PENAEID PRAWNS BREEDING IN FRESH WATER

In a recent note in Current Science on the migratory fishes of the inland waters of Madras, Chacko¹ states that berried individuals of four prawns, namely, Palæmon malcolmsoni Milne-Edwards, Palæmon scabriculus Heller, Penæus indicus Milne-Edwards and Metapenæus monoceros Fabr. were found in the Godavari river both above and below the anicut. On the basis of this it is presumed by this author that these prawns breed in the river.

As Penæid prawns are well known to hatch out as nauplii, and the adult females of Penæus spp., and Metapenæus monoceros are not known to carry eggs attached to the abdominal pleopods² it is most unusual if berried individuals of P. indicus Milne-Edwards and M. monoceros Fabr., have been observed. All available evidence is that in the Penæid prawns the eggs are shed in the surrounding water.³ What seems probable is that there has been some confusion in regard to the species dealt with by Chacko, and it appears to me that the berried prawns seen near the Godavari anicut could not have been Penæids but only Caridian prawns, probably Palæmonids. The statement that P. indicus breeds in inland waters at a distance of 100 miles from the sea has also to be re-examined and, if confirmed, it is in substantial disagreement with our knowledge of this species. But as this is based on the occurrence of so-called berried specimens of Penæus spp., it need not be taken seriously.

It may be added that recent experiments which I have carried out indicate that the Penæid, most tolerant to fresh water, is M. monoceros. This species probably breeds in coastal zones not directly connected with the sea as found from Dakin’s results in Australia and the observations made at Madras.⁴ Of the other two Penæids of commercial importance on Coromandel coast, viz., P. carinatus and P. indicus, the one less tolerant to low salinity is P. indicus. The field data at Madras, the Collair Lake and at the Chilka Lake are also in agreement with this experimental result.

Central Marine Fisheries Research Station,
Triplicane, Madras,
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N. KESAVA PANIKKAR.

² Dakin, W. J., Nature, 1947, 158, 99. (Most of the early references are cited by Dakin.)