THE HARBOUR PORPOISE *PHOCOENA PHOCOENA* IN THE SOUTHERN NORTH SEA. II: A COME-BACK IN DUTCH COASTAL WATERS?

by

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1. Introduction

Since the mid-1980s, harbour porpoises *Phocoena phocoena* (L., 1758) have been observed every winter in the shallow coastal waters of the Netherlands and in the German Bight (Camphuysen, 1982; Kremer et al., 1990; Camphuysen & Leopold, 1993). Quantitative information on distribution and abundance of the harbour porpoise near the Dutch coast has been collected during systematic counts of seabirds and marine mammals from coastal sites since 1972 (seawatching Club van Zeetrekwaarnemers [CvZ], currently Nederlandse Zeevogelgroep [NZG] = Dutch Seabird Group). This sightings scheme has produced one of the very few "effort-corrected" long-term time series of seabird and cetacean observations in the North Sea (Camphuysen & Van Dijk, 1983; Platteeuw et al., 1994). Seawatching data indicate that, since 1986, harbour porpoises have occurred in Dutch coastal waters in very small numbers between December and April, after a period in which this species was quite rare (1972-85; Camphuysen & Leopold, 1993). However, the total number of sightings was considered too small to firmly label the increase as the return of a species which was once very common (72 sightings, 125 animals between 1972 and 1992, of which 60 sightings were recorded after 1986; i.e. less than 30 records per 1000 hours of observation for each winter; fig. 1). The systematic observations from coastal sites have been continued since 1992. Considering that fluctuations in numbers of animals seen and the number of sightings recorded since 1986 had been minimal, a sudden increase in the number of sightings in winter 1993/94 came as a surprise. This paper reports on the sightings since 1992, in order to document an event which might be a sign of the comeback of the harbour porpoise in the Netherlands.

2. Methods

The "seawatching" scheme was established in 1972. Seawatching is conducted by using high-powered binoculars, mounted on a tripod, fixed on the horizon, recording all birds and marine mammals seen within this field of vision. Methods and effort are described extensively in Camphuysen & Van Dijk (1983) and Camphuysen & Leopold (1993). Observer effort has stabilized since 1990 at ca. 1500-2000 observation hours per annum at 15 sites, of which ca. 600 in winter (December-April). The most frequently manned (virtually daily) observation posts are Camperduin (province of Noord-Holland) and Scheveningen (province of Zuid-Holland).

