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STUDIES ON WEST INDIAN MARINE MOLLUSCS, 2

TRIFORIS BARBADENSIS, A NEW SPECIES FROM DEEPER WATER OFF BARBADOS

(GASTROPODA: TRIPHORIDAE)

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Abstract

Triforis barbadensis nov. spec. is the first member of the genus from the West Indies. It was dredged from deeper water off Barbados.

INTRODUCTION

The molluscan fauna of the shelf-slope of the island of Barbados is rather well known. Dall (1889) already discussed several gastropods from this area, including some new species. Quinn (1979) mentioned some Trochidae from off Barbados, collected by the 'State University of Iowa Barbados-Antigua Expeditions' in 1918. Recent dredgings obtained with the research vessel 'Martlet' from Bellairs Research Institute of McGill University, St. James, Barbados, are the base of two surveys on marine mollusks: Lewis (1965) listed 227 species from depths between 50 and 400 m, Sander & Lalli (1982) mentioned 277 benthic molluscs from depths of 125, 175 and 225 m. Some new Conidae have been described by Wils & Moolenbeek (1979) and Sander (1982). Harasewych & Petuch (1980) described a new Cymatid gastropod.

The genus *Triforis* was not known from the West Indies.

Family TRIPHORIDAE

Shell small to very small, slender and turritiform, with numerous whorls, varices absent. Aperture subcircular to squarish, siphonal canal curved backward.

Type genus.-

Triphora Blainville, 1828. Shell sinistral.

Triforis Deshayes, 1834

Shell dextral, anterior and posterior siphonal canal often tubular.

Type species.-

Triforis plicatus Deshayes, 1834 (Eocene, Paris Basin).

Remarks.-

Recent members of the genus were known from New Zealand, South Australia, and Japan. Two Eastern Atlantic species were recently described by Bouchet & Fechter (1981).

Triforis barbadiensis nov. spec.

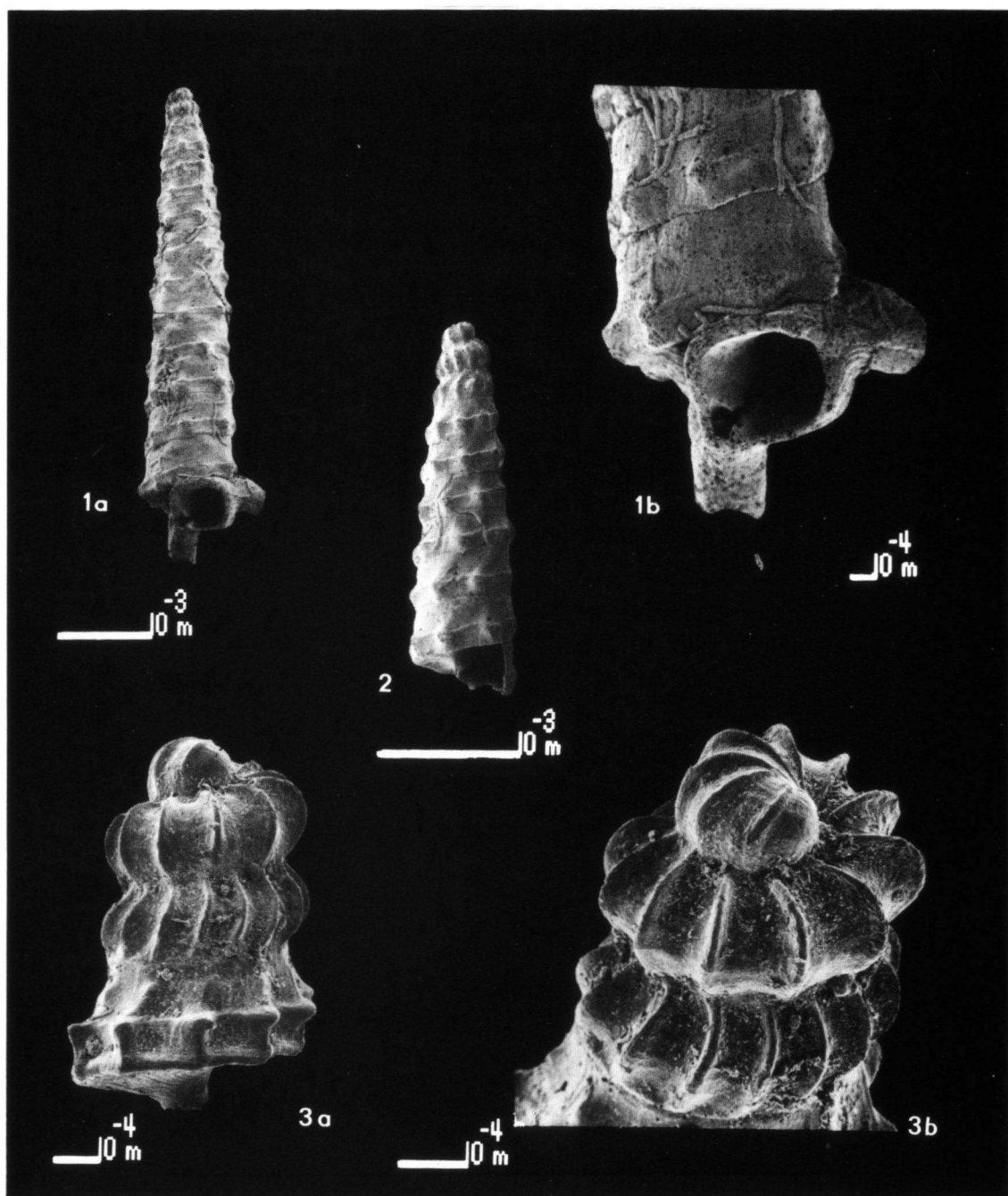
(figs. 1-3)

