ON THE PENAEID PRAWN *PARAPENAEOPSIS STYLIFERA* AND A NEW VARIETY OF THE SPECIES FROM COCHIN*

ABSTRACT

A new variety of the penaeid prawn *Parapenaeopsis stylifera* is described from the samples obtained along with the *forma typica* from the inshore waters at Cochin. In the new variety, the petasma is comparatively much smaller with smaller distodorsal projections which are less divergent. In addition, the appendix masculina lacks the distolateral process seen in the typical *P. stylifera* and the specimens, on the whole are more pubiscent.

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EXAMINATION of innumerable specimens of *Parapenaeopsis stylifera* (H. Milne Edwards) locally known in Malayalam as 'Karikkadi chemmeen' in the fishery has enabled to clear a confusion concerning two varieties of the species recorded by earlier authors and this is reported here. A new variety of the species met with during the study is also recorded.

Parapenaeopsis stylifera (H. Milne-Edwards)

Penaeus styliferus H. Milne Edwards, 1837 : 418

Penaeopsis styliferus Bate, 1881 : 183

Parapenaeopsis styliferus Nobili, 1903 : 4

Parapeneopsis stylifera Alcock, 1906 : 36–37

Parapeneopsis stylifera var. *coromandelica* Alcock, 1906 : 37 ; Menon, 1956 : 346 (key);

Parapenaeopsis stylifera de Man, 1911 : 9; Nataraj, 1942 : 468 ; Menon, 1956 : 346 (key); Ahmed, 1957 : 12 ; Dall, 1957 : 214 (key) ; Tirmizi, 1968 : 193–203 ; 1969 : 762; George, 1969 : 34; Rao, 1970 : 1580

Parapeneopsis coromandelica Hall, 1962 : 27; De Bruin, 1965 : 99

Parapenaeopsis stylifera coromandelica Racek and Dall, 1965 : 96–98

Parapenaeopsis stylifera stylifera Racek and Dall, 1965 : 98

Material: Numerous specimens from different parts of the coast of India - depth 5 to 50 m.

Distribntion: Distributed from Indian and Ceylon waters through Malaysian waters to Indonesia and Borneo. In Indian waters it is distributed all along the coastline, more especially on the west coast and south-east coast, contributing to the fishery to a large extent. Unlike the other coexisting commercially exploited species this has no estuarine phase in its life history.

Remarks: Based on telsonic armature and geographic distribution Hall (1962) raised Alcock's variety *P. stylifera coromandelica* to specific rank, a view followed by De Bruin (1965) also. But Racek and Dall (1965) were of opinion that since all the morphological criteria except telsonic armature in both the forms were in complete agreement, specific separation of Alcock's variety from Milne-Edwards' species could not be attempted. However, they felt that it was necessary to retain their taxonomic distinction at an infra-specific level in view of their geographic separation and proposed two subspecies *P. stylifera stylifera* (Milne-Edwards) and *P. stylifera coromandelica* (Alcock). Examination of innumerable specimens drawn from the fishery of the species on the south-west coast of India showed that both the forms exist together here, contrary to the record of one form on the west coast and the other on the east coast by Alcock (1906). In view of this as well as the various gradations noticed in the telsonic armature varying between the two forms, it is quite evident that the two are only synonyms. So it is suggested that *P. coromandelica* may be relegated to as a synonym of *P. stylifera*.

Parapenaeopsis stylifera var. **cochinensis** nov.

15 male specimens varying in total lengths from 7.2 to 9.0 mm (carapace length 1.7 to 2.5 mm) collected during the course of this study from among *P. stylifera*

catches from Cochin were noticed to be different in some respects. Although no difference between the size and shape of the teeth, spines, grooves and carinae of the carapace and abdomen and other general features could be detected, the petasma was found to be comparatively much smaller (Fig. 1 b) than the typical *P. stylifera*. The distolateral projections are smaller and less divergent. The petasma looks quite similar to that of *P. gracillima* figured by Racek and Dall (1965, plate 8, figs. 8 and 9). But none of the other characters agree with that species. The appendix masculina shown in Fig. 1 d also differs from that of *P. stylifera*, lacking in the distolateral process. The specimens on the whole are also more pubescent than *P. stylifera*.

