

ON THE OCCURRENCE OF LARGE CONCENTRATIONS OF FILE-FISH OFF THE KERALA COAST, INDIA

During a research cruise on R.V. *Varuna* in January 1962, experimental trawling operations were conducted in the region between Calicut and Quilon on the continental shelf in deeper waters than those fished by the commercial trawlers. Echo sounders and the Asdic fish finder of the vessel were used to detect fish. On indications from these equipments regarding the presence of shoals of fish along the course of the vessel, midwater trawl was operated, in all, at eleven stations.

Two species of balistids namely, *Odonus niger* (Ruppell) and *Sufflamen capistratus* (Shaw), were available between Calicut and Kayamkulam at six trawling stations among the eleven ; situated 20-35 miles off the coast, on the continental shelf (Ref. Map). The stations were 60-110 metres deep and the fish were caught at levels 50-60 m. Huge quantity of the fish was caught especially at station No.4, west north west of Cochin and it was found difficult to haul in the catch and a large portion of it had to be let out before the net could be taken in.

Fishes ranged 10-12 cm. in total length and they were immature. *Odonus niger* was the dominant constituent of the catches. Examination of the stomachs of the fishes showed copepods and remains of prawns as common food items. In one specimen of *Sufflamen capistratus* an eel leptocephalus was also seen.

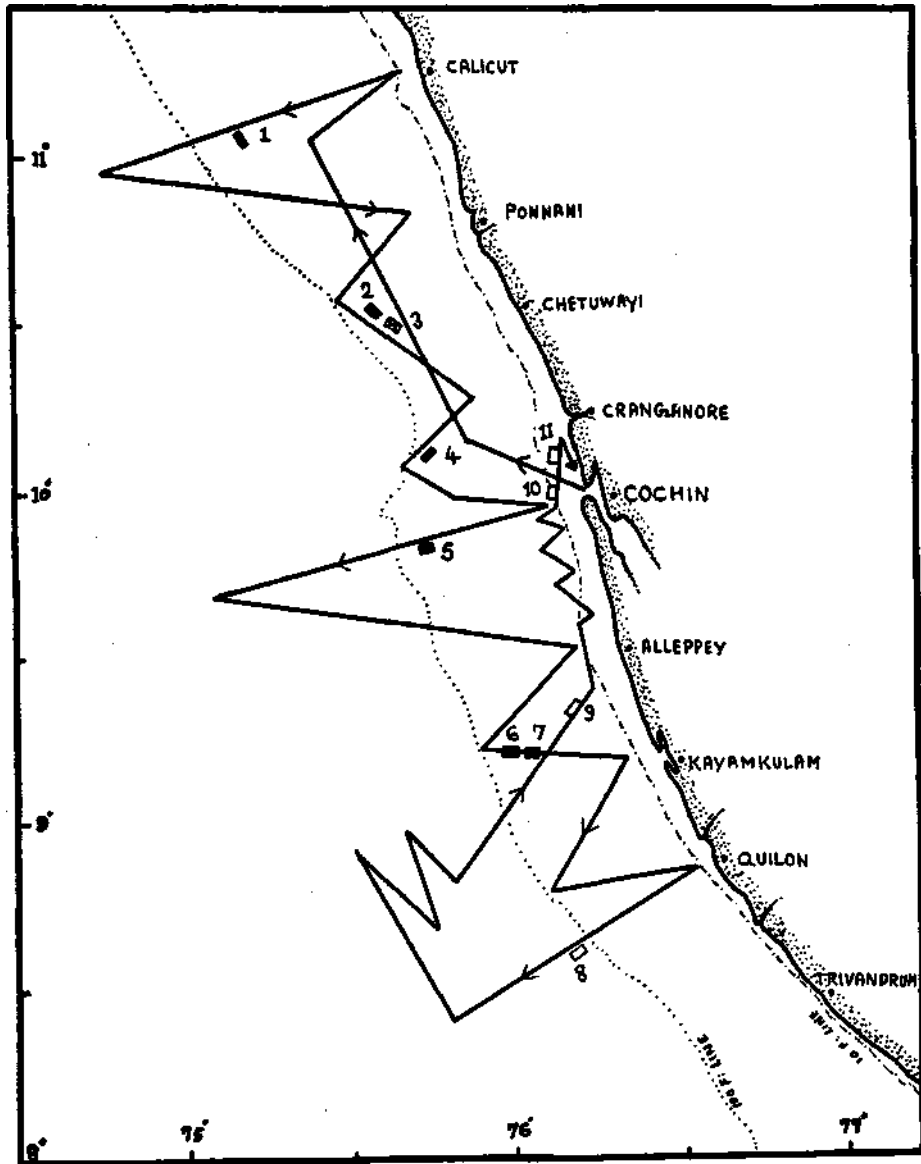
A perusal of the environmental conditions (data kindly supplied by Shri M. R. Patil) where the fish were generally met with showed the following features. In the column between 30 and 75 m. a temperature range of 27.9°-28.76° C. and a salinity range of 34.2-35.46 ‰ have been observed. The dissolved oxygen values were in the range of 3.6-4.6 ml/L.

