plates winding up from the septal foramens.

does not protrude from the aperture. But other species, for example *Cassidella-pacifica* Hofker (p. 273, pl. 174 e, pl. 181), show these features clearly. Both genera are obviously very closely related and need much more detailed investigation than can be given on the basis of a single species.

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