

A REVISION OF THE AUSTRALIAN PINNIDÆ.

By

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(Plates xix-xxi.)

The Pinnidæ are a small family of marine bivalves including many fossil and about fifty recent species which occur throughout the warmer seas of the world. Though thin and brittle these shells are notable for their length, being exceeded in this respect only by the Giant Clams. They live planted point downwards with the tips of the broad ends projecting above the surface of zosteria flats. An ugly wound may be inflicted on the bare feet of those who tread on their sharp blades, from this the shells are called in Australia "Razorbacks." The doings of a commensal crab, *Pinnotheres*, frequently a guest in the *Pinna* mansion, is related by classic legends either as the behaviour of a rascal or of a grateful attendant.

The first attempt at classification of the Pinnidæ was by Chemnitz, who in 1785 drew attention to a feature separating various species of *Pinna*. In some, for instance *P. incurvata*, the apical muscle scar has a ridge running lengthwise down the centre; in others, as in *P. atrata*, this ridge is absent. Apparently prompted by this observation, Gray proposed¹ the genus *Atrina* for the second group, with *P. nigra* for type. As the basis of this genus he cited "1844." This has been shown by Iredale to indicate the following passage,—“The *Pinna* have an elongated shell with a longitudinal crack filled with a cartilage in the middle of each valve, and *Atrina* are shorter shells without any such crack.—Gray, Synopsis of the Contents of the British Museum, 44th Edition, 1842, p. 83.” Iredale² advises that the name *Atrina* should date from the nomination of a type in November, 1847.

This classification was expanded first by the Adams brothers and then more fully by Dr. E. von Martens³. As the latter has explained, the feature noted by Chemnitz is comparatively trivial. The essential characters of *Pinna* are that the shoulder of the shell towards the apex is externally angled and fissured, while that of *Atrina* is rounded and entire; inside the valve, *Pinna* has a long narrow sinus which extends through the middle of the nacreous tract for most of its length, while the nacreous tract of *Atrina* is not thus cleft. These features are contrasted in Pl. xix, fig. 3 and Pl. xx, fig. 12 of the present paper.

An excellent account of the structure and habits of *Atrina* is given by Grave⁴.

¹ Gray—Proc. Zool. Soc., 1847, p. 199.

² Iredale—Proc. Malac. Soc., x, 1913, pp. 294-309.

³ Von Martens—Ann. Mag. Nat. Hist., (3), xvii, 1866, pp. 81-88.

⁴ Grave—U.S. Fisheries Bureau, Bull. xxix, 1911, pp. 411-439, pl. 48-50.