Balistids (*Balistis stellaris*, *B. niger*, *B. maculatus*) have been caught off Quilon to Cape Comorin by the trawler *Lady Goshen* during the periods from October 1927 to March '28 and from November 1928 to May 29 and also recorded once off Calicut (Sundara Raj, 1929 & '30). Even though the fish were met with at stations ranging in depth from 16 to 110 m. they were concentrated mostly at the 30-60 m. levels. Hauls Nos. 30 and 31 of *Lady Goshen* are of special interest. Haul No. 30 of fifteen minutes' duration west north west of Quilon in the 39-47 fathom (71-86 m.) area yielded a total of 2741 lbs. of fish of which 2551 lbs. was constituted of 'small inedible blue trigger fish, *Balistes maculatus*, which were thrown overboard.' Haul No. 31 south west by south of Muttom in the 33 fathom (60 m.) area yielded 2493 lbs. of fish, of which 2293 lbs. were '*Balistes maculatus*, which were again thrown overboard'. These catches were recorded during the first week of December 1928.

Five species of file-fish from 'Cape Comorin Bank' are reported by John (1959), most common of them being *Odonus niger*. Occasionally other species such as *Abalistes stellaris* (Bloch) and *Sufflamen capistratus* are also mixed up in the catches. The fish appear in small quantities from December to May reaching their maximum abundance in August.

Odonus niger formed an important constituent of the catches of Indo-Norwegian Project mechanised boats operating off Cochin in regions deeper than 35 m. during the quarter ending June 1962 (C.M.F.R.I. Report).

It is held by many, especially in central and north Kerala region, that balistids are poisonous and hence not edible. Balistids caught by *Lady Goshen* have always been classified as inedible (Sundara Raj, *op. cit.*). Day (1958) states 'eating the flesh of these fishes occasions in places symptoms of most virulent poisoning'. But at fishing centres south of Trivandrum like Vizhingam and Muttom balistids,



Map showing track chart and the eleven trawling stations of R. V. *Varuna* during the cruise from 3rd to 10th January 1962. Dark rectangles indicate stations from where balistids were caught. The net could not be effectively operated at station No. 3 and there was no catch.

mainly *Odonus niger* and *Sufflamen capistratus*, are landed seasonally (December-April) by country crafts and consumed without any ill effects (Gopalan Nair, 1958 and personal communications from Shri P. Sam Bennet) obviously showing that these fishes are quite edible.

It may be worthwhile further exploring the areas of file-fish concentrations referred to above to assess the resource and the possibility of commercial exploitation of the same.

Our thanks are due to Captain Einarsen and the officers and crew of R.V. *Varuna* and Mr. P. Myrland for their co-operation and help during the cruise.

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