

Some rare fishes from the Dutch North Sea

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During the first part of 1995 three fishes were caught in the Dutch part of the North Sea: the thresher shark *Alopias vulpinus*, the marbled electric ray *Torpedo marmorata* and the electric ray *Torpedo nobiliana*. They respectively represent the 5th, 6th and 3rd record for the Dutch North Sea region. This paper documents the records photographically and gives exact finding locations and detailed measurements of the specimens which are preserved and stored in the collection of the Natuurmuseum Rotterdam.

Enige zeldzame vissen van de Nederlandse Noordzee - Tijdens het eerste halfjaar van 1995 werden er door Urker vissers drie vissen gevangen in het Nederlandse deel van de Noordzee: de voshai *Alopias vulpinus*, de gemarmerde sidderrog *Torpedo marmorata* en de sidderrog *Torpedo nobiliana*. Ze vertegenwoordigen respectievelijk de 5e, 6e en 3e vondst voor de Nederlandse Noordzee. Dit artikel documenteert de vangsten met foto's en geeft de exacte vindplaatsen en uitgebreide maatgegevens van de vissen die zijn opgenomen in de collectie van het Natuurmuseum Rotterdam.

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INTRODUCTION

This paper deals with three fishes, caught in the Dutch part of the North Sea and donated to the Natuurmuseum Rotterdam by K. Post, Urk, the Netherlands. These species are known only from a few records from this North Sea area. The specimens are briefly described and some notes on earlier finds in this area are added.

Abbreviations refer to the following institutes: NMR = Natuurmuseum Rotterdam (Natural History Museum Rotterdam); RMNH = Nationaal Natuurhistorisch Museum, Leiden (National Museum of Natural History); ZMA = Zoölogisch Museum, Universiteit van Amsterdam (Zoological Museum Amsterdam). ZBM = Zeeuws Biologisch Museum, Oostkapelle. Measurements are taken according to Lloris (1986) for *Torpedo* and Compagno (1984) for *Alopias*.

MATERIAL

order Lamniformes
family Alopiidae

Alopias vulpinus (Bonnaterre, 1788)

Figure 1

Immature female (NMR 999600459), preserved in alcohol 70%; caught at a depth of less than 12 m, six to seven miles off the coast of Walcheren (province of Zeeland), the Netherlands [51°30' N, 3°40' E]; brought in on 09-VI-1995 by the DP501, a Dutch owned French vessel. Measurements are given in Tabel 1.

The animal was in good physical condition when captured, the stomach only contained a creamy coloured slimy substance, in which no recognizable prey was found. The thresher shark may reach a maximum length of 6 m. Main characteristic is the very long upper lobe of the tail

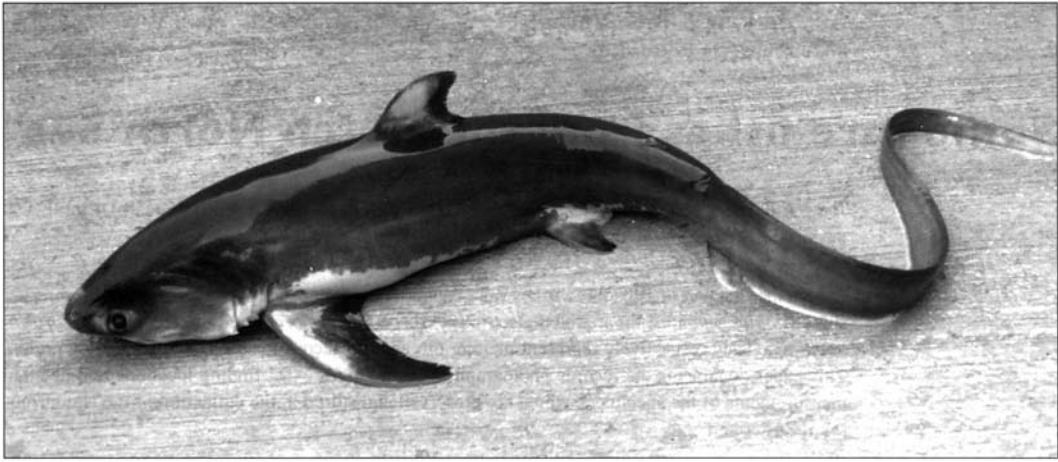


Figure 1 *Alopias vulpinus* (NMR 999600459)
[Photo: C.W. Moeliker]

