

A New Species of *Persicula* from West Mexico

BY

EUGENE COAN

Department of Biological Sciences, Stanford University, Stanford, California 94305

AND

BARRY ROTH

2140 Middlefield Road, Palo Alto, California 94301

(Plate 12; 1 Map)

IN PREPARING A REVIEW of the West American species of the family Marginellidae, we have discovered a new species of the genus *Persicula*. We obtained material of this new form from four different sources – two of these under somewhat unusual circumstances – and have decided to give it a name before completing our more comprehensive review.

The first specimens of the new species were encountered in archeological material which was sent to Stanford University for identification in June, 1962. When that material arrived, Dr. Myra Keen and Eugene Coan identified the molluscan species and came to the conclusion that the *Persicula*, which was present in hundreds, was probably new to science. Because no one at Stanford was then interested in describing the form, the material was returned to the Amerind Foundation of Dragoon, Arizona.

Recent specimens of the new form were first noticed by us at the Geology Department of the California Academy of Sciences in San Francisco, California. The lot (locality number CAS 17805A) had been taken in Banderas Bay, Mexico, by William Beebe on the Eastern Pacific Expedition of the New York Zoological Society on November 15, 1937. At the time, we considered these beachworn specimens to represent a variant of a more southern species. In 1964, we obtained a large lot of live-collected specimens from the Los Angeles County Museum (A. 2457.63-224). This material was consistently different in many characters from previously described species, and we decided that it was new.

Dr. Charles DiPeso, Director of the Amerind Foundation, kindly provided us with a sample of fifty specimens for redetermination. Nearly all of the shells were pierced

for stringing as beads. The site from which these specimens were obtained is at Casas Grandes, Chihuahua, Mexico, 30° 22' N latitude by 107° 58' W longitude, and is officially termed "Chihuahua:D:9:1, Room 22-16-fill." It was collected on July 3, 1960, and is from the Tardio Period, approximately 1200 to 1350 A.D. As can be seen from the Map, this site is a considerable distance from Banderas Bay, the only place that this species has been taken living. One of the Indian shells is illustrated in Figure 1, Plate 12.

In March, 1965, Dr. Keen made a trip to the Banderas Bay area. She had hoped to collect the species living, but, by the evening of the last day, she had given up hope. One of the crew-members, Eulogio Pacheco-Esparza, was given a chance to try SCUBA-diving with a little air left in one of the tanks. He dove into the water beside the anchored boat and picked up a few shells from the surface of the mud bottom. When he brought these into the boat, it was discovered that he had obtained three specimens – now hypotypes – of the new species. Dr. Keen took some photographs of the living animal, and two of these are reproduced in Figures 2 a and 2 b, Plate 12.

Persicula bandera COAN & ROTH, spec. nov.

(Plate 12, Figures 3 a, b, c - Holotype)

Description of Holotype: Shell of moderate size; solid, relatively heavy; ovate, narrower anteriorly; yellowish-tan, with 16 brown, spiral color lines spaced at regular intervals, the most anterior line running to anterior side of anterior canal; entirely covered with a glaze of translucent gray enamel; outer lip heavily calloused, white, tinted on the outside with yellowish-brown; outer lip extending



Map of Western Mexico, Showing Type Locality

to spire; inner lip covered by white callus; spire low, covered with enamel, circled by a distinct ring of merging brown blotches and by a trace of puckering consisting of slightly raised growth lines along suture; suture also covered with enamel; aperture even, narrow, white within, with a notch at the posterior end and a deep, oblique anterior canal; columellar side of anterior canal produced into a little spur; inner margin of outer lip finely denticulate; columella flattened, with four folds, second fold from anterior end widest, most anterior fold at base of columella.

Dimensions of Holotype: Length 12.5 mm; width 8.4 mm.

Dimensions of figured Paratypes:

I: Length 12.8 mm; width 8.4 mm.

II: Length 10.6 mm; width 7.2 mm.

Paratypes: The 42 paratypes differ from the holotype in details of enamelling and in degree of development of the lip callus. Paratype I, a thoroughly mature shell, has only 15 spiral lines, a heavier glaze of enamel, and a greater angulation of the periphery, giving the specimen a "humpbacked" appearance (Plate 12, Figures 4a, b). Paratype II is a younger specimen than the holotype and retains a sharp, uncalloused outer lip which has no denticulation. It has 17 spiral lines, and there is a