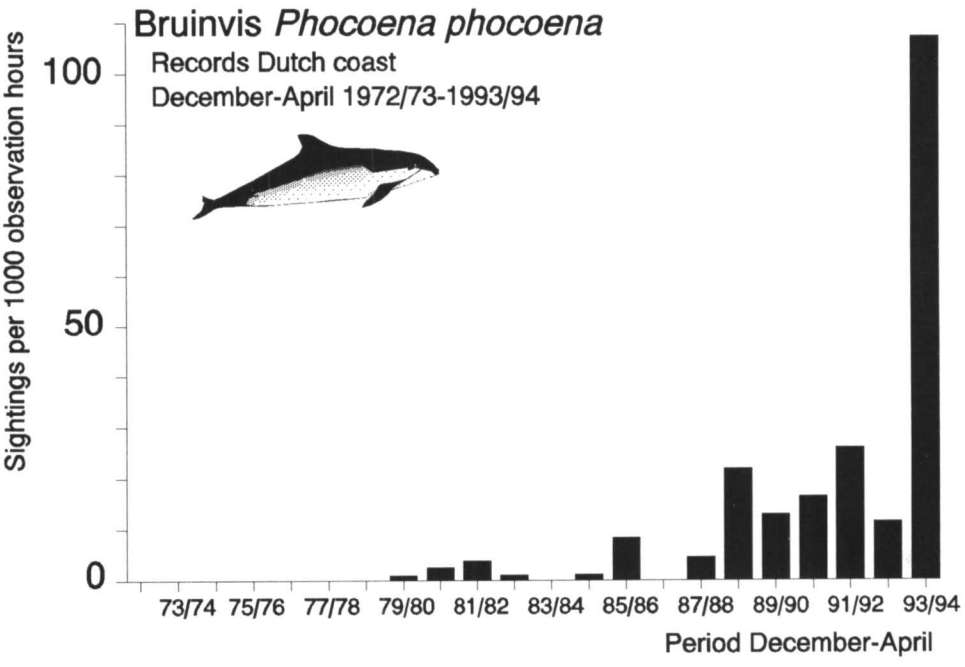

Fig. 1. Harbour porpoises per 1000 hours of observation at seawatching sites in the Netherlands, December-April, 1972/73-1993/94.

Most sightings were reported immediately to the central database address (CJC, Texel), usually by telephone. Details on number of animals, direction of movement, distance, behaviour, and weather were listed. In addition to the seawatching scheme, other people were reporting on marine mammals seen during their work at sea, from the beach, in harbours or when angling at sea. The two sets of data are treated separately. For the former, observer effort is known, whereas the latter might merely reflect the current popularity of cetaceans. Therefore, trends were only deduced from the seawatching data.

3. Results

3.1. Sightings from seawatching sites

Systematic "seawatches" between 1 December 1992 and 31 May 1994 resulted in 80 records with a total number of 108 harbour porpoises (appendix 1A). Of these, 69 sightings (94 individuals) were between 1 December 1993 and 30 April 1994 (just over 100 sightings per 1000 hours of observation; fig. 1).

Harbour porpoises were rather scarce in winter 1992/93. Only six individuals were observed from sites at the mainland coast (4 records December-April), another three

were seen from the island of Ameland (3 records). For harbour porpoise observations, this was the worst season since 1987/88 (fig. 1). Possibly, one of the solitary harbour porpoises recorded from Ameland (occasionally visible from the coast on 18 March between 11:00-14:00 GMT) in fact pertained to more than one individual (and hence, considering the infrequent appearance near the site, to more than one record).

Autumn 1993 produced two records (3 animals) of harbour porpoises at Camperduin (October, November). December 1993 was not particularly rich in sightings (Camperduin, 1 couple), but January 1994 produced five records at Camperduin (7 individuals) and one at Scheveningen. None were seen in February, but March produced 36 records (49 individuals), including one from the island of Texel, one from Bloemendaal, two from Scheveningen (4 individuals) and the rest from Camperduin. Harbour porpoises seen from Camperduin and Texel in March were moving northwards, except six solitary animals heading south and a single porpoise present "on the spot" for some time. April produced another 26 sightings (35 individuals), of which two records from Ameland (3 individuals), 19 from Camperduin (23 individuals), three from Bergen aan Zee, and two from Berkheide/Katwijk (6 individuals). Northward movements of porpoises seen from Camperduin and Bergen aan Zee were much less pronounced in April: twelve sightings of animals heading north (14 individuals), ten sightings of animals heading south (12 individuals). On 14 April 1994, around 11:00 Greenwich Mean Time (GMT; 13:00 local summer time), an adult and calf were seen from Camperduin (8 × visible, very small individual swimming "at the tail", once breaching). Two more sightings in May (Camperduin) were the last of a long and fruitful season of porpoise-watching in the Netherlands.

3.2. Other records

Other records received from the southern North Sea (south of 56°N, north of 51°N) between 1 January 1993 and 31 May 1994 comprised 120 sightings of a total of 240 harbour porpoises. Of these, 27 records (42 animals) were in Dutch coastal waters (Appendix 1B).

