

NOTES

ON AN EPIZOIC GASTROPOD, *SAPTADANTA NASIKA* PRASHAD & RAO, ON THE SHELLS OF *PTEROCERA* LAMARCK

A heavy infestation by a hitherto little known epizoic gastropod on a shell of *Pterocera lambis* (Linne) from Minicoy in the Laccadive group of Islands was brought to my notice by Dr. S. Jones, Chief Research Officer of the Central Marine Fisheries Research Station, Mandapam Camp. It was later identified by me as *Saptadanta nasika* Prashad and Rao under the family Lepitellidae. Several other shells of *P. lambis* (Linne) and *P. chiragra* (Linne) infested in a similar manner by the same species and reported to have been received from Mangalore were obtained subsequently from a chank godown of a shell dealer in Kilakarai, Ramnad district. The original description by Prashad and Rao (1934) of *Saptadanta nasika* *gen. et sp. nov.* was based on a specimen found on *Trochus niloticus* Linne from the



FIG. 1. *Saptadanta nasika* : shells showing the dorsal view in some and the ventral view in others. Depressions on some of the shells indicate reinfestation by younger individuals of the same species. x 14.

Andamans. The occurrence of the same species on other shells of commercial importance recorded here for the first time, it is hoped, will be of some scientific interest. The availability of a large number of individuals enabled furnishing a detailed description of the conchological and other characteristics of the species.

The shell is fairly thick, low, conical, oval at base and whitish with a slightly greenish or brownish tint. The apex is a little recurved and placed at about a third of the distance from the posterior end. There is a varying number of radiating

ridges up to twenty-seven starting from the apical region and extending to the margin. The ridges are of a lighter hue than the intermediary grooves which are greenish or darkish brown. The peripheral region has a faintly marked groove a little away from the margin. When viewed from the ventral surface the edge of the shell presents well marked crenulations corresponding to the outer radiating ridges with the grooves in between. The inner surface of the shell is porcellanous and white. In a few comparatively thinner shells of smaller size and lighter build, the inner peripheral region has irregular brownish radiations alternating with light yellowish markings and the central deeper region a whitish brown colouration. The measurements of representative sample of shells of different sizes are given in table 1.

The observations being confined to dried up specimens, it was not possible to study the soft parts. The radula, however, was well preserved in the material examined and when it was moistened and cleared with a weak solution of caustic potash, it presented a structure which agreed in all details with the earlier description by Prashad and Rao (1934). The radular formula is 2.1.1.1.2. The central tooth is broad with a large median cusp and three other smaller ones on either side; the lateral is arched with about eight cusps of which one is much larger than the rest; the inner marginal is slender with a series of small cusps on its inner face and the outer marginal is stout, a little shorter than the one preceding it and bears short cusps on both the inner and outer faces at its tip.

Table showing measurements of shells with the number of radiations in Saptadanta nasika

Serial Number	Linear measurements in centimeters				Number of Ridges
	Length	Breadth	Apex to Ant. Margin	Height	
1*	1.35	1.20	1.10	0.41	26
2	1.35	1.29	1.27	0.53	24
3	1.30	1.00	1.00	0.45	25
4	1.30	1.00	1.00	0.40	25
5	1.40	1.00	1.20	0.48	27
6*	1.45	1.30	1.18	0.54	25
7*	1.05	0.90	0.80	0.30	19
8	1.08	0.98	0.85	0.35	25
9	1.20	0.70	0.90	0.30	25
10	1.05	0.88	0.85	0.36	27
11	1.05	1.00	0.78	0.21	21
12	0.75	0.78	0.65	0.30	21
13	0.80	0.75	0.65	0.20	18
14	0.90	0.88	0.82	0.32	27
15	0.85	0.80	0.70	0.21	22
16	0.65	0.50	0.45	0.20	22
17	0.60	0.50	0.48	0.25	24
18	0.50	0.35	0.25	0.15	20
19	0.45	0.30	0.30	0.15	24
20	0.30	0.25	0.20	0.10	20

* Reinfested with younger individuals of the same species.

The boundary of each one of the excavations on the surface of the shell has the same outline of the form which secures attachment and with a ring of close-set impressions conforming to the crenulations on the margin of the shell. The sides of the excavations are slightly sloping and the floor has a roughly oval ridge or elevation with a central depression. The ridge is a little higher and more conspicuous behind than in front and externally to it is a groove round the base. When two or more animals settle very close, the excavations made by them coalesce. Their formation is so characteristic that they can be identified and ascribed to the species even if the animals have dropped out of the infested shells.

