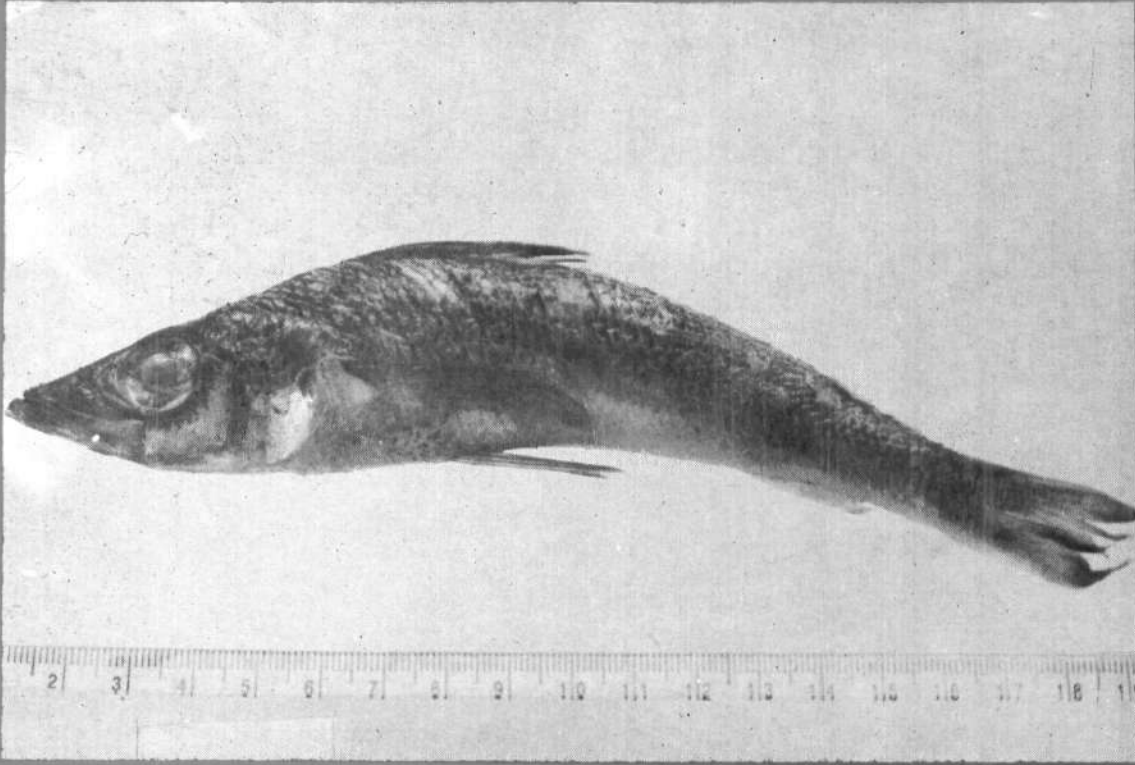




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### Movement of a large shoal of *Hilsa kelee* from Palk Bay to Gulf of Mannar\*

Information regarding the shoaling behaviour of fishes in India is limited. Movement of a large shoal of *Hilsa kelee* from Palk Bay to Gulf of Mannar observed on 2-11-1988 is reported here.

*Hilsa kelee*, locally known as "Kalaru" in Tamil, occurs in small quantities in trawl nets, shore seines (Karavala), drift net (Paruvala) and bottom gill net (Disco Vala) operating off Mandapam and Ramewsaram islands. It does not constitute an important fishery like that of the lesser sardines (*Sardinella albella*, *Sardinella gibbosa*) in the region. *H. kelee* is found to occur mainly in the inshore waters.

On 2-11-1988 around 1400 hrs a large shoal of *H. kelee* was sighted about 2 km north of Pamban light house in the Palk bay. This shoal moved towards south with considerable surface agitation and finally entered the Gulf of Mannar near Therkuvadi via Pamban Pass (Fig. 1). On sighting the shoal, some of the fishermen operating non-mechanised boats at Therkuvadi encircled the shoal preventing them from moving further. Due to this interference, the shoal turned its direction towards east and moved towards the shore. A part of the shoal was caught by the fishermen using cast nets, gill nets and disco nets. Some of the trawlers anchored nearby also joined in this operation. Some of the fishes from the shoal came so near the shore that the children

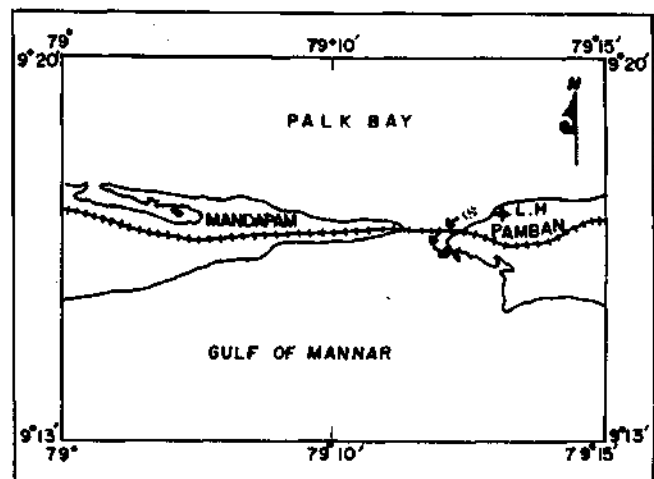


Fig.1. Course of movement of *Hilsa kelee* from Palk Bay to Gulf of Mannar.

of the area collected about 2 to 5 kg each from the nearshore waters. The entire incident took place between 1430 hrs and 1700 hrs when nearly 15 tonnes of *H. kelee* was caught from the shoal. It is estimated

that about three tonnes of fishes would have escaped and moved away from the shore into the Gulf of Mannar.

Five fish merchants of Pamban purchased the fishes and stored in heaps. The ice merchants, at Pamban marketed 12 tonnes of *H.kelee* to different parts of Tamil Nadu and Kerala. Nearly 3 tonnes of fishes were used for sundrying and local consumption.

The size of *H. kelee* ranged from 152 to 712 mm total length and weighed from 34 to 50g. The dominant size group was 160-165 mm which formed 29.5% of the catch. Experienced fishermen informed that small shoals of *H. kelee* were common during the northeast monsoon period but such a large shoal was unusual.

During the northeast monsoon period the waters of Palk Bay are less saline as compared with that of Gulf of Mannar. During rainy days there is considerable incursion of fresh water into Palk Bay from Pillaimadam

lagoon and surrounding areas making the surface waters of Palk Bay at Mandapam less saline. The heavy rain fall recorded during the last week of October and on 02-11-1986 (12.3 mm) in this region might have reduced the salinity of the surface waters of Palk Bay and the wind (18 km/h) blowing from north to south would have caused the mass movement of *Hilsa kelee* which generally prefers the inshore waters.

During the northeast monsoon period (October to November) the drift of water is observed from Palk Bay to Gulf of Mannar [Sewell, *Mem. Asia. Soc. Bengal*, 9:1-424 (1925-32)] and the water current is found to be stronger in the Pamban channel. It may be that these factors would have also contributed to the mass aggregation of *H. kelee* and its movement as a shoal very close to the shore.

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