Two sightings (3 individuals) from the ferry Den Helder-Texel in January 1993 in the Marsdiep were remarkable as this area was rich in porpoises during the first half of this century (Verwey, 1975). Ship-based surveys in February 1993 along the Dutch coast from the Delta area to the German Wadden Sea islands produced eight sightings (11 individuals), a normal number considering coverage and effort. Among these were records of solitary porpoises off Zuid-Holland and Zeeland, just south of the normal range of wintering porpoises in the Netherlands. During the rest of the year, few more porpoises were seen, including two solitary animals in March off Texel and Terschelling, couples in June and in October, and one animal in the harbour of Den Oever, Wieringen, in September. Winter 1993/94 produced only two sightings from ship-based surveys in the southern North Sea (December and March). Interesting coastal sightings were received from Texel and Noord-Holland in March, April and May 1994), when harbour porpoises were again encountered within the Wadden Sea off Texel (Texelstroom, Molengat). On 15 April a harbour porpoise was loitering all day near the landing-stage of the ferry on Ameland, and a small porpoise was seen for

Fig. 2. Harbour porpoise *Phocoena phocoena*, Cape Clear, SW Ireland, summer 1984. Photo: G. Dumay.

several hours in the harbour of Oudeschild on Texel on 23 May (Texelse Courant, 27 May 1994). A large individual in May spent hours swimming near the coast off Petten on 24 May. Another porpoise was seen from a platform parked in Texelstroom and a small boat off 't Horntje on Texel on 30 May.

4. Discussion

The sightings of harbour porpoises in Dutch coastal waters in winter 1993/94 are interesting for at least two reasons. First, the number of sightings increased sharply compared with previous years, which suggests that a firm (re-)establishment of a population of harbour porpoises in the Netherlands is now on the way. More animals have been seen, often under good conditions, which would allow further studies similar to the observations made from the island of Sylt in the German Bight (cf. Schmidt & Hessel, 1993). Second, the sighting of a very young calf swimming with an adult in April confirms that harbour porpoises reproduce in our waters. Sightings of mature porpoises with small calves were common in the 1930s and 1940s (Verwey, 1975), but sightings of calves were rare in recent years in the southern North Sea and did not occur in Dutch waters (Camphuysen & Leopold, 1993). The only indications of reproduction of harbour porpoises in Dutch coastal waters in recent years were strandings of pregnant females and of corpses of young calves (Smeenk, 1989, 1992).

One aspect which deserves more attention is the seasonal pattern in sightings along the Dutch coast. The majority of porpoises since 1986 were reported between December and April and hence, the species' status was described as "winter visitor" (Camphuysen & Leopold, 1993). Sightings in winter 1993/94 clustered in March and

Month	1980/81-1992/93	1993/94
December	18 (23)	1 (2)
January	18 (47)	6 (8)
February	18 (24)	-
March	10 (15)	36 (49)
April	8 (9)	26 (35)

Table 1. Seasonal pattern in sightings (number of animals in parentheses) of harbour porpoises since 1980 and in winter 1993/94.

April, rather late in the season compared to earlier years (table 1). In this respect, sightings in winter 1993/94 were atypical. Future surveys will show whether the increase this winter must be considered an incident or a further step in the return of this species.

In an earlier review of the status of the harbour porpoise in Dutch coastal waters, a common factor was suggested underlying its return and an increase of wintering piscivorous seabirds in the southern North Sea (Camphuysen & Leopold, 1993). However, a time lapse between the sudden increase of seabirds (early 1980s; Camphuysen, 1989, 1992a, b) and the return of the harbour porpoise (mid-1980s; Camphuysen & Leopold, 1993, this paper) was not taken into account. Moreover, seawatching results have now shown that several pelagic seabirds (e.g. shearwaters *Puffinus* spp., fulmar *Fulmarus glacialis*, kittiwake *Rissa tridactyla*) peaked in the early 1980s as compared to the 1970s, but have declined in the late 1980s and early 1990s (Camphuysen & Van Dijk, 1983; Platteeuw et al., 1994). Also, most seabird influxes and wrecks in the southern North Sea, which were probably caused by a shortage of food in the northern North Sea, occurred in the early 1980s (Camphuysen, 1990, 1992a). Hence, one common factor underlying these rather different trends in seabirds and cetaceans is unlikely. Unfortunately, monitoring studies of cetaceans such as the Dutch seawatching scheme are rare in the North Sea. Therefore, it is difficult to judge whether local variations in abundance were caused by changing distribution patterns or by real fluctuations in the (southern) North Sea population.

