

Only one species of the genus *Choanocystoides* has so far been recorded, in Central America. In Malaya, it occurs in one species of earthworm, *Pheretima indica* ———— WINNIE C. CHIA, *Department of Zoology, University of Singapore*, 29th January, 1962.

Some new records of parasitic Crustacea from Malayan fresh waters. ———— Whilst making fresh-water collections during the last two years, three new records of parasitic crustaceans were obtained, namely, *Argulus indicus* Weber, *Alitropus typus* Milne Edwards and *Tachaea chinensis* Thielemann.

Argulus indicus was first described from Java by Weber (1892, *Zool. Eregebn. Nederl. Ost. Ind.*, 2: 544). He found only females. The male was first described from Thailand by Wilson (1927, *J. Siam Soc., Nat. Hist. Suppl.*, 7: 1). The species has also been recorded in India by Ramakrishna (1951, *Rec. Indian Mus.*, 49: 208). Our material consists of one male and two females from *Aplocheilus panchax* (Hamilton) taken in April 1961 at the MacRitchie Reservoir, Singapore. *Argulus indicus* has been recorded on many species of fishes but *Trichogaster pectoralis* (Regan) is supposed to be the "real" host according to Wilson (1944, *Proc. U.S. Nat. Mus.*, 94: 552).

Alitropus typus has been reported both from fresh and salt water in Indonesia, Borneo and India (Nierstrasz and van Swinderen 1931, *Arch. Fur Hydrobiol., Suppl.*, 9: 399). Our material was collected from *Channa gachua* (Hamilton) at Batu Berendam and the Kuala Pilah—Tampin Road, Malacca. Eight specimens, consisting of both males and females were obtained.

Tachaea chinensis has hitherto been recorded from only China and Japan (Shen, 1936, *Bull. Mem. Inst. Biol.*, 7: 18). Our material consists of 4 specimens collected on *Macrobrachium geron* Holthuis from Gunong Pulai, Johore.

We are indebted to Mr. R. W. Ingle, British Museum (Natural History) and Mr. P. Kirtisinghe, Aquinas University College, Colombo, Ceylon, for the identifications. ———— A. KARIM, *Fisheries Laboratory, Glugor, Penang* and C. H. FERNANDO, *Department of Zoology, University of Singapore*, 12th June, 1962.

The larva of the Cockle, *Anadara granosa* Linn. ———— The full-grown larva of the variety of the cockle, *Anadara granosa bisenensis*, an economically important species in Japan, is described and figured by Yoshida (1957, *Journ. Shimonoseki College Fisheries*, 6 (3): 63-66). This larva differs from the larva of *Anadara granosa* as found locally in the following features:—

- (a) The full-grown larva attains a much larger size—0.218 mm. to 0.268 mm. in length.
- (b) The larva is longer; the ratio of length to height is 1.23 to 1.34.
- (c) The number of concentric lines is fewer, about 7.
- (d) The shape is more ovate-oblong.

My identification of the larva was based entirely on shell characters, shape, hinge structure, and texture from Rees (1950, *Hull. Bull. Mar. Ecol.*, 3 (19): 78-80). The initial identification was made by comparing the clearly defined prodissococonch on early spat collected during July to October, 1958, at Kuala Jalan Bharu, Penang, with planktonic larvae collected during the same period. The initial identification was later confirmed by culturing the planktonic larva in the laboratory.

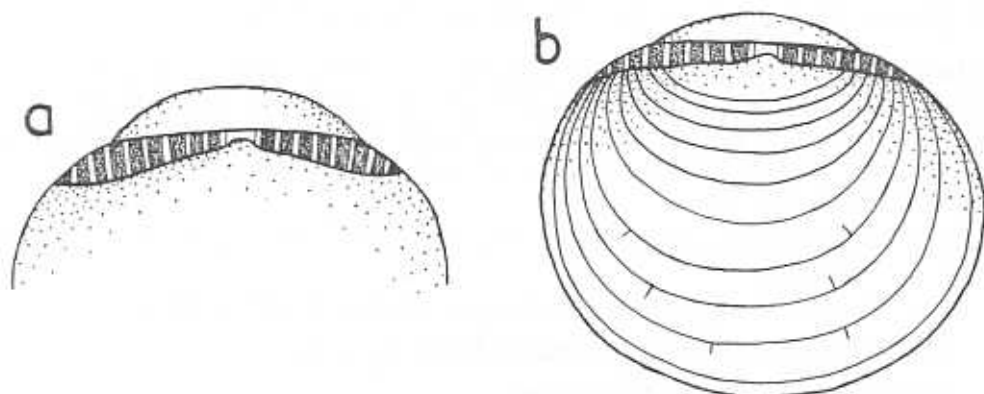
TABLE 1

Measurements of the right valve of the larva of *Anadara granosa* Linn. from Penang.

Length in mm.	Height in mm.	Length/Height
0.187	0.166	1.13
0.192	0.170	1.13
0.198	0.170	1.12
0.200	0.177	1.13
0.203	0.180	1.13
0.208	0.183	1.14

The smallest shell collected measured 0.192 mm. in length by 0.166 mm. in height, while the prodissoconch measured 0.187 mm. by 0.161 mm. The full-grown larva, in which the foot is well developed and on keeping in the laboratory for 24 hours, or even less, quit the free swimming stage to settle to the bottom of the dish and to crawl about actively, measured from 0.187 mm. to 0.208 mm. in length. The accompanying table gives the measurements of a single valve, the right, with the ratio length/height.

The larval shell is strong and convex with prominent but bluntly rounded umbones widely separated from each other. The anterior is narrow and slopes downwards from the umbo, while the posterior is broad and rounded. The live larva appears a very pale yellow with the colour more intense on the dorsal anterior and posterior edges. The concentric lines, usually 10 in number, are quite distinct. A very few short bristles may be observed. The hinge apparatus is strong with about 16 large comb-like teeth which grow progressively larger from the mid-point outwards to the anterior and posterior of the hinge apparatus. The mid-point of the hinge apparatus bears no teeth and shows a gap.

Figure 1. The larva of *Anadara granosa* Linn., (a) hinge apparatus, (b) lateral view.

The larva of *Anadara granosa* differs in the typical Arcacean characters of Rees (1950: 81, 83 & 89) in the anterior being the narrower end and in having fewer teeth which are similar in both valves.

I am grateful to Mr. Soong Min Kong, Director of Fisheries, Federation of Malaya, for his constant help and advice during the course of the present study. ——— D. PATHANSALI, Fisheries Laboratory, Glugor, Penang, 2nd August, 1962.