ON A NEW SPECIES OF SINISTRAL *LIMNÆA*, FROM CENTRAL AUSTRALIA, WITH SOME REMARKS ON SO-CALLED SPECIES OF *PHYSA*, ALSO FROM AUSTRALIA.

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(Read before the Conchological Society.)

Some years ago, ten or a dozen specimens of a fresh-water shell were sent from Australia to my friend, Mr. H. M. Gwatkin, of St. John's College, Cambridge, the exact locality being given as "Paroo Creek, River Darling, 90 miles north of Mount Murchison." The shell was sinistral, the dentition Mr. Gwatkin at once determined to be that of a typical *Limnæa*, such as our own *stagnalis* or *peregra*.

Failing to find the species described in the Monographs, it occurred to me the other day to take specimens to the British Museum, to see if the shell were known there. I found that the species is probably new, but closely allied to two other sinistral species in the British Museum, both from Australia.

These however, curiously enough, were described, and have always been regarded as *Physa*, not as *Limnæa*. They are :---

1. Physa Hainesii Tryon, Amer. Journ. of Conch., vol. ii., p. 9, pl. ii., fig. 9.

> Smith, Journ. Linn. Soc. Zool., vol. xvi., On the Freshwater Shells of Australia, p. 281.

Küster, Mart. and Chem. Conch. Cab., *Physa*, nr. 252, p. 366, taf. 49, fig. 1.

" latilabiata Sowb., Conch. Icon., vol. xix., Physa, fig. 33, a. b.

" Schayeri Troschel, Mus. Berolin.

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LOCALITY: Australia (W. Newcomb, M.D.), India? (W. A. Haines), Victoria R. and Depuch I., N. Australia (Smith).

Described by Tryon as an Isidora, which subgenus, however, seems peculiar to Africa (see the monograph in Küster).

Physa Newcombi Ad. and Ang. P.Z.S., 1863, p. 416. Smith, Journ. Linn. Soc. Zool., vol. ,, xvi., On the Freshwater Shells of Australia, p. 280.

> Sowb., Conch. Icon., vol. xix., Physa, fig. 21.

> Küster, Mart. and Chem. Conch. Cab., Physa, nr. 131, p. 299, taf. 43, fig. 6.

LOCALITY: Ponds near Mount Margaret, Stuart's Expedition (Angas).

TYPE in Mus. Brit.

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There is no evidence, in the descriptions of these two shells, that their authors examined the animal. The shells being sinistral, and rather large and ventricose, it probably did not occur to them that they were anything else but Physa, or that it were possible, perhaps, for a species of Limnaa to be permanently reversed. Mr. Gwatkin's examination of the animal of our shells was confined to the dentition, but was sufficient to establish beyond the possibility of a doubt that they were Limnaa and not Physa. If, therefore, we find that on conchological grounds these two other species from the same part of Australia, hitherto described as Physa, approach very closely to ours, there are strong grounds for believing-in the absence of the certainty which an examination of the radula would afford-that they also are Limnæa.

In a question like this, an examination of the type specimens is the most convincing test that can be applied.* The outer surface of the shell, in all these three species, is that of a

* I will place the type specimen of the new species in the Mus. Brit.

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Cooke, A. H. 1887. "On a new species of sinistral Limnaea, from Central Australia, with some remarks on so-called species of Physa, also from Australia." *Journal of conchology* 5, 241–243.

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