

ON THE BREEDING HABITS
OF THE RIBBON FISH

TRICHIURUS HAUMELA (FORSK.)*

ALTHOUGH ribbon fishes provide an important fishery along the east and west coasts of India, their shoaling, breeding and spawning habits have not been investigated in detail. Venkatraman⁶ gave a short account of the feeding habits of ribbon fishes of the Malabar coast, and Chidambaram and Venkatraman¹ dealt with the natural history of ribbon fishes.

A detailed investigation on the minimum size at maturity and the spawning habits of the common Madras species, *T. haumela*, was undertaken during the period 1947-49. Observations based on about a thousand specimens of this species show that it is sexually mature when it attains a length of 47-48 cm. The age at maturity could not be determined from the inconspicuous growth zones on otoliths, nor are scales present in ribbon fish for study of growth rings. The occurrence of gravid ribbon fish in April and May and their reappearance in spent condition in July lead to the conclusion that the former have spawned in the interval. This inference is confirmed by the study of the diameters of 1300 ova in sections of ovaries in the last and penultimate stage of maturity, and is supported by work on similar lines by Hickling and Rutenbergh.⁴ The fact that maturing eggs are sharply differentiated from immature eggs makes it probable that spawning is restricted to a definite and short period. The non-occurrence of the eggs in the plankton and of the spawning adults of Stage IV (of the International Council for the Exploration of the Sea) in the coastal waters seem to show that the species breeds probably in the off-shore waters. Devanesan and Chidambaram³ and Jacob⁵ have, however, recorded, in plankton collected in October 1939, eggs of what they believed to be ribbon fishes. The eggs of ribbon fishes are so remarkably