fin, which usually takes up about 56% of the total length. The animal is dark blue on the back with grey areas on the sides. The underparts of the body are of a dirty white colour. It is a cosmopolitan species but rare in Dutch coastal waters, where it only has been found in summer and autumn. According to Nijssen & De Groot (1987) the following three specimens are recorded from the Dutch part of the North Sea: off Noordwijk (province of Zuid-Holland), July 1951 (RMNH 18564; Boeseman 1951); off Scheveningen (province of Zuid-Holland), September 1971 (ZMA 111198; De Groot 1972) and northwest of Schouwen-Duiveland (province of Zeeland, the Netherlands), August 1986 (ZBM, no catalogue number; Nijssen & De Groot 1987).

According to a newspaper-report in 'de Telegraaf' dated 01-XI-1990, a specimen of *Alopias vulpinus* with a length of 6 m was captured near the Dutch coast (no further details were given). The shark was sold to the wholesale trade and consumed.

Table 1 Measurements of *Alopias vulpinus* (NMR 999600459) in mm

Total length	1610
Fork length	792
Precaudal length	757
Pre-second dorsal length	672
Pre-first dorsal length	371
Head length	237
Prebranchial length	179
Prespiracular length	92
Preorbital length	37
Prepectoral length	223
Prepelvic length	532
Snout-vent length	553
Preanal length	669
Interdorsal space	214
Dorsal-caudal space	74
Pectoral-pelvic space	233
Pelvic-anal space	95
Anal-caudal space	58
Pelvic-caudal space	157
Vent-caudal length	1051
Dorsal caudal margin	872
Preventral caudal margin	107
Upper postventral caudal margin	576
Lower postventral caudal margin	43
Caudal fork width	108
Caudal fork length	78
Subterminal caudal margin	14
Subterminal caudal width	23
Terminal caudal margin	57
Terminal caudal lobe	62