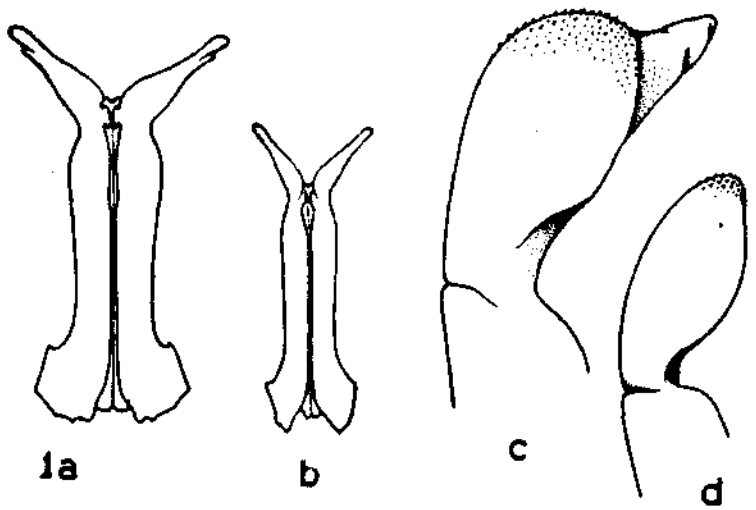

Fig. 1 a. Petasma of *P. stylifera*, b. petasma of *P. stylifera* var. *cochinensis* nov., c. appendix masculina of *P. stylifera*, d. appendix masculina of *P. stylifera* var. *cochinensis* nov.

Unsupported in any other way these differences are not quite sufficient for the creation of a new species. Corresponding female specimens with any difference in thelycal features were not obtained either. However, the difference in these male specimens are so pronounced that a distinct variety is indicated. This variety is named *Parapenaeopsis stylifera* var. *cochinensis* nov. and the specimens have been deposited in the reference collection of the Regional Centre of the Central Marine Fisheries Research Institute, Mandapam Camp.

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REFERENCES

AHMED, N. 1957. *Dir. Fish. Govt. Pakistan*:1–31.

ALCOCK, A. 1906. *Cat. Indian Decapod Crustacea Indian Mus.*, 3 (*Fasc.* 1) :1–55

BATE, C. S. 1881. *Ann. Mag. Nat. Hist.*, 8 (5) : 169–196.

DALL, W. 1957. *Aust. J. Mar. Freshw. Res.*, **8** (2) : 136–231.

DE BRUIN, G.H.P. 1965. *Zool. Meded.*, **41** (4) : 73–104.

DE MAN, J.G. 1911. *Siboga. Exped.*, **39a** : 1–131.

GEORGE, M.J. 1969. *Bull. Cent. Mar. Fish. Inst.*, **14** : 5–48.

HALL, D. N. F. 1962. *Fish. Publ. Col. Off., London*, **17** : 1–229.

MENON, M. K. 1956. *Proc. Indo–Pacif. Fish. Coun.*, **6** (3): 345-347.

MILNE–EDWARDS, H. 1837. *Hist. Nat. Crust. Anat. Physiol. Anim.*, **2** : 418.

NATARAJ, S. 1942. *Curr. Sci.*, **11** (12) : 468–469.

NOBILI, G. 1903. *Bull. Mus. Zool. Anat. Comp., Torino*, **18** (447) : 1–32.

RAO, P. VEDAVYASA 1970. *FAO Fish. Rep.*, (57) Vol. **4** : 1575–1605.

RACEK, A.A. AND W. DALL 1965. *Verh. K. ned. Akad. Wet.*, **56** (3) : 1–116.

TIRMIZI, N.M. 1968. *Crustaceana*, **15** (2) : 193-203.

———— 1969. *FAO Fish. Rep.*, (57) Vol. **3** : 749-763.