Material studied.-

Holotype: length 5.5 mm, width 1.2 mm (ZMA, dept. Malacology No. 384003). Eight paratypes: see table 1.

Type locality.-

Barbados, Alleyne's Bay off Hometown, St.



Figs. 1-3. *Triforis barbadiensis* nov. spec. 1a: Holotype, overgrown with calcareous algae; 1b: Aperture of holotype, enlarged; 2: Paratype no. 3; 3a-b: Two views of the protoconch of paratype no. 8.

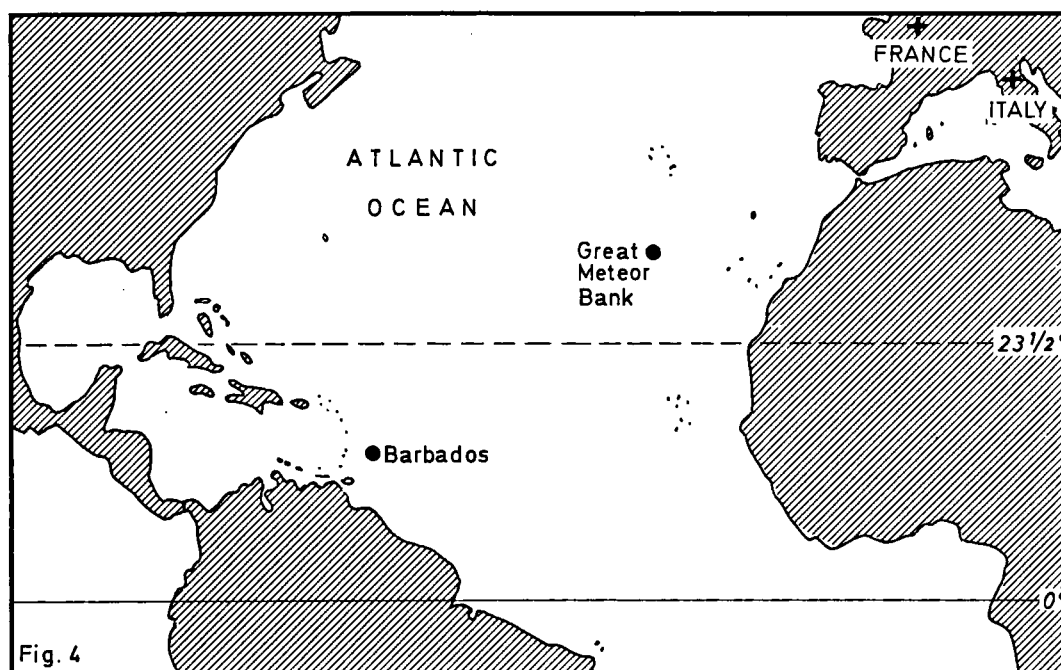


Fig. 4. Distribution of *Triforis* in Europe and the Atlantic Ocean. Fossil records from France and Italy (Eocene, Miocene), recent from the Great Meteor Bank (300-301 m) and off Barbados (90-100 m).

James, about half a mile offshore, 19.II.1964 (fig. 4). Sponge bottom, muddy sand with shell debris (dredged by John B. Lewis & staff of Bellairs Institute); 90-100 m (Wagenaar Hummelinck, 1977: station 1442).

Description.-

Shell small, slender, yellowish-white with some slightly darker spots. More than 10 whorls, which very slowly increase in size. Protoconch of about $2\frac{1}{2}$ whorls, sculptured with rather sharp axial ribs, which extend from suture to suture.

Teleoconch-whorls nearly straight-sided, a little bent to the left.

Sutures shallow.

The sculpture consists of axially elongated nodules on the lower half of each whorl, and a suprasutural spiral ridge. This ridge is absent on the protoconch. On the first postnuclear whorls the nodules are rather spiny where they are crossed by the spiral ridge. On the remaining whorls the sculpture becomes altogether more obsolete, with the nodules less protruding, and the upper half of each whorl nearly flat. The space between the nodules is about twice as broad as a nodule itself. The microsculpture consists of opisthocline growthlines.

