

Synonymy of the Caribbean olives *Ancilla (Amalda) pacei* Petuch, 1987, and *Amalda (Alcospira) zeigleri* Ninomiya, 1987 (Gastropoda: Olividae)

Christopher B. BOYKO and James R. CORDEIRO
 Division of Invertebrate Zoology, American Museum of Natural History
 Central Park West at 79th Street,
 New York, NY 10024
 U.S.A.

E-mail: cboyko@amnh.org; cordeiro@amnh.org

KEYWORDS. Gastropoda, Olividae, *Ancilla*, *Amalda*, Caribbean.

ABSTRACT. Two species of Caribbean deep-water olives, *Ancilla (Amalda) pacei* Petuch, 1987, and *Amalda (Alcospira) zeigleri* Ninomiya, 1987, are found to be synonymous, based on examination of type material. Evidence is presented to document the priority of Petuch's species over Ninomiya's.

INTRODUCTION

Subsequent to the preparation of a type catalog of non-pulmonate, non-opisthobranch gastropods in the collections of the American Museum of Natural History (AMNH) (Boyko & Cordeiro, 2001), we discovered a remarkable similarity between the descriptions and illustrations of the nearly simultaneously described taxa *Ancilla (Amalda) pacei* Petuch, 1987, and *Amalda (Alcospira) zeigleri* Ninomiya, 1987. Both species were collected from the Caribbean waters surrounding Honduras and both, so far as we can determine, are only known from their type series (2 and 4 specimens, respectively). A letter discovered in the AMNH files indicated that we were not the first to suspect this synonymy (R. T. Abbott to W. E. Sage III, 29 Jan 1988), but neither of those correspondents acted upon this suspicion nor examined any specimens. Direct comparison of the holotype of *A. pacei* in the National Museum of Natural History, Smithsonian Institution (USNM) with the holotype of *A. zeigleri* in the National Science Museum Tokyo (NSMT) and a paratype of *A. zeigleri* in AMNH showed no important differences between the three specimens, other than size. We also discovered that the type series of both taxa were collected not only in close geographical proximity, but were sent to their respective author's by the same person. The two nominal species are herein considered synonymous.

SYSTEMATICS

Family **Olividae** Latreille, 1825
 Genus *Amalda* H. & A. Adams, 1853
 Subgenus *Alcospira* Cossmann, 1899

Amalda (Alcospira) pacei (Petuch, 1987), nov. comb.

Fig. 1

Ancilla (Amalda) pacei Petuch, 1987: 69, pl. 11, figs. 15-16.—Petuch, 1988: 155, pl. 33, fig. 14.

Amalda (Alcospira) zeigleri Ninomiya, 1987: 139-141, 143-144, pl. 1, fig. 5-8.

Material examined

Off northern coast of Roatan Island, Honduras, Caribbean Sea, 50 m depth, coll. commercial shrimpers, 1979, holotype of *Ancilla (Amalda) pacei* (USNM 859862; 25.6 mm); Gulf of Honduras, 250 fathoms (= 457.3 m) depth, coll. unknown, holotype of *Amalda (Alcospira) zeigleri* (NSMT-Mo 64210; 27.1 mm); 17°17'N, 87°59'W, south of Turneffe Island, Gulf of Honduras, Caribbean Sea, 125 fathoms (= 228.6 m) depth, coll. unknown, paratype of *Amalda (Alcospira) zeigleri* (AMNH 206078; 22.9 mm).

Distribution

Honduras, Caribbean Sea, 50-457.3 m depth.

Discussion

Some authors (Michaux, 1991; Wilson, 1994) have treated *Alcospira* as a genus-level taxon, but we feel that the phylogeny of this group has not been fully resolved and, pending future study, retain it as a subgenus. *A. pacei* is clearly not an *Ancilla*, all of which possess an undivided fasciolar band (Kilburn, 1977), and it should be placed in the genus and subgenus combination originally given by Ninomiya (1987) for *A. zeigleri*.

Although Petuch's 1987 publication received generally negative reviews (e.g., Abbott, 1987a, b; Ode, 1988), and many of the new species described therein are suspected to be junior synonyms, his *A. pacei* is clearly distinct. This species can be distinguished from any known *Amalda* in the western Atlantic by its banding pattern, and is the northernmost western Atlantic species in the genus. The closest affinities of this species appear to be with taxa in the Indo-Pacific, as suggested by Ninomiya (1987), but this also requires further study.

The descriptions by Petuch (1987) and Ninomiya (1987) are so similar that they could almost have been describing the same shell; the only differences being in terminology (e.g., Ninomiya's "orange-squarish dots" on the subsutural and ancillid bands vs. Petuch's "orange-brown flammules") and that Ninomiya described the operculum. Comparison of the holotype of *A. pacei* with the holotype and a paratype of *A. zeigleri* (the other three specimens are in private collections and not accessible) shows remarkably little difference between the specimens other than in the size of the individual orange "flammules" on the subsutural and ancillid bands and the overall size of the shells.

