

Korte bijdragen

Shark predation on Harbour Porpoise *Phocoena phocoena* in the North Sea

Predatie door haai op Bruinvis in de Noordzee

On 2 January 1995, the fresh corpse of a Harbour Porpoise *Phocoena phocoena* was found along the shoreline on the Frisian island of Ameland, The Netherlands. The corpse was transferred to the Seal Rehabilitation and Research Centre at Pieterburen where a detailed post-mortem examination was carried out. The animal measured 126 cm in length and it was a male. The left and ventral side of the throat were heavily damaged, apparently through extensive predation (figure 1). The flukes were partly gone and the body and flippers showed a large number of lunate rowed cuts (figure 2). Internal examination indicated that the animal was emaciated. It was seriously infected with lung parasites and it probably suffered from pneumonia. Close examination of the wounds on throat, tail and sides revealed that these were caused while the porpoise was still alive, because the subcutaneous tissue around the wounded areas showed the presence of haemorrhages.

The lunate rows of cuts on the sides, tail and flippers could be identified as tooth-marks caused by sharks. The dimensions of these tooth-marks indicated that a species of shark with a gape of 20-25 cm had been involved. Because of the shape and size of the marks, three species of shark can be considered as possible agents, viz Porbeagle *Lamna nasus*, Shortfin Mako *Isurus oxyrinchus* and Greenland Shark *Somniosus microcephalus*. The second species has a southern distribution and is not known to occur in the North Sea, while the third is only known from young specimens there (Nijssen & De Groot 1987). Therefore, the Harbour Porpoise was probably attacked by one or more adult Porbeagles, which can reach a length of up to 3 m.

Predation of sharks on dolphins is well known in warm-temperate and tropical waters (e.g. Wood *et al.* 1970, Irvine *et al.* 1973). In colder waters, attacks of sharks on dolphins and porpoises have only rarely been reported.

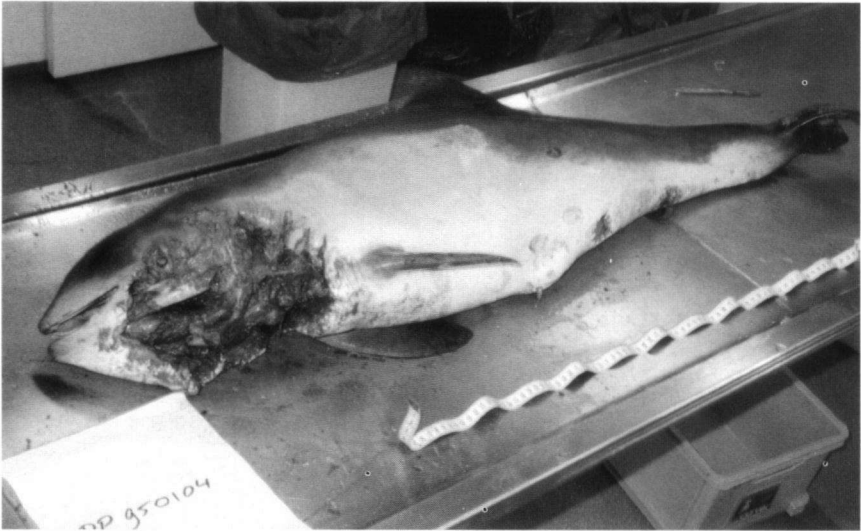


Figure 1. Harbour Porpoise with wounds caused by predation through sharks.

Figuur 1. Bruinvis met wonden als gevolg van predatie door haaien (foto P. 't Hart)

Williamson (1963) reported a Harbour Porpoise with a length of 79 cm in the stomach of a Greenland Shark which was caught near Newfoundland. Templeman (1963) reported predation by Great White Shark *Carcharodon carcharias* on Harbour Porpoise in Canadian coastal waters. We have not been able to find references on shark predation on cetaceans in European waters. It should be emphasized, however, that the porpoise was already weakened and could probably easily be attacked by a rather small shark.

We wish to thank P. de Jong for informing us about his find of the Harbour Porpoise. P. 't Hart assisted with the dissection and made the photographs. Dr D. Nolf (Royal Institute of Natural Sciences, Brussels) supplied information about shark identification.

Samenvatting *Op 2 januari 1995 werd op het strand van Ameland een dode Bruinvis Phocoena phocoena gevonden. Het betrof een mannetje met een lengte van 126 cm. Het dier was in slechte conditie, ernstig geïnfecteerd met longparasieten en leed waarschijnlijk aan longontsteking. Het was aangevreten aan de keel, terwijl lichaam en flippers een groot aantal wondjes in bogen vertoonden. Nader onderzoek wees uit dat deze wondjes veroorzaakt moesten zijn terwijl het dier nog in leven was. Afgaande op vorm en formaat van de wondjes werd geconcludeerd dat deze door een of meerder haaien veroorzaakt waren, vermoedelijk een Haringhaai Lamna nasus, een soort die*

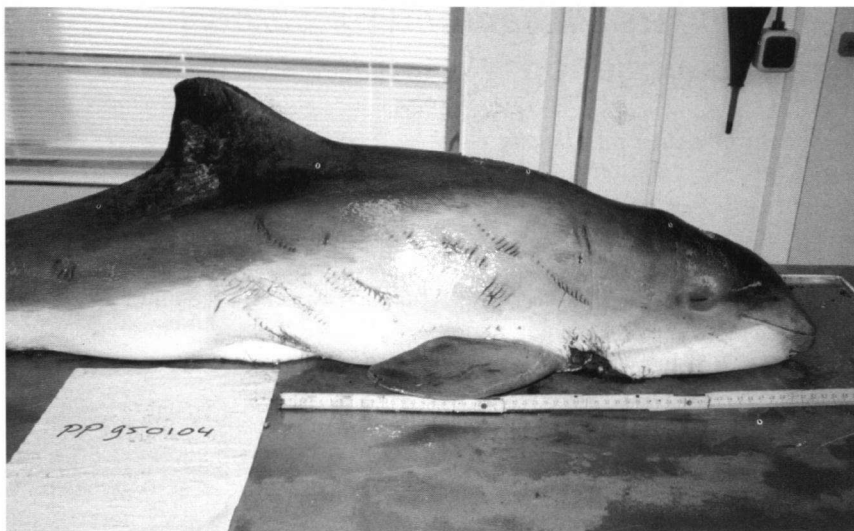


Figure 1. Harbour Porpoise showing lunate rows of cuts caused by shark bites.
Figuur 1. Bruinvis met door haaien toegebrachte wondjes (foto P. 't Hart)

een lengte van 3 m kan halen. Predatie door haaien op dolfinachtigen is welbekend in (sub)tropische wateren maar is slechts zelden gemeld uit koudere zeeën. Enkele gevallen zijn bekend uit Canadese kustwateren, maar uit de Noordzee was nog geen melding bekend.

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Stefania Anselmo, Seal Rehabilitation and Research Centre, Hoofdstraat 94A, 9968 AG Pieterburen, The Netherlands

P.J.H. van Bree, Zoological Museum, University of Amsterdam, Mauritskade 61, 1092 AD Amsterdam, The Netherlands