

## On the Importance of *Mesopodopsis Zeylanica* (Crustacea, Mysidacea) as Food of Fish

Smith (1879), Tattersall & Tattersall (1951), Stevenson (1958) and Hopkins (1965) have stressed the importance of mysids as food of many marine fishes. Of the estuarine species, *Neomysis awatschensis* is the most extensively studied species. Heubach *et al.* (1963) have shown that it forms an important food of one year old striped bass (*Roccus saxatilis*) over 2.5 cm in length. From India there is no detailed report regarding the part played by mysids in the food of fishes. Kaliamoorthy (1972) found that *Mesopodopsis orientalis* as an important food of fishes. Devraj *et al.* (1975) reported the presence of mysids in the stomach of pearl spot (*Etroplus suratensis*), but they have not identified the species.

The present investigation was aimed at ascertaining the actual consumers of *Mesopodopsis zeylanica*, to assess its importance in the trophic relationship within the habitat.

Random collection of fishes from Veli lake (08 26' Lat. N and 76 57' Long E) was made and their gut contents examined. It was observed (Table 1) that none of the fishes except *Etroplus suratensis* had mysids in their stomach. Further no mysids were found in fishes above 5 cm length. Small fishes measuring 2.5 cm contained 12-27 mysids. Apart from mysids, there were also a good number of copepods. These fishes were observed following swarms of mysids. The stomach of *E. suratensis* was full of *M. zeylanica* during February and March, 1973 when a peak in the abundance of this mysid occurred.

This indicated that *M. zeylanica* formed a preferred item in the food of *Etroplus*, particularly juveniles, ranging from 2 to 5 cm. Those above 5 cm showed no preference probably because they fed on larger organisms. The intensity of feeding was observed to be

Table 1. Gut contents of different fishes

Fish	No.	Range in total length mm	Gut contents
<i>Mugil cephalus</i>	27	48-361	Diatoms, algae and decayed organic matter
<i>Chanos chanos</i>	14	39-312	Diatoms, blue green algae, filamentous algae and decayed vegetable matter
<i>Channa striatus</i>	19	61-407	Remains of fish, fish fry, insect larvae and mud
<i>Clarius batrachus</i>	23	42-296	Small fish, worms and insects
<i>Glossogobius giures</i>	12	17-128	Hydrilla, filamentous algae, ostracods and insect remains
<i>Arius sp.</i>	8	51-281	Detritus, vegetable matter and remains of small crustaceans
<i>Barbus sp.</i>	31	23-198	Detritus, insect larvae, copepods and mud
<i>Lates calcarifer</i>	6	118-403	Small fishes, prawns and remains of crabs
<i>Etroplus suratensis</i>	58	18-156	Diatoms, filamentous algae, water fleas, mysids and copepods
<i>Etroplus maculatus</i>	32	11- 48	Diatoms and unicellular algae

directly proportional to their abundance in the habitat. This suggests the importance of this mysid in fish culture. If artificial manuring is resorted to, this continuous breeder can be made available in large numbers throughout the year.

The author is thankful to Dr. N. Balakrishnan Nair, Head of the Department of Aquatic Biology, Trivandrum for providing facilities for this work and to Dr. N. Krishna Pillai for guidance.

#### References

- Devaraj, K. V., Shantharam, B. & Shetty, H. P. C. (1975) *Mysore J. agric. Sci.* 9, 479
- Heubach, W., Toth, R. J. & Mcready, A. M. (1963) *Calif. Fish. Game.* 49, 224
- Hopkins, T. L. (1965) *Chesapeake Sci.* 6, 86
- Kaliamoorthy, M. (1972) *J. Inland Fish. Soc. India.* 4, 198
- Smith, S. I. (1979) *Trans. Conn. Acad. Agrts. Sci.* 5, 27
- Stevenson, R. A. (1958) *The Biology of the Anchovies Anchoa mitchilli mitchilli (Cuvier and Valenciennes 1848) Anchoa hepsetus hepsetus (Linnaeus 1758) in Delaware Bay. M.Sc. Thesis, University of Delaware*
- Tattersall, W. M. & Tattersall, O. S. (1951) *The British Mysidacea*, p. 460 Ray Society, London

Department of Aquatic Biology & Fisheries,  
University of Kerala, Trivandrum-695 007

M. D. VARGHESE\*

---

\*Present address: Burla Research Centre of Central Institute of Fisheries Technology, Burla 768 017