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## Remarks on *Triton ranzanii* Bianconi (Mollusca, Gastropoda)

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### INTRODUCTION

The growth of interest in mollusks during the last two decades has been matched by an increase in the number of new areas explored. In addition, new techniques, such as skin diving and SCUBA diving, have been utilized in the investigation of the shallow sublittoral depths of the oceans. All of which, as might be expected, has led to the discovery of new forms and to the rediscovery of species that had not been recorded since the great furor of conchological interest in the middle of the nineteenth century.

One of these interesting, "long-lost" species has recently come to our attention. In 1961, K. J. Grosch, a noted diver and collector of Mozambique, Portuguese East Africa, submitted a specimen of *Cymatium* to the junior author, with a request for help in the identification of his find. The differences between this shell and related forms from the Indo-Pacific region suggested that the specimen was not referable to any of the common forms of this group that are known to occur in the Indian Ocean. Discussion with the senior author led to the conclusion that the specimen was *Cymatium (Cymatium) ranzanii*, a species that was well

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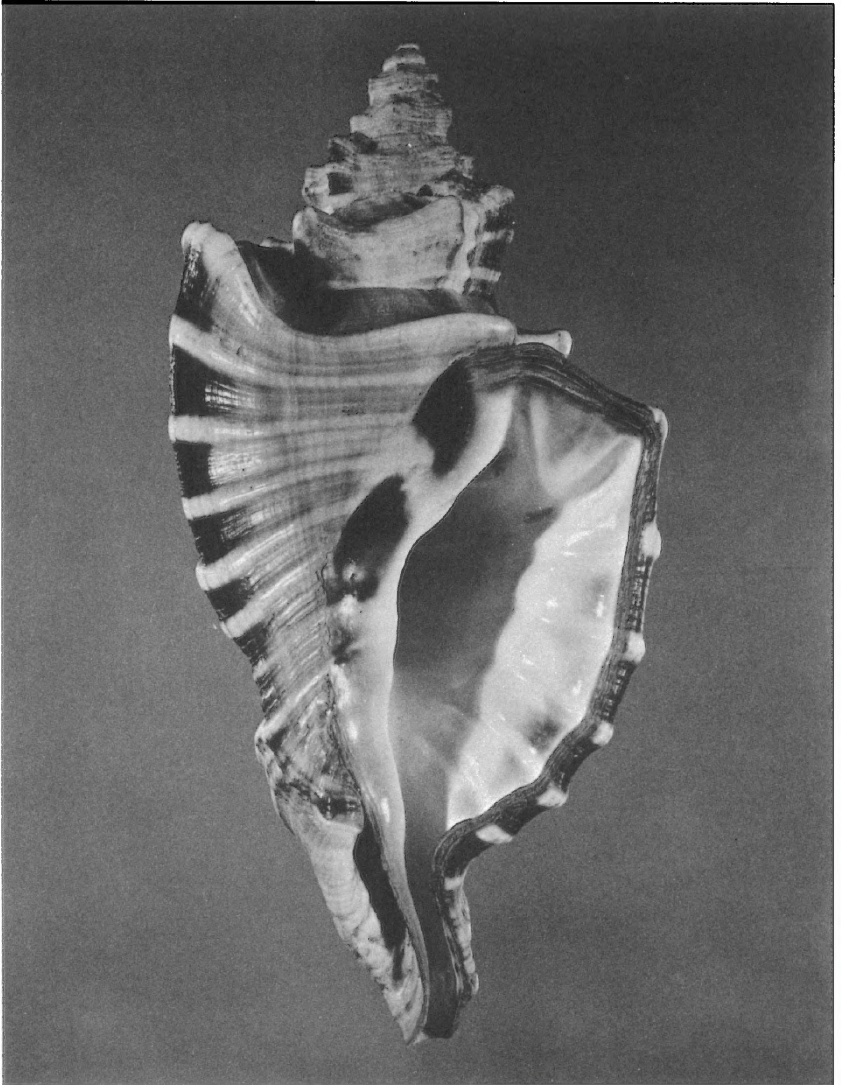


FIG. 1. Apertural view of *Cymatium* (*C.*) *ranzanii* Bianconi. Specimen with seven post-nuclear whorls; Cabaceira Peninsula, Mozambique, K. J. Grosch collection.  $\times 2/3$ .

defined in the literature more than 100 years ago, but has not been reported since 1850.

