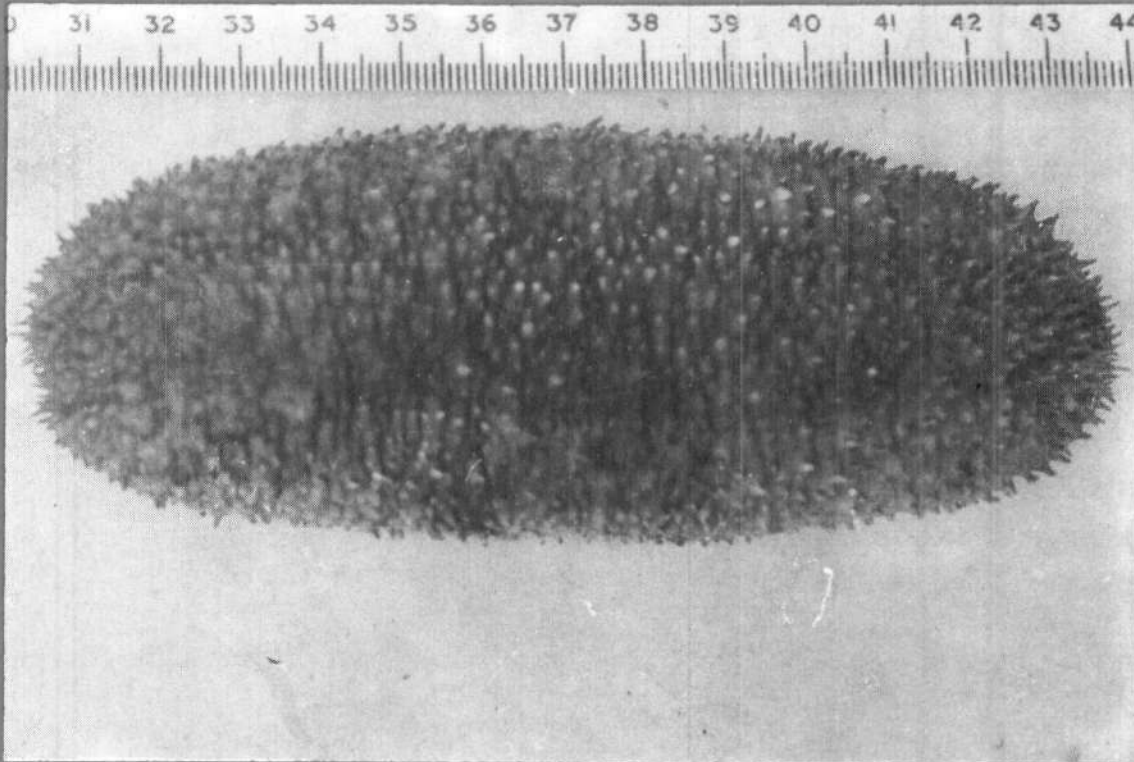




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INDIAN COUNCIL OF AGRICULTURAL RESEARCH

THE INSHORE MIGRATION OF BUCCANEER ANCHOVY DURING MONSOON*

Whitebaits which form one of the important commercial pelagic fishery resources of the south-west coast of India, are generally inshore schooling species. But the Buccaneer anchovy, *Encrasicholina punctifer* (= *Stolephorus buccaneeri*) is comparatively an oceanic species which migrate to inshore waters during the southwest monsoon period (June - September). During the other months, this species is available only in stray numbers in the inshore catches. This species is the suitable anchovy which could be employed as live-bait and hence has special importance as a potential live-bait for tuna in Lakshadweep.

A large scale inshore migration of this species resulted in heavy landing of the fish by boat seine during 19 - 22 July '94 at Vizhinjam. The catch details of the boat seine during the four days are given in Table 1.

It could be seen that the total whitebait catch during the four days was 222.7 t which constituted 94.8% of the total fish catch by boat seine. *E. punctifer* formed 83.6% and *E. devisi* 11.2% of the catch. The catch per unit effort of *E. punctifer* in

TABLE 1. Catch details of the boat seine from 19th to 22 July '94 at Vizhinjam

Species/Group	Boat seine catch in kg		Total	%
	Motorised craft	Non-motorised craft		
<i>Encrasicholina punctifer</i>	1,67,576	55,172	2,22,748	83.6
<i>E. devisi</i>	19,468	10,335	29,803	11.2
<i>Decapterus macrosoma</i>	406	420	826	0.3
<i>Trichurus lepturus</i>	1,292	160	1,452	0.5
<i>Rastrelliger kanagartha</i>	6,636	3,694	10,330	3.9
Carangids	-	160	160	0.1
<i>Loligo duvaucell</i>	895	160	895	0.3
<i>Acetes</i>	-	392	392	0.1
Total	1,96,273	70,333	2,66,606	
Effort expended	726	410		

* Prepared by G. Gopakumar, R. Bhaskaran Achary and A. K. Velayudhan, Vizhinjam Research Centre of C.M.F.R.I. Vizhinjam - 696 521

motorised and non-motorised boat seine units were 230.8 kg and 134.6 kg respectively.

The monsoon was very active and the surface water temperature came down from 24.5°C to 22.5°C during these days.

E. punctifer ranged in total length from 55 to 119 mm with modes at 70 and 100 mm. The major portion of the catch was contributed by 100-109 mm fish. Among females 71% and among males 95% of the fish were in partially spent gonadal condition. It is known that the spawning season of this species is protracted and the monsoon season also forms part of the spawning period of the fish. In the samples collected, 95.6% of the fish were with 'empty' and the rest were with 'half full' stomach condition. The stomach contents consisted almost entirely of the copepod, *Temora turbinata*. However, it needs further investigation to establish whether the migration of *E. punctifer* is associated with feeding or in accordance with the environmental changes.

Eventhough, the inshore migrated population of *E. punctifer* during monsoon can be termed as a spawning stock, it is seen that the majority of the fish had almost reached their maximum size. Added to that, the spawning season of the fish also is protracted. Hence the exploitation of the inshore stock during monsoon may not adversely affect the recruitment pattern. In view of the above, it is felt that if this species is not judiciously exploited from the inshore waters during the monsoon months, it will be almost entirely lost to the artisanal fishery. Experiments carried out at Vizhinjam had shown that this species could be kept in pens without much mortality for about three months. It is worth investigating whether the species could be stocked in pens during the monsoon period for two to three months and then transported to Lakshadweep for utilisation as live-bait for tuna.