landing centres such as Vasco-de-gama, Colva and Betu also landed at Panjim jetty. The prices crashed to Rs. 10/- per basket weighing 40 kg and the fishermen resorted to distress sales on 18th & 19th September due to the non availability of ice and cold storage facilities. Some of the catch were thrown into the estuary which then spread along the edges of the river Mandovi. Details of the Mackerel catch by the Purse-seines at Panjim jetty is given below.

Sixty seven purse-seiners, each one with 2 to 4 tonnes of mackerel landed on 18 - 9 - '89 and on 19 - 9 - 89, 39 purse-seiners landed the catch at a rate of 1.5 to 5 tonnes by each boat.

A NOTE ON THE LARGEST MACKEREL, RASTRELLIGER KANAGURTA CAUGHT OFF KARWAR *

The largest mackerel ever caught in this part of the coast measured 366 mm in total length and weighed 592 g. It was caught by a purse seiner on 11-9-1984, which operated at 30 m depth off Binaga - Chendia. Detailed morphometric measurements of the fish (in mm) are given below:

Total length 366; Standard length 311; Head length 84; Inter-orbital distance 29; Pre-orbital distance 27; Pre-ventral distance 103; pre-posterior dorsal distance 186; Pre-anal distance 195; Anterior dorsal fin base length 48; Anal fin base length 34; Maximum height of body 85; Snout length 27; Eye diameter 15.5; Pectoral fin length 39; Anterior dorsal height 42; Posterior dorsal height 29; Ventral fin length 35; Depth through pectoral fin base 78; Depth through anal fin base 75; Depth through orbit 49; and least depth of caudal peduncle 13.

Earlier Dhulkhed and Annigeri (Indian J. Fish, 30 (1) : 183 - 184, 1983) had recorded mackerel with a maximum length of 360 mm also caught off Karwar.

ON A SHOAL OF JAVANESE COW-NOSE RAY FROM PALK BAY *

The occurrence of violating shoals of Javanese cow-nose ray (Rhinoptera javanica) has been reported on a few occasions from the south east coast of India. One such shoal was sighted in the Palk Bay on 16 - 12 - '89 by the shrimp trawlers operated at a depth of 10 m and netted the fish at an average rate of 350 kg per boat. The rays had a disc width ranging from 100 - 165 cm and a weight from 16 - 57 kg. Eighty per cent of the fish were females.

The gut content analysis revealed the presence of crushed pieces of gastropod shells, partly digested fishes such as sciaenids and gobids, and crustaceans like crabs, *Squilla*, *Penaeus semisulcatus* and *Alpheus* spp.

The rays landed were processed by pit curing method. The cured products were sent to the markets in Kerala where there is good demand.