In addition to Mr. K. J. Grosch, we are indebted to the following for

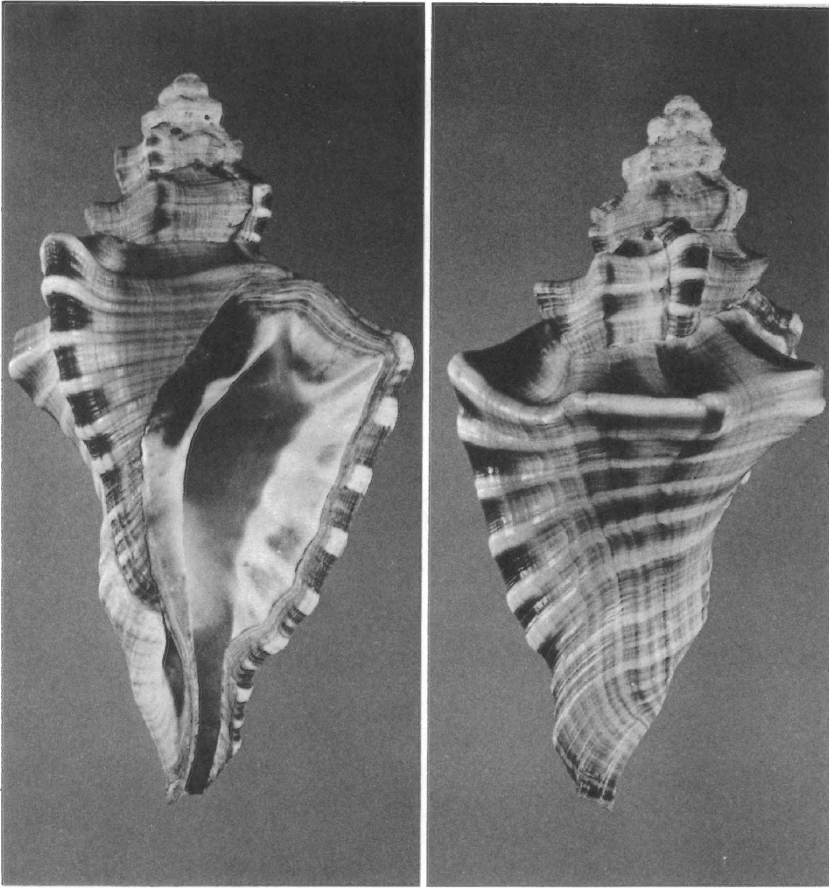


FIG. 2. Apertural view (*left*) and dorsal aspect (*right*) of *Cymatium (C.) ranzanii* Bianconi. Specimen with six post-nuclear whorls; Cabaceira Peninsula, Mozambique, A. D'Attilio collection, *ex* Grosch collection.  $\times 2/3$ .

the loan of specimens or for information: Dr. Donald C. Bosch, Muscat, Arabia; Drs. William J. Clench and Ruth D. Turner, Department of Mollusks, Museum of Comparative Zoölogy at Harvard College; Drs. Harald A. Rehder and Joseph P. E. Morrison, Division of Mollusks, United States National Museum; Dr. R. Tucker Abbott and Miss Virginia Orr, Department of Mollusks, Academy of Natural Sciences of Philadelphia. We are especially grateful to Mr. William E. Old, Jr., Department of Living Invertebrates, the American Museum of Natural History, for his valued assistance.

## DISCUSSION

*Triton ranzanii* was described from "le canal de Mosambique" by Bianconi (1850, 1851a, 1851b, 1851c). Bianconi compared his species with *Triton femorale* (Linné) from the West Indies. Only passing mention has been made to *Triton ranzanii* by subsequent students of the group. Küster and Kobelt (1878) reviewed the Purpuracea and placed this taxon in a list of *species inquirendae*. In a monograph of the family Tritonidae by Tryon (1881, pl. 10, fig. 71), one of Bianconi's figures (Bianconi, 1851a; 1851b, fig. 1) was reproduced, and this taxon was included in the synonymy of *Triton (Cymatium) tigrinus* Broderip, from the tropical eastern Pacific. Bayer (1933) listed *Cymatium (Cymatium) ranzanii* as a variety of *Cymatium (Cymatium) tigrinum* (Broderip) in his catalogue of the Cymatiidae in the 'sRijks Museum in Leiden. Smith (1944, p. 22, fig. 270) presented Tryon's reproduction of Bianconi's illustration and followed Tryon by referring the figure to *Cymatium tigrinum* (Broderip). Smith (1948) did not cite *Cymatium ranzanii* in his review of the family Cymatiidae, nor did Franca (1960) record this species in her list of mollusks collected at Inhaca Island, Mozambique. Specimens of this species apparently were not available to these workers, and the validity of this species has remained questionable until the present time.