The base is flat and surrounded by a nodulous spiral ridge.

The anterior and posterior siphonal canal are both tubular and turn away from the aperture. The aperture is squarish. The opening of the anterior siphonal canal is well visible inside the aperture.

DISCUSSION

Kosuge (1966) discussed the systematic position of the Triphoridae, but hardly mentioned the dextral *Triforis* species. Marshall (1977: 103) recognized eight fossil triforids from the Eocene of France, and the Miocene of France, Italy and New Zealand. He mentioned recent *Triforis* from New Zealand (6), South Australia (2), Japan (1), and one doubtful from South Africa.

Bouchet & Fechter (1981) described the first eastern Atlantic members of the genus: *Triforis superstes* and *T. anelpistos*, from the Great Meteor Bank (fig. 4) at a depth of 300-301 m. After comparing these with the new species described here, it shows that *T. barbadensis* is distinct by the presence of a suprasutural ridge on the teleoconch, with fewer and more distant nodules which are restricted to the lower half of the whorls.

Table 1. Measurements of, and remarks on the type series.

	length in mm	width in mm	figure	remarks
Holotype, ZMA 384003	5.5	1.2	1	adult, 14 whorls
Paratype 1, ZMA 384004	3.4	1.1	-	adult, 11 whorls
Paratype 2, RMNH, Leyden	2.8	1.0	-	adult, decollated
Paratype 3, ZMA 384004	2.2	0.8	2	subadult, 9 whorls
Paratype 4, ZMA 384004	1.9	0.7	-	
Paratype 5, ZMA 384004	1.8	0.7	-	decollated
Paratype 6, ZMA 384004	1.3	0.6	-	juvenile
Paratype 7, ZMA 384004	1.2	0.5	-	juvenile
Paratype 8, ZMA 384004	1.0	0.5	3	juvenile

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