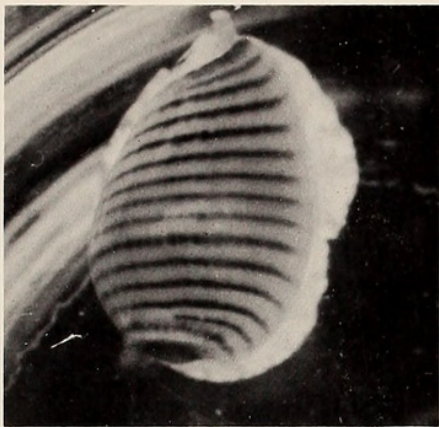


Figure 2 a

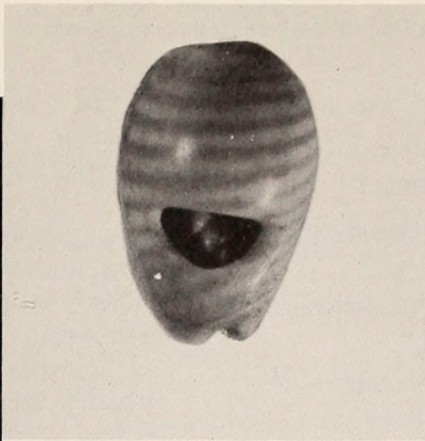


Figure 1

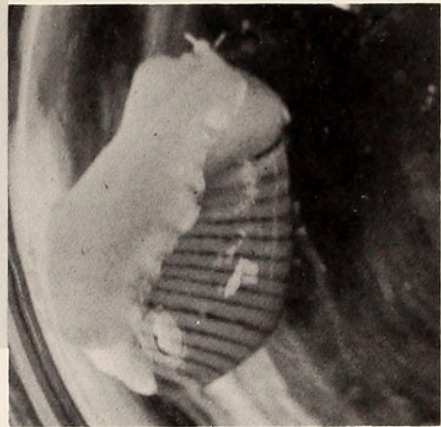


Figure 2 b

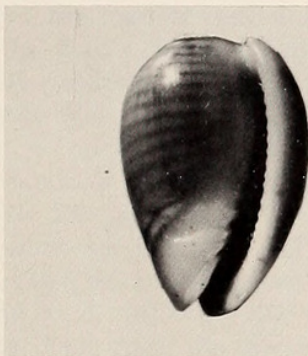


Figure 3 a

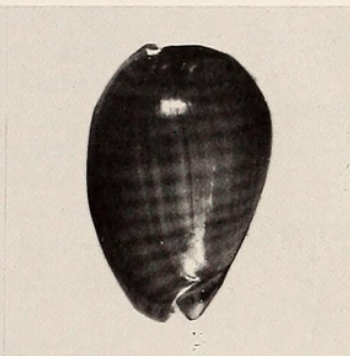


Figure 3 b

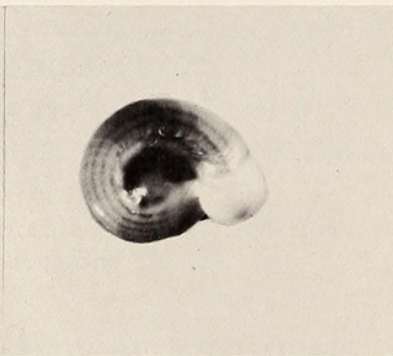


Figure 3 c

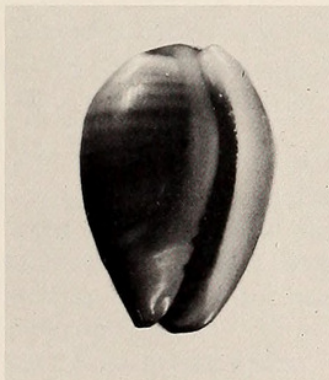


Figure 4 a

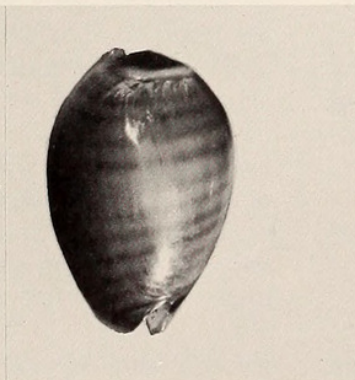


Figure 4 b

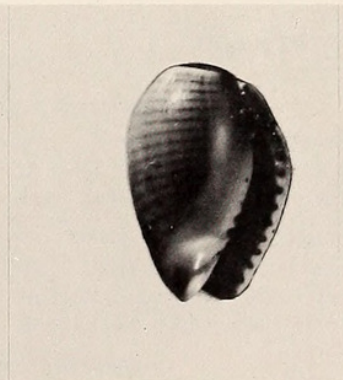


Figure 5 a

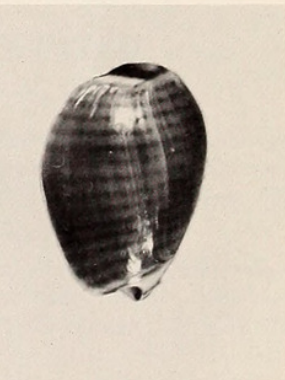


Figure 5 b

Figure 1: *Persicula bandera* COAN & ROTH. Indian specimen from Tardío Period, Casas Grandes, Chihuahua, Mexico. x 2.8

Figures 2 a, b: *P. bandera*. Hypotype. Banderas Bay, Mexico.

Dorsal and ventral views, respectively. Photograph by Dr. M. Keen.

Figures 3 a, b, c: *P. bandera*. Holotype (LACM No. 1141). Ventral, dorsal, and apical views, respectively. Banderas Bay, Mexico. x 2.6

Figures 4 a, b: *P. bandera*. Paratype I (LACM No. 1142). Ventral and dorsal views. x 2.7

Figures 5 a, b: *P. bandera*. Paratype II (LACM No. 1142). Ventral and dorsal views. x 2.6



Coan, Eugene V. and Roth, Barry. 1965. "A new species of *Persicula* from West Mexico." *The veliger* 8, 67–69.

View This Item Online: <https://www.biodiversitylibrary.org/item/134685>

Permalink: <https://www.biodiversitylibrary.org/partpdf/97380>

Holding Institution

Smithsonian Libraries and Archives

Sponsored by

Biodiversity Heritage Library

Copyright & Reuse

Copyright Status: In Copyright. Digitized with the permission of the rights holder.

Rights Holder: California Malacozoological Society

License: <http://creativecommons.org/licenses/by-nc-sa/3.0/>

Rights: <https://www.biodiversitylibrary.org/permissions/>

This document was created from content at the **Biodiversity Heritage Library**, the world's largest open access digital library for biodiversity literature and archives. Visit BHL at <https://www.biodiversitylibrary.org>.