

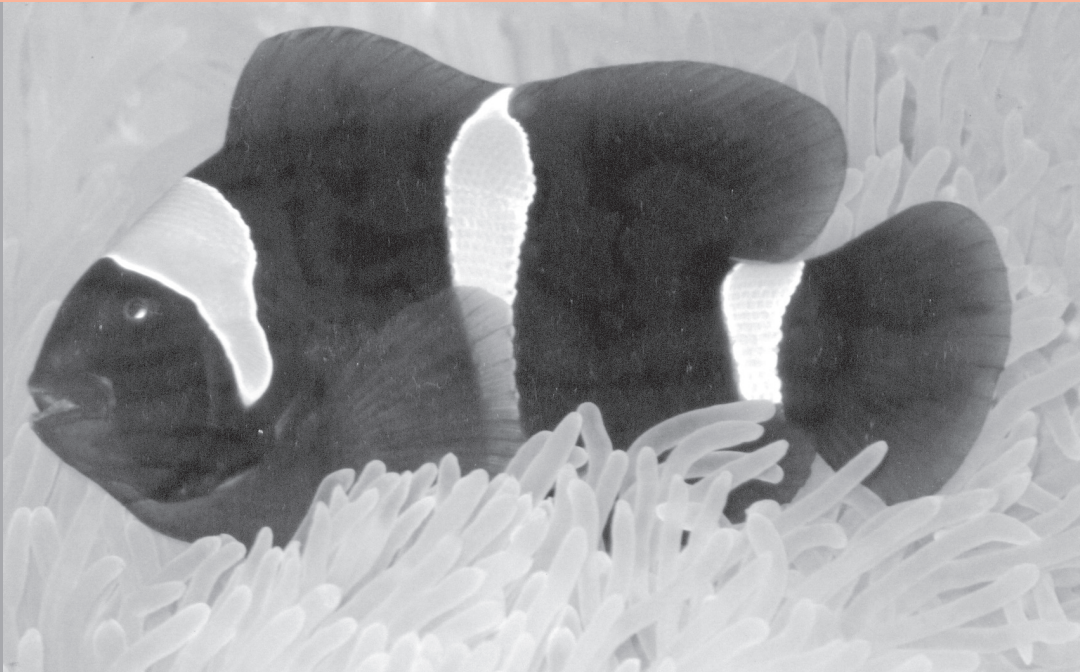
ISSN 0254-380 X



MARINE FISHERIES INFORMATION SERVICE

No. 190

October, November, December, 2006



TECHNICAL AND EXTENSION SERIES

CENTRAL MARINE FISHERIES RESEARCH INSTITUTE

COCHIN, INDIA

(INDIAN COUNCIL OF AGRICULTURAL RESEARCH)

First record of thresher shark, *Alopias vulpinus*, from Malabar coast with note on its fishery and biology

Thresher sharks are distributed circumglobally in the Atlantic, Pacific, Mediterranean and Indian Oceans. Thresher sharks include the common thresher (*Alopias vulpinus*), bigeye thresher (*A. superciliosus*), and pelagic thresher (*A. pelagicus*), the former being the largest. They are pelagic, inhabiting mainly oceanic waters but they wander close to the coast in search of food. The young may be found in shallow waters, whereas adults are common over the continental shelf. Unusual landings of this shark by long liners were

noticed along the Malabar coast in 2005. The details of its fishery and some observations made on the biology are presented in this account.

Gear

Thresher shark was caught by mechanised long liners (OAL: 58'). The operation was at a depth of 120-150m off Malabar coast. The operations were conducted by the migrated fishermen from Thuthur in Kanyakumari District, Tamilnadu who were temporarily based at Azheekal in Kannur. Nearly 40

