

## On the occurrence of the polychaete *Ceratonereis burmensis* **Monro**, from Pichavaram mangrove

Olivia J. Fernando and R.Rajasekaran

C.A.S. in Marine Biology, Parangipettai, 608 502, Tamil Nadu, India

### Abstract

The nereid *Ceratonereis burmensis* **Monro** (1937) is recorded from the intertidal sediment of a mangrove, Pichavaram, southeast coast of India, for the first time.

*C. burmensis* was established by **Monro** (1937) from specimens collected from Maungmagan, Burma and off Bombay. He believed that the specimens collected off Bombay were the epitocous forms of the polychaete collected at Maungmagan, Burma. Subsequent to the record of **Fauvel** (1953), **Kumaraswamy Achari** (1969) has listed the occurrence of this species in the catalogue of polychaetes of Central Marine Fisheries Research Institute.

The authors thank the authorities of Annamalai University for facilities provided and **Dr.G.L.J. Paterson**, Natural History Museum, London for help in identification.

### Material and methods

During the present study, *C.burmensis* was observed to be the most common representative of the polychaete fauna and occurred throughout the period of study (Jan. to Dec. 1998). The largest animal observed was 55mm in length. The annual salinity variation ranged from 7-29‰ and the substrate was observed to have 27-48% of sand with the median particle diameter of 1.9 to 3.1 $\mu$ .

The identification of this species was based on the following characteristics as per the description of **Monro** (1937). The prostomium is not incised and the tentacles are about one third the length of the body. The longest tentacular cirri reaches upto the 6 setiger and the remainder are less than half of this. There are no paragnaths on the proximal ring. The paragnaths of the distal ring are variable. Group I more or less rectangular patch of very small paragnaths; Group II narrow oblique cluster of relatively larger paragnaths; Group III wide transverse band of about three rows of very small paragnaths; and Group IV oblique cluster of about ten larger paragnaths. Quite a large number of specimens were observed to have an everted proboscis.

The ramus of the feet are each supported by a single aciculum. The dorsal ramus has three triangular languets, of which the median is slightly shorter than the rest. The ventral ramus has four languet. Anteriorly there are only spinigerous bristles which are delicate and slender and other considerably shorter. Beyond the tenth setiger, the parapodia carries a number of

modified falcigers on the lower ventral setal bundle. Further back there are only spinigers. The description of the specimens collected during the present study is in agreement with Monro (1937) in all characteristics.

Parulekar (1971) who has studied the polychaetes from the intertidal regions of 16 localities of Maharashtra and Goa, stated that *Nereis (Ceratoneis) burmensis* Monro recorded by Fauvel from this part of west coast was not encountered during his study. Later, Parulekar *et al.* (1980) encountered *C.burmensis* from one out of 14 stations along the Mandovi-Zuari estuarine complex of Goa. Sunil Kumar (1999), who made a detailed study of the polychaetes of mangrove area at Cochin along the southwest coast of India, found that the nereid, *Nereis glandicineta* Southern was the most dominant.

*N. burmensis* has also been reported from the brackish environment of Veraval in Gujarat (Nageswara Rao and Soota, 1981) and other widely separated estuarine regions (Radhakrishnan and Ganapati, 1968; Parulekar *et al.*, 1980; Misra, 1995). This species has been recorded from one out of 22 stations studies at Hooghly-Matla estuary by Misra (1995) from sandy soil at the low water mark. However, Chakraborty *et al.* (1992) and Chakraborty and Choudhury (1994, 1997) have not observed this species from their studies at Sagar Island, Hooghly estuary.

Experimental studies on the salinity tolerance of *C. burmensis* and its length-weight relationship has been made from

specimens collected from Vellar estuary, southeast coast of India (Kandeepan and Balasubrahmanyam, 1992, 1997) although the occurrence of this species has not been previously reported to occur in this area (Balasubrahmanyam, 1960, 1964; Srikrishnadhas *et al.*, 1981, 1987).

## References

- Balasubrahmanyam, K. 1960. *J.mar.biol.Ass. India*, 2 : 264-265.
- 1964. *J. Annamalai Univ.*, 25: 101-103.
- Chakraborty, S.K. and A. Choudhury, 1994. *Tropical Ecology*, 35(1): 97-104.
- and ---, 1997 *J.mar.biol.Ass.India*, 39(1&2) : 140-147.
- , T.K. Poddar and A. Choudhury. 1992. *Proc. zool. Soc. Calcutta*, 45 (suppl.A) : 435-444.
- Fauvel, P. 1953. *Annelida, Polychaete. The fauna of India including Pakistan, Ceylon, Burma and Malaya*. The Indian Press Ltd., Allahabad, 507 pp.
- Kandeepan, C. and K. Balasubrahmanyam, 1992. *J. ecotoxicol. Environ. Monit.* 2(2): 153-155.
- and ---1997. *J.mar.biol.Ass.India*, 39 (1&2): 197-198.
- Kumaraswamy Achari, G.P. 1969. *Bull. Cent. Mar. Fish. Res. Inst.* No 7 : 31-40.
- Misra, A. 1995. Polychaetes. *Zool. Surv. India, Estuaries Ecosystem Series, Part 2: Hugli Matla estuary*, 93-155.
- Monro, C.C.A. 1937. *Ann. Mag. Nat. Hist. London*, Ser. 10, XIX, pp 531-538.
- Nageswara Rao, C.A. and T.D. Soota. 1981. *Rec.zool.Surv.India*, 79: 73-82.
- Parulekar, A.H. 1971 *J.Bombay Nat. Hist. Soc.*, 68(3): 726-749.
- , V.K.Dhargalkar and S.Y.S.Singbal, 1980. *Indian J. mar. Sci.* 9: 189-200.
- Radhakrishna, Y and P.N. Ganapati. 1968. *Bull. natn. Inst. Sci. India*, 38: 49-79.
- Srikrishnadhas, B., K.Ramamoorthi and K.Balasubrahmanyam, 1987. *J. mar. biol. Ass. India*, 29 (1&2) : 134-139.
- , N.Jayabalan and K.Ramamoorthi, 1981. *Proc. symp. Ecol. Anim Popul. Zool. Surv. India*, 1: 73-81.
- Sunil Kumar, R. 1999. *J. mar. biol. Ass. India*. 41(1&2) : 116-118.