

## PHYSA AMPULLACEA 'GOULD' BINNEY

BY W. J. CLENCH

The mid-western forms of this species have long been known under the name of *P. ampullacea* 'Gould' Binney. A study made of a large series of material from many sections of the north central and northwestern states indicate that two entirely separate species are involved. This confusion was brought about by the figures published by Binney (1865, p. 79). Two species were obviously used to figure, though the formal description refers to only one species. I propose the following to cover the unnamed species in the north central area of the United States and the south central area of Canada.

*Physa gouldi*, new species. Vol. 48, pl. 7, fig. 5.

*Description*:—Shell sinistral, medium to large, elliptical to ovate, imperforate, rather thin. Color ranging from light straw-yellow to reddish-brown. Whorls 5, rounded, sometimes slightly inflated. Nuclear whorl reddish-brown. Spire usually obtuse, not produced and continuing the line of the body whorl. Aperture large and ovate, flaring at the base. Palatal lip thin, usually marginate internally. Parietal lip very thin and only as a glaze on the body whorl. Columella slightly twisted, inclined to the left and generally terminating abruptly at the central portion of the body whorl. Suture only slightly impressed, producing a very small indentation in the otherwise smooth contour of the spire. Sculpture composed of fine cross striae, occasional specimens with growth lines in the form of slight ridges. Varicose bands of dark brown and visible both externally and internally. Surface of body whorl noticeably malleated in some specimens.

Length	15.5,	width	8.5,	aperture	12.0 × 5.0 mm.	Holotype
"	19.5	"	11.7	"	15.5 × 8.0 mm.	Paratype
"	15.7	"	9.0	"	12.0 × 5.5 mm.	Paratype

*Holotype*: M. C. Z. 103282, Mouse River, 6 mi. N. of Towner, McHenry Co., North Dakota, collected by Neal Weber, 1934. *Paratypes*: M. C. Z., A. N. S. P.; and Univ. of Mich. from the same locality.

*Remarks*: This form was first described by Gould as *P. bullata*<sup>1</sup> but was not figured. As the name *bullata* was preoccupied,

<sup>1</sup> Gould, A. A. 1855, Proc. Boston Soc. Nat. Hist., 5: 128.



Binney at the suggestion of Gould, published it under the name of *P. ampullacea*,<sup>2</sup> and figured three specimens. His figures 134 and 135 are exactly like material that has been obtained from Montana and the Dakotas. His figure 133 is not at all like the other two and more nearly fits the original description as published by Gould.

An examination of the two specimens in the type series leads to the conclusion that the figures 134 and 135 were not drawn from the types, though Bartsch<sup>3</sup> believed that the artist might have drawn the broken areas of the shells. Both specimens of the type lot are badly broken, the type has a large portion of the aperture missing, and a large hole in the body whorl. The remaining specimen has the aperture side entirely missing, as though the specimen had been cut into halves with only the hinder portion remaining. In all probability the specimens were broken at the time Binney worked with the material, and as a consequence he selected others to figure but made no mention from what source he obtained the shells. The spire characters, both the general shape and the sutures, are quite different (figures 134 and 135), from the type specimens, and by his own statement fig. 133 was obtained from other material.

The exact locality is not known other than that of Oregon. At the time the specimens were discovered, 'Oregon' occupied a much greater area than its present boundaries now indicate, but the entire territory fell within the Pacific drainage area. None of the west coast forms so far examined quite approach the elliptical shape of the Montana-Dakota shells and again the *lack* of an impressed suture, which is very characteristic of the mid-western forms, does not agree at all with Gould's "sutura bene impressa" or Binney's translation "suture decidedly impressed." Gould further states "It accords most nearly with Haldeman's plate iii, f. 9, which was given him as *P. sayii* Tappan." It is evident that this comparison would not have been made if material similar to Binney's from which the figures 134 and 135 were obtained, had been used in the original diagnosis of the species. *P. ampullacea* of authors resolves itself into two species,

<sup>2</sup> Binney, W. G. 1865, Smithsonian Misc. Colln. No. 143, p. 79.

<sup>3</sup> Bartsch, P. 1919 (in Baker, F. C.), Bull. Amer. Mus. Nat. Hist., 41: 534.



*P. ampullacea* 'Gould' Binney for the Pacific drainage forms, and *P. gouldi* for the northern mid-western forms.

In relationship, *P. gouldi* appears to be closely allied to *P. warreniana* Lea. This latter species is more attenuated, has deeper incised sutures and a more amber coloration.

Henderson and Daniels<sup>4</sup> were of the opinion that *P. nuttallii* Lea was the same as *P. ampullacea*, basing their assumptions only upon the original description of *P. nuttallii*<sup>5</sup> overlooking Lea's figure of that species which had appeared later in his Observations.<sup>6</sup> If Lea's figures truly represents the species, it would be valid, and Hemphill's *P. ampullacea columbiana*<sup>7</sup> would become a synonym, as the description of the latter species agrees in all essential details with *P. nuttallii*.

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### BOSTON MALACOLOGICAL CLUB

The regular meetings of the Boston Malacological Club have been held during the past season, from October to May inclusive, on the first Tuesday evening of each month.

The October meeting was devoted to the summer experiences of members, and reports were forthcoming of collecting in such widely separated localities as Russia, the Belgian Congo, Cuba and California, as well as Maine, Tennessee and Florida. In November the Club was addressed by Dr. Bernard E. Proctor, of Massachusetts Institute of Technology, on "Molluscan Food Industries," and in December Dr. John H. Welsh spoke on "The Significance of the Mantle-flaps of Certain Fresh Water Mussels," and showed a series of lantern slides. At the January meeting Mr. William J. Clench spoke on "The Isolation of Species," citing various contributory factors, and stating that isolation is more pronounced among land forms than among marine species. Dr. Joseph C. Bequaert spoke in February on "Some Relations of Mollusks to Other Animals."

On the evening of March 5, the Club celebrated its twenty-fifth anniversary, with a banquet, at the Children's Museum of Bos-

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<sup>4</sup> Henderson J., and L. E. Daniels. 1917, Proc. Acad. Nat. Sci. Phila., p. 51.

<sup>5</sup> Lea, I. 1864, Acad. Nat. Sci. Phila., p. 116.

<sup>6</sup> Lea, I. 1866, Observations, 11: pl. 24, fig. 93.

<sup>7</sup> Hemphill, H. 1890, Naut., 4, No. 3, p. 27.



Hertlein, Leo George. 1935. "Physa ampullacea [Gould] Binney*The Nautilus* 49, 30–32.

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