Our search of the conchological collections of the larger museums of the eastern United States for specimens of *Cymatium ranzanii* revealed the following: One specimen, lacking definite locality data, is present in the old D. J. Steward collection of the American Museum of Natural History; and single specimens were recently received by the Museum of Comparative Zoölogy of Harvard College from Somaliland [Somalia Republic], and by the United States National Museum from near Karachi, Pakistan. Recently, the American Museum of Natural History received two fragmental specimens from Muscat, Oman, Arabia. These five specimens appear to be the only representatives of this species now present in collections of these institutions, and all but one of the specimens were received within the last five years.

After determining the rarity of this species, we requested additional information from Grosch. He kindly sent two other specimens to us on loan and provided the following field notes: "The first of the few specimens, three live collected and one or two dead, I found during the months of March or April 1953. It measured 204 mm. Another smaller specimen turned up in 1957 and a third one in 1958. All including one or two dead specimens were found in the same area. This locality is in the North East corner of the Cabaceira Peninsula which separates

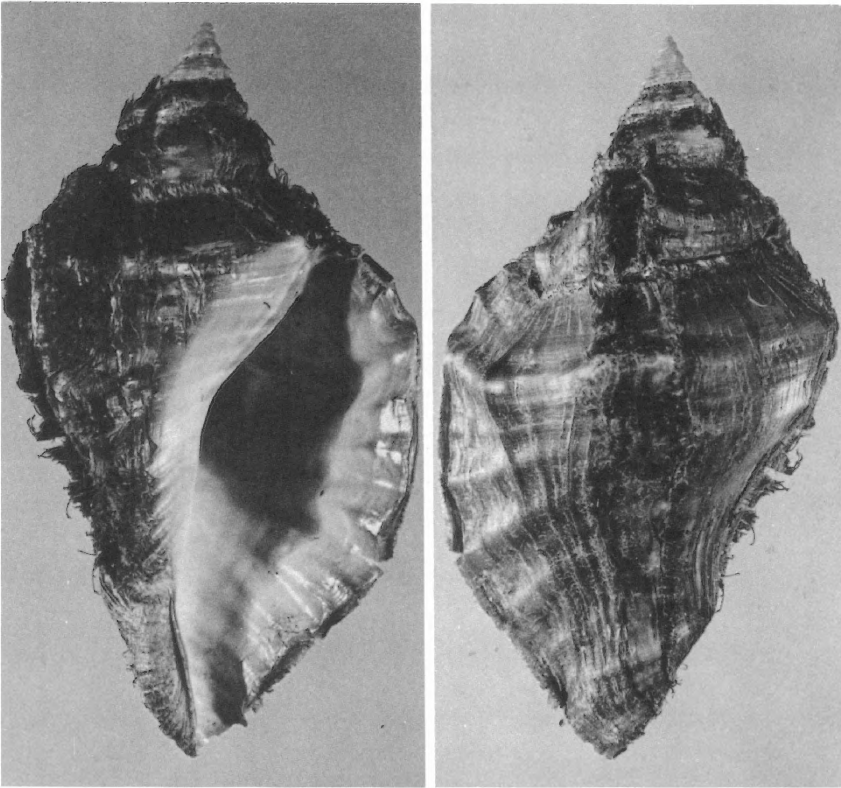


FIG. 3. Apertural view (*left*) and dorsal aspect (*right*) of *Cymatium* (*C.*) *tigrinum* (Broderip). Specimen with the periostracum preserved and with an immature outer lip; Venado Island, west coast of Panama, the American Museum of Natural History collection, *ex* H. Dawson collection.  $\times 2/3$ .

Mozambique Bay from Conducia Bay, about 200 meters off shore and in about 6 to 10 meters below low tide level. The area has a terraced, gravelly bottom covered with seaweed and dotted with great, isolated coral boulders. All specimens were collected about the time of the March Spring tides between the years 1953–1959.”

Compared to the known living species of *Cymatium*, there is little doubt that *Cymatium ranzani* is most closely related to *Cymatium tigrinum* (Broderip) of the Panamic faunal province and *Cymatium femorale* (Linné) of the Caribbean fauna (see figs. 3, 4). The three species form a group with obvious affinities of shell characters and are referable to *Cymatium*, *sensu stricto*.