ACKNOWLEDGEMENTS

Records listed here were derived from the marine mammal database of the Dutch Seabird Group (NZG) and included ship-based sightings of surveys conducted by the Netherlands Institute for Sea Research (NIOZ) and the Institute for Forestry and Nature Research (IBN-DLO) on Texel. I want to thank all the observers which were kind enough to provide additional information on sightings of harbour porpoises, often promptly by telephone after the animals were seen: G. van der Berg, Fred Cottaar, D. van Elswijk, Nick van der Ham (NZG), Rob Hammer, Nick den Hollander (NIOZ), N.C. Hoogendoorn, Nico IJnsen (NZG), Ben and Bert Knegtering (IBN-DLO), Sander Lagerveld (NZG), Genevieve Leaper (NIOZ), Mardik Leopold (IBN-DLO), Frits Jan Maas, Dirk Moerbeek (NZG), Henk Offringa (NIOZ), Maarten Platteeuw (NZG), J. Smit (NBLF Friesland), Kees van der Star, Johan Tuntelder (NIOZ), W. Tijsen (Westerland), Michiel Versluys (NZG), Arend Wassink (Texel) and Hans Witte (NIOZ). Mardik Leopold, Chris Smeenk and Marjan Addink kindly commented on the draft of this paper.

APPENDIX 1

Number of sightings (records) and total number of harbour porpoises (animals) during systematic counts from seawatching sites (A) and other records in Dutch coastal waters (B), including sightings during systematic ship-based surveys and incidental records. Records per month per location, December 1992-May 1994.

Month	Year	Location	Observer(s)	Records	Animals	
Dec	92	Ameland	J.N. IJnsen	2	2	A
		Camperduin	N.F. van der Ham	1	2	
Jan	93	Camperduin	N.F. van der Ham	1	2	
Feb	93	Bergen aan Zee	N.F. van der Ham	1	1	
Mar	93	Ameland	M. Versluys	1	1	
		Camperduin	N.F. van der Ham	1	1	
Oct	93	Camperduin	N.F. van der Ham	1	1	
Nov	93	Camperduin	D. Moerbeek	1	2	
Dec	93	Camperduin	N.F. van der Ham	1	2	
Jan	94	Camperduin	N.F. van der Ham, G. van der Berg	5	7	
		Scheveningen	D. van Elswijk	1	1	
Mar	94	Texel paal 15	F.J. Maas	1	1	
		Camperduin	N.F. van der Ham, S. Lagerveld e.a.	32	43	
		Bloemendaal aan Zee	F. Cottaar	1	1	
		Scheveningen	D. van Elswijk	2	4	
Apr	94	Ameland paal 9	J.N. IJnsen	2	3	
		Camperduin	N.F. van der Ham	19	23	
		Bergen aan Zee	N.F. van der Ham	3	3	
		Berkheide (Katwijk)	N.C. Hoogendoorn	2	6	
May	94	Camperduin	N.F. van der Ham	2	2	
Jan	93	Marsdiep	C.J. Camphuysen	2	3	B
Feb	93	off Borkum/Rottum	H.O. Offringa	1	1	
		off Schiermonnikoog	H.O. Offringa	1	1	
		off Vlieland	M.F. Leopold	1	2	
		off Petten	R. Hammer	1	1	
		off Zuid-Holland	R. Hammer, M.F. Leopold	2	2	
		Voordelta	J. Tuntelder	1	1	
		Terschelling Bank	G. Leaper	1	3	
Mar	93	Zeegat van Terschelling	A. den Hollander	1	1	
		Molengat	K. van der Star	1	1	
Jun	93	Southern Bight	H.O. Offringa	1	2	
Aug	93	Den Oever harbour, Wieringen	W. Tijsen	1	1	
Oct	93	Southern North Sea	H.O. Offringa	1	2	
Dec	93	off Zuid-Holland	B. Knegtering	1	1	
Mar	94	Texel beach	A. Wassink	3	8	
		Southern North Sea	C.J. Camphuysen	1	2	
Apr	94	Ferry landing-stage Ameland	J. Smit	1	1	
		Molengat, off Texel	K. van der Star	2	4	
		Texelstroom, Waddensea	K. van der Star	1	2	
May	94	Oudeschild harbour, Texel	Texelse Courant	1	1	
		Texelstroom, Waddensea	H. Witte	1	1	
		Petten	N.F. van der Ham	1	1	
Records from coastal sites (NZG data)				80	108	A
Records from ships and coast, Dutch coastal waters				27	42	B
Other records southern North Sea (not listed)				93	198	