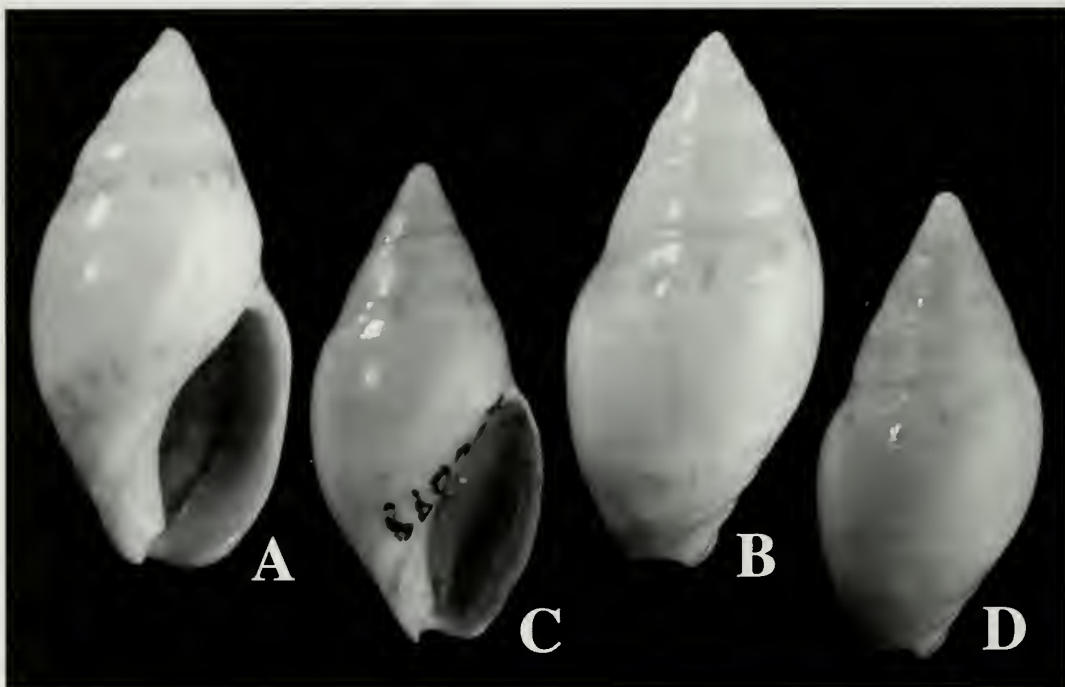
The priority of Petuch (1987) over Ninomiya (1987) requires additional evidence to establish an exact publication date. That of Ninomiya's paper was given directly in the issue of the journal in which it appeared (Oct. 1987), but no specific date was given in Petuch's (1987) work. The exact publication date of Petuch's (1987) work was July 8, 1987, as evidenced by a statement from C. Finkl, the Director

of the Coastal Education and Research Foundation, which published the book. Mr. Finkl stated that "copies were received by Dr. Petuch and myself on 8 July 1987 from the printers.... I mailed on the 10th copies to museums around the world to establish primacy in the month of July" (C. Finkl, in litt. to W. K. Emerson, 7 Oct. 1987). The AMNH was apparently not one of those museums, as the copy in the Division of Invertebrate Zoology was signed by Petuch "26 Aug 87."

Interestingly, the material described by both Petuch and Ninomiya came from the same source. Ninomiya (1987) explicitly noted that he received his specimens from Dr. Emilio García (Lafayette, Louisiana) in 1978, while Petuch (1987) thanked García in his acknowledgments. Although Petuch did not provide the source of his material beyond the local collectors cited, García (pers. commun. to CBB, Nov. 2000) confirmed that he sent specimens from the original lot of "6 or 7" to both Petuch and Ninomiya.

ACKNOWLEDGMENTS.

Our thanks to Cheryl Bright and Tyjuana Nickens for loan of USNM material and Emilio García for information on the source of the type specimens. The NSMT holotype was kindly loaned by Hiroshi Saito. Photographs are by Steve Thurston (AMNH). Paula Mikkelsen and William K. Emerson (AMNH) kindly read the manuscript and improved it markedly.



1A, B: holotype of *Ancilla (Amalda) pacei* Petuch, 1987, 25.6 mm length (USNM 859862); 1C, D: paratype of *Amalda (Alcospira) zeigleri* Ninomiya, 1987, 22.7 mm length (AMNH 206078).

REFERENCES

- Abbott, R. T. 1987a. [Review of] new Caribbean molluscan faunas. *The Festivus* 19 (10) : 98, 99.
- Abbott, R. T. 1987b. [Review of] new Caribbean molluscan faunas. *American Conchologist* 15 (4) : 19.
- Boyko, C. B. & Cordeiro, J. R. 2001. Catalog of Recent type specimens in the Division of Invertebrate Zoology, American Museum of Natural History. V. Mollusca part 2 (class Gastropoda [exclusive of Opisthobranchia and Pulmonata], with supplements to Gastropoda [Opisthobranchia], and Bivalvia). *American Museum Novitates* 262: 1-170
- Kilburn, R. N. 1977. A new *Ancilla* from the Arabian Sea, and a discussion of two homonyms in the Ancillinae (Mollusca: Gastropoda: Olividae). *Durban Museum Novitates* 12 (14) : 167-170.
- Michaux, B. 1991. The evolution of the Ancillinae with special reference to the New Zealand Tertiary and Recent species of *Amalda* H. & A. Adams, 1853. *Venus (Japanese Journal of Malacology)* 50 (2) : 130-149.
- Ninomiya, T. 1987 (Oct.). Three new species of the genus *Amalda* from Japan, Caribbean Sea and southwestern Australia (Gastropoda: Olividae). *Venus (Japanese Journal of Malacology)* 46 (3) : 137-147.
- Ode, H. 1988. [Review of] new Caribbean molluscan faunas. *Texas Conchologist* 24 (2) : 43-44.
- Petuch, E. J. 1987 (July). *New Caribbean molluscan faunas*. Coastal Education & Research Foundation, Charlottesville, Virginia. 158 pp., 29 pls.
- Petuch, E. J. 1988. *Neogene history of tropical American mollusks*. Coastal Education & Research Foundation, : Charlottesville, Virginia. 217 pp.
- Wilson, B. 1994. *Australian marine shells*. Volume 2. Prosobranch gastropods part two (neogastropods). Odyssey Publishing, Kallaroo, Australia. 369 pp.