

**A NOTE ON THE NIGHT FISHING OBSERVATIONS FROM
A KELONG**

The possibilities of night fishing with lights along the coast of Mandapam with stationary dip nets have been under experimentation for some time, and the following is a brief account of an attempt made by the author in 1956. There exists at present a lucrative fishery for 'Choodai' *Sardinella* spp. in these regions (Sekharan, 1956) where lighted torches are used from boats and the fish which are attracted to the light are scooped into nets. Similarly, use of stationary nets (Chinese dip nets) and lights is common along the backwaters of Kerala.

During January-April when waters of the Gulf of Mannar normally remain calm, an experimental *Kelong* was constructed opposite the Central Marine Fisheries Research Station, Mandapam, at about 200 metres from the shore, where the water has an average depth of 3 metres. This *Kelong*, built in the pattern of those seen in the Malaya-Indonesian Coasts, consisted of a dip net supported on a frame 3×3 metres and a platform of about 6.5 metres square around from where 4 men could raise or lower the net by means of pulleys. The lights employed were either a 300 C.P. kerosene Petromax lamp, or high and low wattage electric lamps.

The *Kelong* fishing commenced at dusk and lasted until day-break the following day. The first set of observations was made by using the Petromax lamp suspended in the centre of the net 0.75 metre above water level; the second set was done similarly using electric lights and the power increased from 100 to 400 watts in four stages; the third set was done with lights submerged in water with the power raised from 7 to 21 and 32 watts; and the last set of observations was taken with a combination of the high-powered surface electric lamps and the low-powered submerged lamps—the high-powered lamps were first switched on for 30 minutes, followed by the submerged lights switched on for 5 minutes when the former were switched off and the net quickly raised for collecting the fish. The fishes were observed within a maximum radius of 15 metres when the 400 watt lamps were used; while, they were observed around 3 metres radius within the area of the *Kelong* frame when submerged lights were in use. Even though the occurrence of the individual species varied during the four-month period when the *Kelong* was in operation, there was a noticeable dominance of species of *Gazza*, *Pellona*, *Plotosus* and *Leiognathus* and Squids in all collections. Further it was observed that the number of fish caught was more or less directly proportional to the intensity of light used. While the submerged light by itself was not effective, a combination of this with surface illumination invariably gave a much higher catch than either of the lights used singly.

It was particularly noticed that large number of fish was caught invariably one week before and one week after new-moon, commencing at about 2 hours before and ending at about 2 hours after the high tide.

Finally it may be mentioned here, that as the above observations were made from the *Kelong* during a short period only, more extensive work is required in order to elucidate the various aspects connected with the use of lights for night fishing.

I wish to express my gratitude to the scientific staff of the Central Marine Fisheries Research Station, who gave me all encouragement and help in the *Kelong* operations and in the preparation of this note.

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REFERENCE

- SEKHARAN, K. V. 1955. Observations on the *Choodai* fishery of Mandapam area. *Indian J. Fish.* 2 : 113-132.