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INDIAN COUNCIL OF AGRICULTURAL RESEARCH

ON THE INCURSION OF BROWN ALGAE AND SARGASSUM FISHES INTO THE COCHIN BACKWATERS *

The incursion of marine sea weeds like brown algae and reef fishes like Sargassum fishes was observed in the Cochin backwaters on 6-12-1991. An extensive survey was made in the backwaters for understanding the species composition and the factors responsible for the incursion of these organisms into the area. The fishes which were available in plenty along the shores of the backwaters from Fort Cochin to Thoppumpady, Chullikkal, Willingdon Island area on 6-12-'91 were caught by local fishermen and boys using scoop nets and sold as ornamental (aquarium) fishes at prices ranging from Rs. 25/- to Rs. 50/- per pair. The local press also gave a wide coverage to the incident with the result that there was heavy demand for the Sargassum fish *(Histrio histrio)* for rearing in aquarium tanks. But most of the fishes could survive in the tanks only upto a maximum of two days. During this period, brown algae belonging to different species were found washed ashore in the backwaters from the Cochin barmouth to Willingdon Island. The list of marine algae and fishes obtained from the backwaters is given below.

Fig. 1. *Cystoseira trinodes.*

Brown algae (Phaeophyceae)

1. *Cystoseira trinodes* (Forskal)
2. *Sargassum myriocystum* J. Ag.
3. *S. tenerrimum* J. Ag.
4. *S. wightii* Greville
5. *Dictyota dichotoma* (Huds) Lamour
6. *Turbinaria conoides*
7. *T. ornata*

Reef fishes

1. *Histrio histrio* (Antennariidae)
2. *Aluterus monoceros* (Aluteridae)
3. *A. scriptus* (Aluteridae)
4. *Canthidermis maculatus* (Balistidae)
5. *Platax teira* (Platacidae)
6. *Lobotes surinamensis* (Lobotidae)
7. *Psenes cyanophrys* (Nomeidae)
8. *Platycephalus indicus* (Platycephalidae)

Fig. 2. *Sargassum myriocystum.*

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Fig. 3. *Dictyota dichotoma.*

Fig. 4. *Turbinaria conoides.*

Fig. 5. *Histrio histrio.*

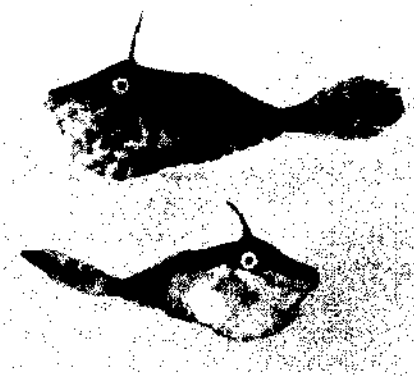

Fig. 6. *Aluterus monoceros.*

Fig. 7. *Aluterus scriptus.*

Most of the species of brown algae recorded from the Cochin backwaters are found to occur on rocky substrata in shallow coastal waters in Alleppey, Quilon, Neendakara and Vizhinjam area along the southwest coast. Most of the fishes are also found to be associated with the sea weeds. It appears that the habitat disturbance caused by

Fig. 8. *Canthidermis maculatus.*

Fig. 9. *Platax teira.*

Fig. 10. *Lobotes surinamensis.*

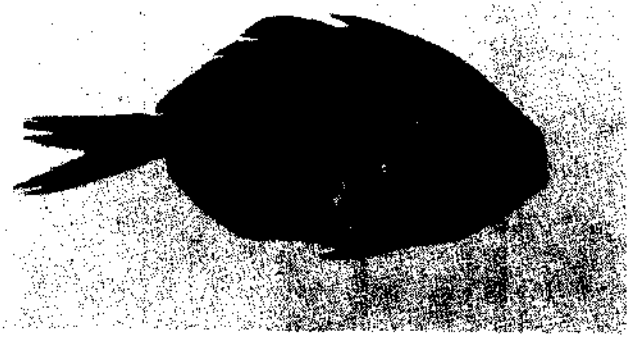

Fig. 11. *Psenes cyanophrys.*

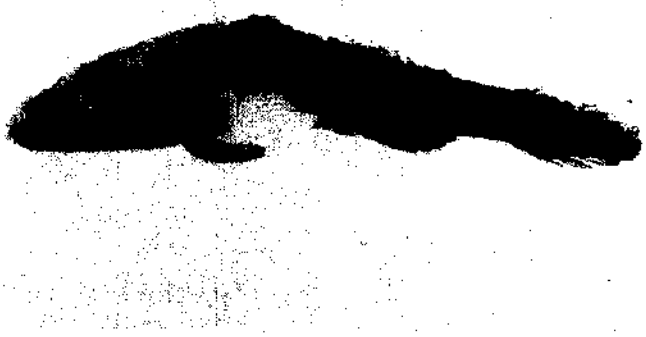

Fig. 12. *Platycephalus indicus.*

the human interference along the southern part of the west coast brought the reef fishes along with the marine algae into the backwaters being assisted by the strong northerly current prevailing during the season. In November-December a strong northerly current is established off the shelf along the southwest coast of India (Varadachari and Sharma, 1967, *J. Indian Geo.* Union., 4 (2) : 61-73). The flora and fauna present in the current are usually carried along with the tidal waters into the backwaters during high tide. The probability of the sea weeds being brought along with the northerly drift from the dense natural beds in the Cape Comorin area also cannot be ruled out, though the chance appears to be rather remote.