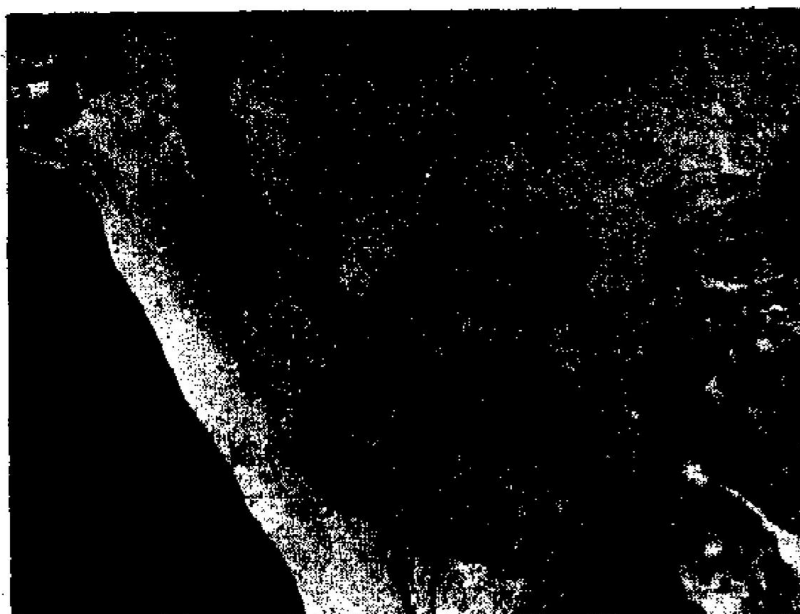


FIG. 2. *Saptadanta nasika*: excavations made by the form on *Pterocera* shell. Marginal row of close-set minute impressions and an oval ridge with a central depression may be noted. x 2.

In *Pterocera* the infestation has been found to be the highest close to the apical region although it occurs on other parts of the shell like the ventral surface of the body whorl and the fingered processes. Often the damage caused by the species is very great as nearly fifty and occasionally more have been found infesting a single shell. In the manufacture of fancy articles like flower vases and lamp shades *Pterocera* are largely used and those drilled with excavations caused by this species are considered unsuitable for the purpose.

I wish to express my very sincere thanks to Dr. S. Jones, Chief Research Officer, Central Marine Fisheries Research Station, Mandapam Camp, for the keen interest taken in the preparation of this note.

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**RECORD OF MALE *PARAPENAEOPSIS ACCLIVIROSTRIS*
ALCOCK**

WHILE revising the prawns of the *Penaeus* group Alcock (1905) created the species *acclivirostris* of genus *Parapenaeopsis*. The material he studied comprised 34 prawns, all females, obtained from Madras, Ganjam, Vizagapatam, the Palk Strait and the Persian Gulf. The male of this species has not been described so far.

A few small prawns, resembling young *Metapenaeus affinis* in general form and colour, were taken in the month of March 1960 from the 'dol' (fixed bag net) catches made off Sassoon Docks in Bombay at a depth of 6 to 7 fathoms. They measured 26 to 46 mm. from tip of rostrum to end of telson. Later in the same month, from an otter trawl catch from deeper waters of 15 to 20 fathoms off the same locality a large individual measuring 58 mm. was obtained. On close examination these prawns proved to be *Parapenaeopsis acclivirostris* Alcock. Out of the 19 individuals collected 9 are males.

Alcock's (1906) description and figures of the female tally with the present material in almost all details. The rostrum has 7 to 8 teeth and in the female it does not pass beyond the tip of the second segment of the antennular peduncle. The antennular flagella are subequal and 7/10 of the length of their peduncle in the female. The fifth pair of legs reaches almost to the tip of antennal scale.

The males are far smaller than the females. The 9 males examined are within a length range of 26 to 31 mm. and all of them appear to be adult as could be seen from the full development of their petasma. Three mature females with ripening ovaries measure from 44 to 58 mm. in length. The rostrum in the male just surpasses the eye and falls short of the tip of the basal segment of the antennular peduncle. The petasma reaches the basis of the third pereopod. The distolateral projections of the lateral lobes are reflected posterolaterally making an angle of 60° with the longitudinal axis of the petasma. The distance between the tips of the projections is a little less than half the total length of the petasma. The width across the lateral lobes at their widest region is about a third of the petasmal length (Fig. 1 *a* and *b*). The distal piece of the appendix masculina is horse-hoof shaped, minutely setose and about half the length of the basal piece. On its posterodistal aspect are found one large and one or two smaller tongue like processes (Fig. 1 *c*).

Parapenaeopsis acclivirostris very closely resembles *P. tenellus* (Bate), and Alcock himself was doubtful of the validity of the new species he created. With the discovery of the male, its specific identity can now be established.

The main differences in the external sexual characters of the males of the two species are given below.