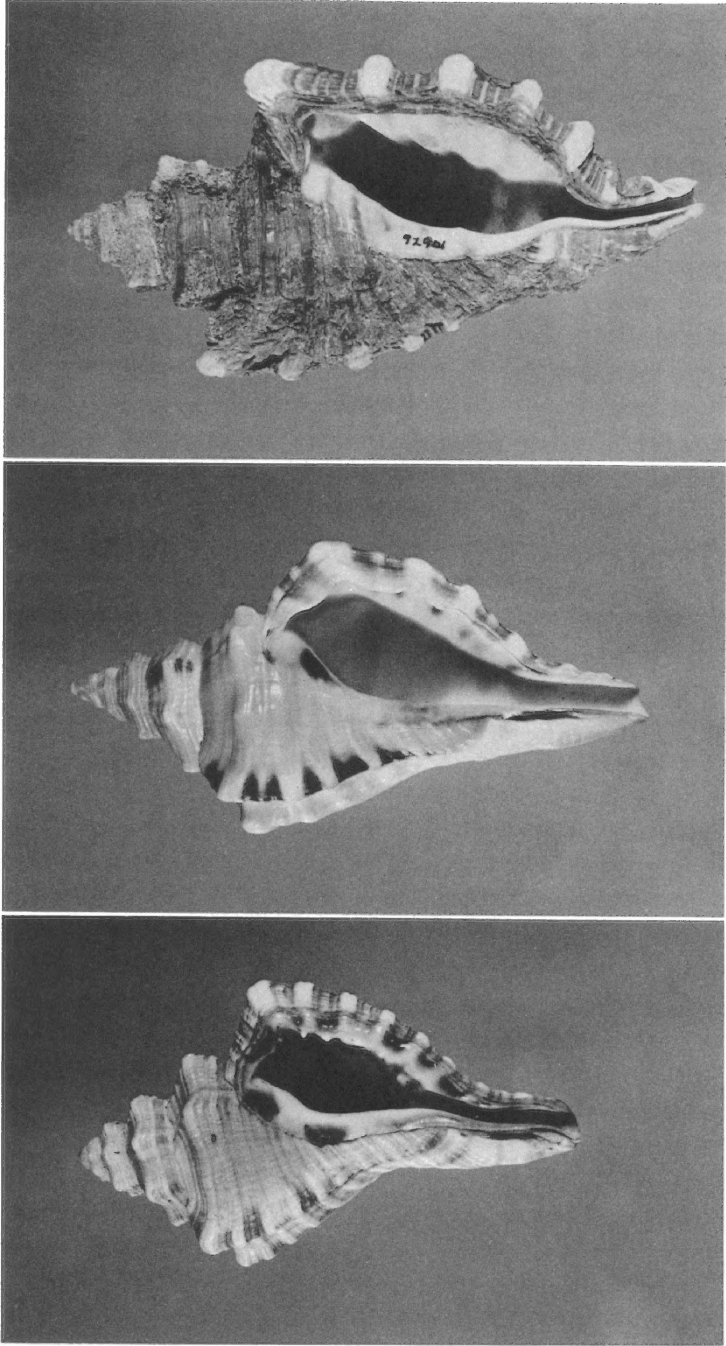


FIG. 4. Juvenile specimens representing similar growth stages of *Cymatium ranzanii*, Karachi, Pakistan; *C. tigrinum*, Balboa, Panama; and *C. femorale*, Nassau, Bahamas.  $\times 2/3$ .

An annotated synonymy of *Triton ranzanii*, together with distributional notes, is given below.

*Cymatium (Cymatium) ranzanii* Bianconi, 1850

Figures 1, 2, 4 (left)

*Triton ranzanii* BIANCONI, 1850, p. 42, "Canale del Mozambico"; 1851a, pp. 17, 18, pl. 3, figs. 1, 2; 1851b, pp. 63, 64, pl. 1, figs. 1, 2; 1851c, pp. 217, 218, "le canal de Mosambique." KÜSTER AND KOBELT, 1878, p. 273, "Habitat ad Mozambique."

*Triton (Cymatium) tigrinus* Broderip, TRYON, 1881, p. 18, in part, pl. 10, fig. 71 only. Not *Triton tigrinus* Broderip, 1833.

*Cymatium (Cymatium) tigrinum* var. *ranzanii* (Bianconi), BAYER, 1933, p. 48. Not *Cymatium (Cymatium) tigrinum* (Broderip), 1833.

*Cymatium tigrinum* Broderip, SMITH, 1944, in part, fig. 270 only. Not *Cymatium tigrinum* (Broderip), 1833.

VERIFIED RECORDS: Cabaceira Peninsula, Mozambique, Portuguese East Africa (four specimens, K. J. Grosch collection; one specimen, A. D'Attilio collection); Somaliland [Somalia Republic] (one specimen, Museum of Comparative Zoölogy collection), *teste* W. J. Clench; Muscat, Oman, Arabia (two specimens, the American Museum of Natural History collection); and Karachi, Pakistan (one specimen, United States National Museum collection).

REMARKS: On the basis of the above records, this species is now known to range in the extreme western part of the Indian Ocean, from the Mozambique Channel, to the Arabian Sea at Oman and Pakistan.

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