

[References are given to the names used in Mathews' Hand List. Each species is dealt with under the following headings:— Other species in South Australia, Size, Bill, Legs, Plumage, Habitat, Food, Nest, Eggs, and in some cases with additional general notes. The Bulletin owes its origin to Thos. Duffield, Secretary to the Commissioner of Crown Lands. The plates are reproduced by photo-litho from paintings by C. Wall, Government Artist, and figure both birds and eggs. The publication was issued to every public school and institution, and police stations throughout the State. The coloured plates and portion of the text were reprinted in *The Journal of the Department of Agriculture of South Australia* (q.v., Edquist, 1911-1912).]

THE "GUNDLACHIA" PUZZLE.

By TOM IREDALE.

(Contribution from *The Australian Museum, Sydney, N.S.W.*)

Another step towards the elucidation of the Molluscan "*Gundlachia*" puzzle is here presented. In this Journal, Vol. x., p. 229, April 30, 1943, I sketched the history of the capbearing Australian Ancylicids, and introduced the name *Problancylus* for these, as obviously *Gundlachia* was not applicable. The small freshwater Limpets, known as Ancylicids, have a world-wide distribution, and a curious apparent aberration was discovered in Cuba, and named *Gundlachia*. A similar aberration turned up in New Zealand and Tasmania, and then in South Australia and Victoria. From examination of the records I concluded that *Problancylus* was almost certainly an aberrational development, occurring in stagnant water.

Now Sgt. F. Elkington Allen has brought in a series of *Problancylus*, from a backwater of the Peel River, near Tamworth, N.S.W., the first record from this State. The shell is large for the genus, elongate oval, parallel-sided, bearing a cap on the sinister apex, the right edge of the shell advanced beyond the apex. Sculpture of fine radial striae. The cap is small, notable, not detached, though obliquely placed. Interiorly the entrance to the cap is seen as figured by Hedley. The N.S.W. shell measures 5.25 mm. in length by 3 mm. in breadth by 1.75 mm. in height; it is longer and the cap does not project as in *petterdi*, and is here named *Problancylus anticipatus*, sp. nov. It will be figured later.

Even more interesting is a series of Ancylicids, collected by Dr. Consett Davis, in the Harding Ranges, North-west Australia, which perpetuate the cap of *Problancylus* in the adult. The shell, measuring 3 mm. by 1.5 mm. by .75 mm., is from above a very ordinary parallel-sided *Ancylus*, but the under-surface shows a shelf extending two-thirds of the shell, leaving only a small aperture exactly as in the *Problancylus* cap, this aperture being narrower than broad, only 1 mm. in length.

This is named as the type of a new genus and species, *Stimulator consetti*, and its discovery must lead to a revision of the "*Gundlachia*" puzzle, even providing later the solution.



Iredale, Tom. 1944. "The "Gundlachia" puzzle." *The Australian zoologist* 10, 290–290.

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