SUMMARY

Since the mid-1980s, harbour porpoises have returned in very small numbers to Dutch coastal waters as winter visitors (December-April). The increase, corrected for observer effort, could be documented thanks to a scheme of systematic seawatches from coastal sites which commenced in 1972. Between 1972 and 1992, 72 records of harbour porpoises were received (125 individuals), 60 of which were received after 1986. Yet, some 69 records (94 individuals) reported by seawatchers in winter 1993/94 came as a surpise. Other records during this winter included several sightings within the Wadden Sea and, in contrast to previous years, sightings during seawatches were not exclusively from the mainland coast of Noord-Holland. The sightings in winter 1993/94 support the idea that the harbour porpoise has returned in Dutch coastal waters and that reports in the late 1980s and early 1990s were more than an incident. It is uncertain whether the return was caused by variations in the distribution of porpoises in the North Sea or by an increase of the stock.

SAMENVATTING

De bruinvis *Phocoena phocoena* in de zuidelijke Noordzee. II: een terugkeer naar de Nederlandse kustwateren?

Sinds het midden van de jaren tachtig werden in de Nederlandse kustwateren, vooral in de winter (december-april) weer af en toe bruinvissen gezien. Aan de hand van zeetrektellingen (systematische registratie van langsvliegende zeevogels vanaf telposten aan de Nederlandse kust) kon de toename, gecorrigeerd voor waarnemingsinspanning, goed worden gedocumenteerd. Tussen 1972 and 1992 werden tijdens deze tellingen 72 maal bruinvissen gezien (125 exemplaren), waarvan 60 gevallen sinds 1986. Toch kwam het aantal van 69 waarnemingen (94 dieren) in de winter van 1993/94 als een verrassing. Behalve de waarnemingen tijdens systematische tellingen kwamen dit seizoen ook opvallend veel meldingen van "derden" binnen. Het voorkomen bleef niet beperkt tot de Noordhollandse kust (97% van de gevallen in 1986-92), maar strekte zich uit tot de Noordzeekust van de Waddeneilanden, de Waddenzee en de Zuidhollandse en Zeeuwse kust. De waarnemingen van deze winter maken het aannemelijk dat er inderdaad sprake is van een terugkeer van deze soort voor de Nederlandse kust. Het is onduidelijk of deze terugkeer werd veroorzaakt door een veranderend verspreidingspatroon of door een toename van de populatie.

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RECTIFICATIE

In de bespreking van het boekje "Vom MeerEinhorn zum Narwal" door Cäsar Claude (Lutra 36, 1993, pp. 98-99) zijn twee zaken niet juist weergegeven. Ik opperde daarin dat de tekening van Olaus Magnus uit 1555 door een vroegere tekenaar of vervalser over die van 1539 heen getekend was (p. 8) en dat de auteur dit niet gezien leek te hebben. Claude wijst erop dat de zaak eenvoudiger ligt: de drukker van het boek heeft de afbeeldingen over elkaar heen gedrukt, uiteraard tot grote ergernis van de auteur. Op de achterkaft staat de plaat uit 1555 correct weergegeven. Verder vermeldde ik ten onrechte dat de narwal op Magnus' kaart uit 1539 niet voorkomt. Daar staat hij wel degelijk op; ik had hem domweg over het hoofd gezien, letterlijk zelfs. Beide onjuistheden zijn hierbij rechtgezet. Als genoegoening heb ik Claude beloofd zijn charmante boekje nog een keer bij de lezers aan te bevelen, hetgeen bij dezen geschiedt.

C. SMEENK