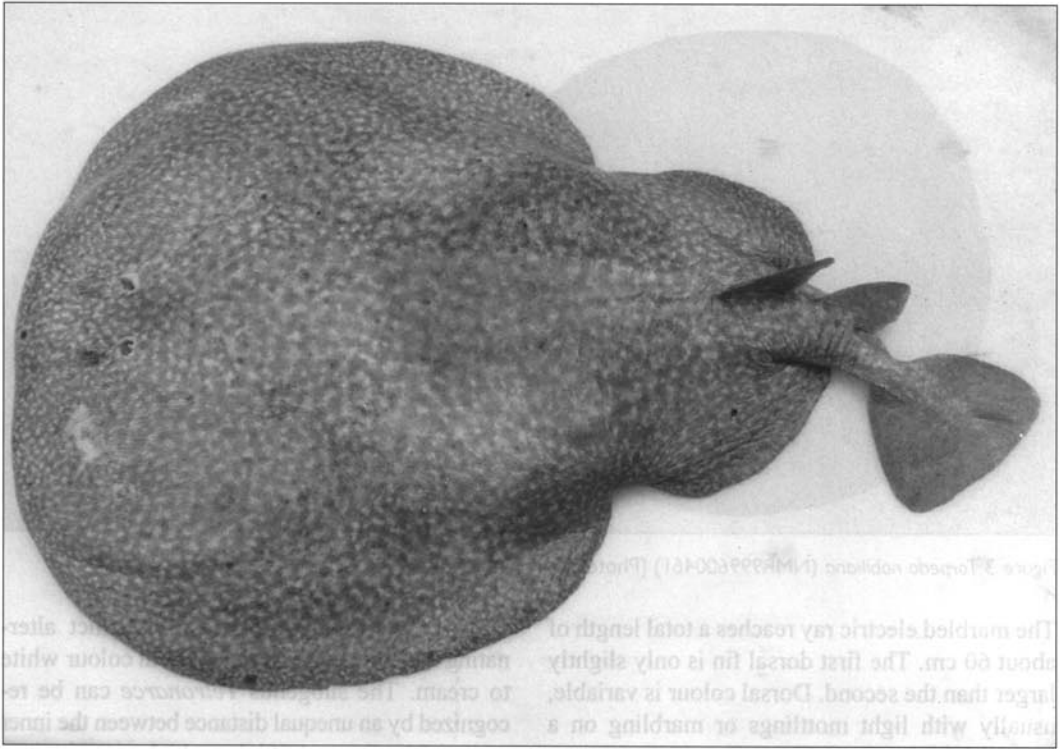


Figure 2 *Torpedo marmorata* (NMR 999600460) [Photo: C.W. Moeliker]

order Rajiformes
family Torpedinidae

***Torpedo (Torpedo) marmorata* Risso, 1810.**

Figure 2

Adult female (NMR 999600460), preserved in alcohol 70%; caught 21-V-1995 in coastal waters off the islands of Vlieland and Terschelling (province of Friesland), the Netherlands [53°N, 5°E], at a depth of 12-16 m, by the Dutch vessel UK 194. Measurements are given in Table 2.

At the time of capture the animal was in good physical condition, the stomach contained the remains of three small flat-fish specimens (possibly *Solea* spec.), fragments of a brittle-star *Ophiura* spec. and fragments of a prawn. This species is found in the northeast Atlantic but rarely off the Dutch coast. Five earlier records could be traced: Steendiep (NW of Walcheren, province of Zeeland), September 1949 (ZMA 113551; Nijssen & De Groot 1987); off Camperduin (province of Noord-Holland), August 1959 (RMNH 23211; Nijssen & De Groot 1987); Molengat (SW of Texel Island, province of

Noord-Holland), August 1968 (ZMA 113553; Nijssen & De Groot 1987); North Sea, 54°10'N, 7°20'E, 12-X-1969 (ZMA 110189; De Groot 1971) and North Sea, 54°N, 3°10'E, 03-12-1970 (ZMA 110713; De Groot 1971).

Table 2 Measurements of *Torpedo marmorata* and *Torpedo nobiliana* in mm

	<i>T. marmorata</i>	<i>T. nobiliana</i>
Total length	601	793
Disc width	388	415
Disc length	341	399
Pre-first dorsal length	393	515
Pre-second dorsal length	448	581
Interdorsal space	21	32
Interocular space	27	48
Ocular diameter	18	19
Spiracle length	16	26
Ocular-spiracle space	37	53
First interbranchial space	94	142
Second interbranchial space	89	118
Interbranchial length	86	84
Branchial-anal space	183	248
Postanal length	121	178
Preanal length	369	443

