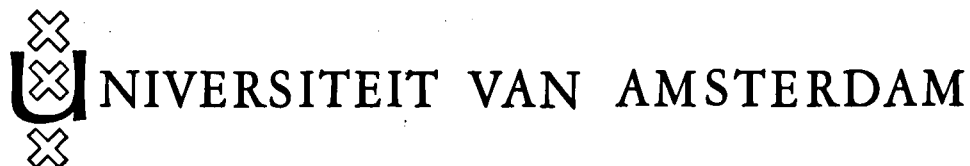


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THE OCCURRENCE OF THE FLYING FISH, *HIRUNDICHTHYS SPECULIGER* (VALENCIENNES, 1847), IN THE NORTH SEA (PISCES, ATHERINIFORMES, EXOCOETIDAE)

P. BOER & H. NIJSSEN

ABSTRACT

The occurrence of a specimen of the Flying Fish *Hirundichthys speculiger* (Valenciennes, 1847) in the North Sea is recorded. This is the first record of a member of the family Exocoetidae in the coastal waters of the Netherlands. The specimen is illustrated, and its occurrence in the North Sea is discussed.

On March 31st, 1971, a Flying Fish was caught off the coast of the islands Texel and Vlieland (53° 23' N, 04° 07' E) by the fishing-cutter TX 24 "Filia Maris" from Texel, while fishing with a Otter trawl at a depth of 17 fathoms. We identified the specimen (cf. Bruun, 1935) as belonging to the genus *Hirundichthys*, having the length of the pectoral fin (141 mm) 67% of standard length, the length of the ventral fin (54 mm) 25.5% of standard length, 12 rays in both dorsal and anal fins, and the second ray of the pectoral fins branched. Of the genus *Hirundichthys* two species are known to occur in Atlantic waters, viz., *H. affinis* (Günther, 1866) and *H. speculiger* (Valenciennes, 1847). Since the genus *Hirundichthys* has never been recorded from the North Sea and adjacent waters (Bruun, 1935; Wheeler, 1969), and because our collection is rather poor in Atlantic flying fishes, the specimen was sent to Dr. R.H. Gibbs, Jr., who identified the specimen as *Hirundichthys speculiger*.

The specimen is 210 mm in standard length. It has well developed palatine teeth, which are absent in the congeneric *H. affinis*.

H. speculiger is an oceanic species, occurring between the parallels of approximately 15° South off the Brazilian coast, and 28° North off the African coast, between the isotherms of about 23°C (cf. Bruun, 1935). No records of *H. speculiger* from northern European waters are known. However, Wheeler (1969: 234) states: "The status of the flying fishes in northern European waters is a matter of doubt. There have been at least twenty recorded occurrences in, and north of, the English Channel. The majority of these were identified as *Exocoetus volitans* Linnaeus, a species which in all probability does not occur north of the Canary Islands, and thus would hardly occur in the waters of northern Europe. Five specimens caught in Norwegian and Danish waters in 1850, 1937, 1955 and 1959 (2) have, however, been reliably identified as *Cypselurus heterurus*. There is, however, reason to believe that at least three further species may occur from time to time within the area covered here," (the waters of the British Isles and North-West Europe). These three species are *Exocoetus obtusirostris* Günther, 1866, *Danichthys rondeletii* (Valenciennes, 1847), and *Cypselurus pinnatibarbus* (Bennett, 1831), of which a specimen, believed to be of British origin, was reported in 1967 (cf. Wheeler, 1969: 235). Although the present occurrence of *H. speculiger* in the North Sea lies well outside its normal area of distribution, there seems to be no reason to mistrust this record, since the specimen, when caught by captain P.H. Eelman was undamaged and in excellent condition. Gibbs (in litt., September 30, 1971) states: "*H. speculiger* is an open-ocean species, and it does not astound me to have it wander into your waters". Wheeler, who also examined the specimen, remarks (in litt., February 14, 1972): "This is really most interesting to find in the North Sea, although as it is an oceanic species we should be less surprised at this than some of the coastal tropical species". As Wheeler stated (1969: 234), the majority of the occurrences of flying fishes from northern European waters were uncritically referred to as *Exocoetus volitans* Linnaeus, 1758. Few, if any, of these specimens were adequately described or preserved, so it would not be surprising if further species of flying fishes were found in the eastern North Atlantic.