Table 1. Monthwise catch (t) and effort (units) of *Alopias vulpinus* landed in long line at Azheekal

| Month | Effort (U) | Total catch | Total Elasmobranchs | | Sharks | <i>Alopias vulpinus</i> | | | |
|--------|---------------|----------------|---------------------|------|--------|-------------------------|-------|------|----------|
| | | | Catch | % | Catch | C/E (Kg) | Catch | % | C/E (kg) |
| Jan | 80 | 54.632 | 27.3 | 49.9 | 27.3 | 340.7 | 0.0 | 0.0 | 0.0 |
| Feb | 75 | 74.944 | 65.6 | 86.3 | 64.7 | 862.4 | 16.3 | 25.2 | 217.3 |
| Mar | 52 | 87.421 | 62.0 | 69.7 | 61.0 | 1172.4 | 8.2 | 13.5 | 158.6 |
| Apr | 105 | 62.533 | 51.1 | 80.6 | 50.4 | 480.0 | 4.9 | 9.8 | 46.9 |
| May | 119 | 92.648 | 72.6 | 77.0 | 71.3 | 599.2 | 0.0 | 0.0 | 0.0 |
| Jun | 21 | 41.776 | 38.0 | 90.5 | 37.8 | 1800.0 | 0.0 | 0.0 | 0.0 |
| Jul | 0 | 0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 | 0.0 |
| Aug | 41 | 58.331 | 53.0 | 89.5 | 52.2 | 1272.8 | 0.0 | 0.0 | 0.0 |
| Sep | 40 | 51.800 | 41.4 | 79.9 | 41.4 | 1035.0 | 0.0 | 0.0 | 0.0 |
| Oct | 80 | 96.723 | 69.2 | 71.6 | 69.2 | 865.3 | 0.0 | 0.0 | 0.0 |
| Nov | 45 | 52.125 | 32.6 | 62.4 | 32.6 | 723.3 | 0.0 | 0.0 | 0.0 |
| Dec | 23 | 36.696 | 25.8 | 70.2 | 25.8 | 1120.3 | 2.1 | 8.1 | 90.4 |
| Annual | 681 | 709.629 | 538.5 | 75.2 | 533.5 | 783.4 | 31.6 | 5.9 | 46.3 |

mechanised long liners of 100-130 H.P. were operated. Each long line had 300-600 hooks. The boats remained in the sea for 15-20 days depending upon the availability of sharks. The fishing operation started in September and extended upto the middle of June.

Fishery

The occurrence of *A. vulpinus* in the long line catch was first observed in February, 2005 and subsequently in March-April and December 2005 at Azheekal. Total shark landing by the long line at Azheekal during January to December, 2005 was 534 t and the catch of *A. vulpinus* for this period was 32 t (6% of the shark landing). This species contributed 25.2, 13.5, 9.8 and 8.1% of the

total shark catches in February, March, April and December respectively. The annual effort expanded by long lines was 681 units. The monthly C/E of *A. vulpinus* varied between 217.3 kg in February and 46.9 kg in April and the annual C/E was 46.3 kg (Table 1).

Biological observations

Total length of 104 specimens was measured. The specimens were in the range of 132-381 cm and the modal length was 280-319 cm. Fish of length 2 to 5 meters (10 to 16.5 feet) are commonly observed in the fishery. The size at birth is reported as 114 to 150 cm TL. In the present observation, the male: female ratio was found to be 1:1.18. Cuttlefishes were the main food items observed in the stomach.

Length-weight relationship was studied using 78 specimens, out of which 32 were females, ranging from 242-278 cm (45-57 kg) in total length and 46 were males in the length range of 258-310 cm (46-59 kg). As the differences between regression coefficients of the sexes were not significant at 5% level, a common formula for both the sexes have been calculated as : $\text{Log } W = -3.9861 + 2.6921 \text{ Log } L$ ($r=0.9980$).

The present account is the first report on the occurrence of thresher sharks from Malabar coast and this shark appears to be a potentially

new resource in the off shore waters of Malabar coast. Being an unconventional resource, the shark did not command good price and were sold at Rs. 30-40/ kg. It is quite probable that this species may command better price in future due to demand for its fins in the foreign markets. Good landings of this unexploited species can be expected in future when mid water long lining is conducted in the offshore waters.

Prepared by : P.P. Manojkumar and P.P. Pavithran, Calicut Research Centre of CMFRI, Calicut