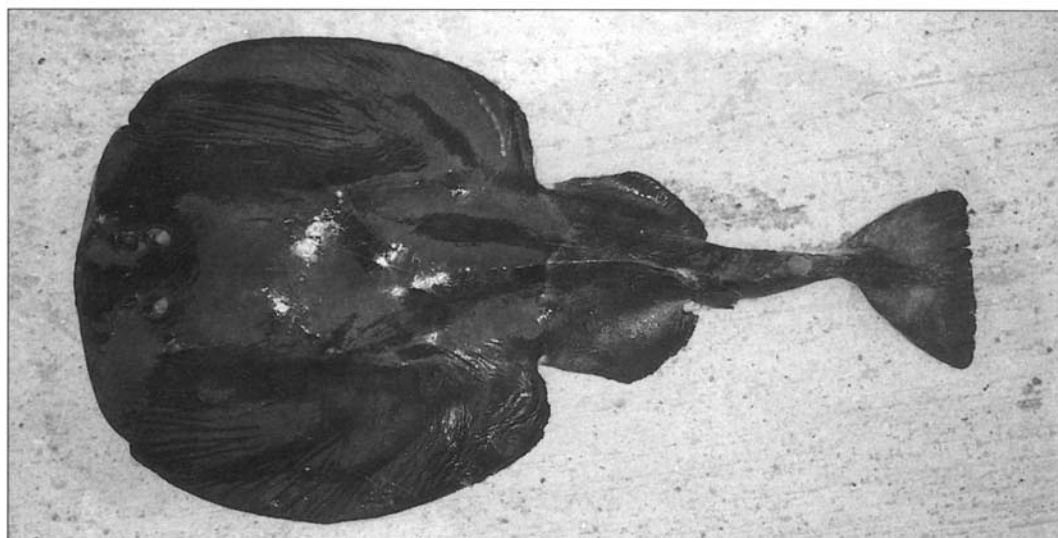


Figure 3 *Torpedo nobiliana* (NMR999600461) [Photo: C.W. Moeliker]

The marbled electric ray reaches a total length of about 60 cm. The first dorsal fin is only slightly larger than the second. Dorsal colour is variable, usually with light mottlings or marbling on a brownish background. Ventrally white to cream. The subgenus *Torpedo* can be recognized by an even distance between the inner edges of the first and fifth branchial aperture.

violet-brown, sometimes with indistinct alternating dark and white spots. Ventral colour white to cream. The subgenus *Tetronarce* can be recognized by an unequal distance between the inner edges of the first and fifth branchial aperture.

***Torpedo (Tetronarce) nobiliana* Bonaparte, 1835**

Figures 3 & 4

Immature female (NMR 999600461), preserved in alcohol 70%; caught 00-I-1995 in the North Sea area known as the 'White Bank' [55°N, 6°E] at a depth of 20-40 m by the Dutch vessel UK 67. Measurements are given in Table 2.

The animal seemed to be close to starvation when captured. Rakemarks were found on the margin of the disk (Fig. 4). Unfortunately, the ray was gutted directly after having been taken, so no details on stomach contents can be given. In the area discussed this species is only known from the following two records: Texelse Stenen (Texel Island, province of Noord-Holland), October 1964 (NNM 24906; Nijssen & De Groot 1987) and North Sea, West Hole, 53°05'N, 2°50'E, 10-IX-1970 (ZMA 110682; De Groot 1971).

The electric ray can reach a total length of about 180 cm. The first dorsal fin is distinctly larger than the second. Dorsal colour is of a plain dark



Figure 4 Rake marks on the margin of the disk of *Torpedo nobiliana* (NMR 999600461) [Photo: C.W. Moeliker]

REMARKS

The juvenile specimen of *Alopias vulpinus* is a fifth record, *Torpedo marmorata* is a sixth record and *Torpedo nobiliana* is a third record known so far for the Dutch North Sea region. For *Alopias vulpinus* it is the first springtime record in this area; till date it has only been recorded in summer and autumn. During the preparation of this article, *Alopias vulpinus* was recorded for the sixth time according to a newspaper-report in 'de Telegraaf' dated 07-VIII-1995. This time an angler obtained a 153 cm long specimen in Molengat (SW of Texel Island, province of Noord-Holland). Although *Torpedo nobiliana* is found as far north as Scotland in the Atlantic Ocean (Whitehead et al. 1984), this new record from 55°N, is the northernmost in the North Sea.

Among others, scientists from the Nederlands Instituut voor Onderzoek der Zee (NIOZ) state that over the last few years a growing number of species from the subtropical parts of the Atlantic Ocean and the English Channel are moving north into the North Sea. These particular finds could be due to southerly winds, common in the last period, and are therefore probably not related to more permanent climatological changes.

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