

ON NEW RECORDS OF FIVE SPECIES OF PENAEINAE
(DECAPODA MACRURA : PENAEIDAE) ON THE WEST COAST*
OF INDIA

By M. M. KUNJU

Central Marine Fisheries Research Sub-station, Bombay-1

WHILE examining the composition of the prawn landings in the various fishing centres of Bombay the writer has come across five species of penaeid prawns which are new records in Bombay and the west coast of India. They constitute a considerable portion of the prawn catch in Bombay, one of them viz. *Parapenaeopsis hardwickii* being a major species of commercial value.

They are dealt with below in the order of abundance :

Parapenaeopsis hardwickii (Miers)

Alcock (1906) designated this prawn as a variety of *Parapenaeopsis sculptilis* Heller. By comparative analysis of the morphological features Burkenroad (1934 a) established it as a distinct species with pronounced specific characters, and he has since been followed by all workers such as Kubo (1949) and Dall (1957).

The adults of *P. hardwickii* are much smaller than *P. sculptilis* Heller; females seem to attain maturity at a minimum length of about 70 mm. and males at about 50 mm. In the field the species can be distinguished from *P. sculptilis* by the absence of the median carination of the first two pleonic terga, the distomedian lobes of the petasma not extending wing-like beyond the lateral cornua, the absence of median tuft of setae on the posterior plate of thelycum and the presence of three pairs of small but recognisable spines on the lateral margins of the telson. The two sexes are dimorphic, males being considerably smaller in size than females. The rostrum in all the mature males is devoid of the unarmed styliform portion. Burkenroad (1934 a) has remarked in the case of male *P. sculptilis* that the shorter rostrum is characteristic of 'an adult instar ultimately attained by all males'. Since the male rostrum is less robust it is likely to get broken more easily (Dall, 1957). The immature males have the styliform portion of the rostrum unduly elongated.

The species appears to be well distributed along the coast of Bombay, forming one of the major species of fishery value. They occur in large numbers at Dahanu, Satpati, Arnala, Versova and Sassoon Docks. Stray individuals were picked up from Alibag and Janjira-Murud in the month of May, 1959.

Alcock recorded *P. sculptilis* var. *hardwickii* from Orissa, Ganjam, Madras and Pondicherry.

Atypopenaeus compressipes (Henderson)

This is a small penaeid prawn, the vast majority of the adult females falling within a length range of 40 to 50 mm. and males within 35 to 40 mm. In the 'dol'

* Published with the permission of the Chief Research Officer, Central Marine Fisheries Research Station, Mandapam camp.

nets (fixed bag nets) operating at about a depth of 6 to 7 fathoms off Sassoon Docks at the entrance to the Bombay harbour and at depths of 6 to 15 fathoms off Versova (Bombay) these prawns are caught in large numbers throughout the year. Members of the genus including *A. compressipes* are regarded as rare in occurrence by Kubo (1949) and Dall (1957). Alcock (1906) recorded only a single male 1 $\frac{3}{8}$ " long, obtained off Madras at a depth of 12 fathoms.

Parapenaeopsis acclivirostris Alcock

The species is found in small numbers in the prawn landings at Sassoon Docks. In the month of March, 1960 nineteen individuals were collected from the 'dol' and Otter trawl catches made from a depth of 6 to 20 fathoms. Among the Indian Penaeinae it is remarkable in the absence of the isolated epigastric tooth on the carapace, and therefore can easily be identified. Alcock's material consisted of 34 females collected from Madras, Ganjam, Vizagapatam and the Palk Strait. The male of the species is recorded now for the first time and an account of it is being published separately. As in the case of *P. hardwickii* the males are considerably smaller than females.

Metapenaeopsis novae-guineae (Haswell)

It is a medium sized penaeid growing to about 90 mm. in length and is represented in the 'dol' net catches of Bombay in fairly large numbers, particularly in the months of October and November.*

It is synonymous with *Metapenaeus stridulans* Alcock. Burkenroad (1934 a and b) redefined the genera *Metapenaeus* of Wood-Mason and Alcock (1891) and *Metapenaeopsis* of Bouvier (1905) and proposed the sub-genus *Metapenaeopsis* to separate out species with an asymmetrical petasma from those with a symmetrical one. Subsequently Kubo (1949) elevated the sub-genus to generic rank. *Metapenaeus stridulans* Alcock has been brought under *Metapenaeopsis* by various authors, and the specific synonymy was first stated by Schmitt (1926). The material collected from Bombay conforms to the description and figures of *Metapenaeopsis novae-guineae* given by Kubo (1949) and Dall (1957).

Alcock recorded his species from Orissa, Ganjam, Andamans, Vizagapatam, Madras and the Palk-Strait.

Trachypenaeus curvirostris (Stimpson)

The species is not as common as the above four, a few individuals only having been collected from a 'dol' net catch from off Sassoon Docks in November, 1959. A closely similar species viz. *T. asper* Alcock has been reported from the Ganjam coast and the Andamans.

*Its occurrence has been noticed by Dr. (Miss) F. S. Shaikhmahmud (Central Marine Fisheries Research Sub-station, Bombay) also.

Metapenaeopsis novae-guineae and *Trachypeneus curvirostris* are normally deep sea forms, occurring beyond the 20 fathom line ; but both of them have been collected in Bombay from the 'dol' net catches of 6 to 15 fathoms.

My thanks are due to Shri M. Krishna Menon, Research Officer (Prawns), Central Marine Fisheries Research Sub-station, Ernakulam for his valuable comments in the preparation of the note.

REFERENCES

- ALCOCK, A. 1906. Catalogue of the Indian Decapod Crustacea in the collection of the Indian Museum. Part III. Fasciculus I. The prawns of the Peneaus group. Indian Museum, Calcutta.
- BOUVIER, E. L.* 1905. Peneides et Stenopides recueillis par les expeditions francaises et monegasques dans l'Atlantique orientale. *C.R.Acad. Sci. Paris*, 140.
- BURKENROAD, M. D. 1934 a. Littoral Penaeidae chiefly from the Bingham Oceanographic collection with a revision of *Penaeopsis* and descriptions of two new genera and eleven new American species. *Bull. Bingham Oceanogr. Coll.* 4 (7) : 1-109.
- . 1934b. The Penaeidae of Louisiana, with a discussion of their world relationships. *Bull. Amer. Mus. Nat. Hist.* 68 : 61-143.
- DALL, W. 1957. A revision of the Australian species of Penaeinae (Crustacea Decapoda : Penaeidae). *Aust. J. Mar. Freshw. Res.* 8 : 136-230.
- KUBO, I. 1949. Studies on penaeids of Japanese and its adjacent waters, *J. Tokyo. Coll. Fish.* 36 : 1-467.
- SCHMITT, W. L.* 1926. Report on the Crustacea Macrura (families Penaeidae, Campylonotidae and Pandalidae) obtained from the F.I.S. 'Endeavour' in Australian Seas. *Biol. Res. Fish. Exp. 'Endeavour'* 5 : 309-81.
- WOOD-MASON, J., AND ALCOCK, A. 1891. Natural history notes from H.M. Indian Marine Survey Steamer 'Investigator' Commander R. F. Hoskyn, R.N. Commanding. *Ann. Mag. Nat. Hist.* 8 (6):16-34.

* Not consulted in original.