However, the possibility exists that the occurrence of this specimen in the North Sea can be explained by its having been carried on board a ship. Flying fishes frequently board ships in the open sea, and are often saved for bait or for food. It is therefore possible that a frozen specimen could have been thrown into the sea while cleaning the ship before entering European harbours to be caught later by the Dutch vessel.

Wheeler (personal communication) has informed us of a case involving a Flying Fish, a species of *Epinephelus*, and a pomacanthid fish found on successive days in the Tilbury Docks at the mouth of the River Thames in 1957. Subsequent investigation at the docks elicited the information that they had been thrown overboard from the ship's refrigerator on docking, having originally been captured in the Red Sea. However, in view of the good condition of the present specimen we do not feel that it is likely to have come to the North Sea by such a means.

ACKNOWLEDGEMENTS

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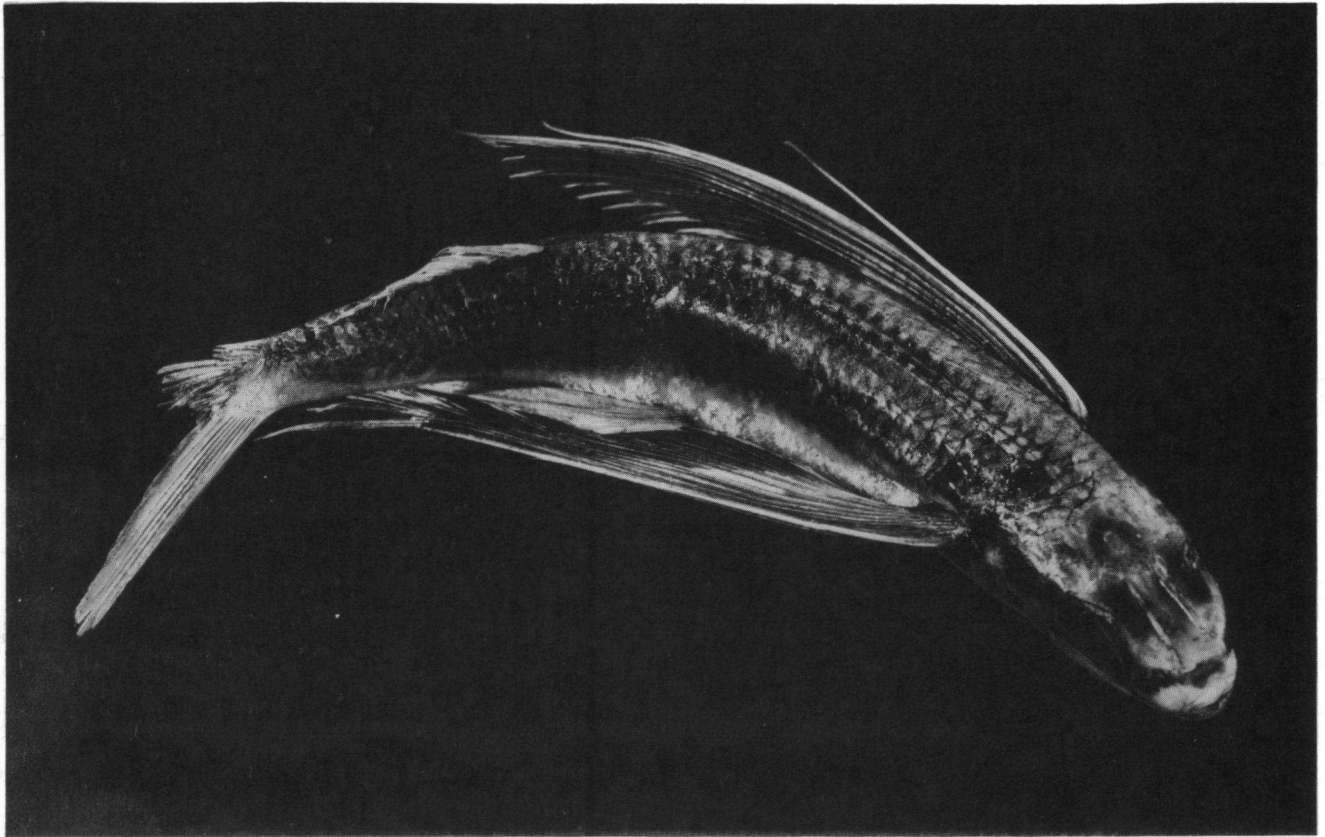


Fig. 1. *Hirundichthys speculiger* (Valenciennes, 1847), 210 mm standard length, caught in the North Sea (ZMA 111. 199).