

Bonn. zool. Beitr.	Bd. 46	H. 1–4	S. 377–383	Bonn, Juni 1996
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Extralimital records of the Ringed Seal, *Phoca hispida* Schreber, 1775, on the West-European continental coast

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Abstract. A review is published of the extralimital records of the Ringed Seal, *Phoca hispida*, on the West-European continental coast (northern Denmark to southern Spain). Before World War II the species was rarely observed but at present almost every year a Ringed Seal, mostly young females, can be found on the mentioned coast. That at present more specimens are seen, is due to increased observer effort, better identification manuals and the creation of seal rescue centres, where seals are not only taken care of, but also can be studied at close quarters.

Key words. Ringed Seal, *Phoca hispida*, Denmark, Germany, The Netherlands, Belgium, France, Spain & Portugal.

On the West-European continental coast (northern Denmark to southern Spain) only two seal species can be found permanently, viz. the Common or Harbour Seal, *Phoca vitulina*, and the Grey Seal, *Halichoerus grypus*. The first one is found along the coast of Denmark, Germany, the Netherlands, Belgium (only stragglers) and France (a small colony at the mouth of the river Somme). The second species formerly occurred along the Danish North Sea coast (Holm Joensen et al. 1976) and actually small colonies are found on high-lying shoals off the Atlantic coast of Germany (Scheibel & Weidel 1988) and the Netherlands ('t Hart et al. 1988). Furthermore they can be found on islands around Brittany (Duguy 1988).

All other seal species found on the coast are stragglers, either from the Arctic North (Walrus — *Odobenus rosmarus*, Hooded Seals — *Cystophora cristata*, Harp Seals — *Phoca groenlandica*, Bearded Seals — *Erignathus barbatus* and Ringed Seals — *Phoca hispida*) or from the South (Monk Seals — *Monachus monachus*). Among the stragglers the Ringed Seal is the most numerous one.

From before the Second World War only a few records are known: in the Netherlands three specimens (see compilation in van Bree et al. 1992) and in France two animals (Duguy 1988, Robineau 1992). It is further known that during the period 1918–1927 in the area of the North Sea coast of Denmark, six Ringed Seals were killed (Bøgebjerg Hansen in litt.) but it is not known where exactly. After 1945 only two Ringed Seals are reported from the Danish North Sea coast. One tagged specimen on the Island of Mandø on 4-VIII-1973, which had been set free on 27-VII-1973 in the Dutch Wadden Sea (van Haaften 1974). A second Ringed Seal was found near Norlev (37° 30' N, 09° 40' E). That animal had also been tagged previously; it was set free at the French coast (Duguy 1988). These two “secondary” finds are not recorded in table 1.

Along the Atlantic coast of Germany at least 12 Ringed Seals were found (Mohr 1952, Hagenbeck in litt. 1992, Drescher 1978, Schumann in litt. 1992, Heidemann in litt. 1992, Borkenhagen 1994). After World War II 24 specimens *Phoca hispida*

have been reported in the Netherlands (see table 1). At present almost every year a Ringed Seal can be found on the Dutch coast.

On the Belgian coast for a long time no Ringed Seals were known till in 1987 three specimens were found and in 1988 again another one (Anon. 1987, Van Gompel 1987, 1990 and Van der Straeten in litt. 1992). Recently two *Phoca hispida* were captured and brought to the seal recovery centre at Pieterburen, the Netherlands. In France, besides the two specimens before World War II, three other Ringed Seals were reported (Duguy 1988). In Spain a Ringed Seal was found recently (Santiago Lens in litt. 1992) and from Portugal also one Ringed Seal has been recorded (Teixeira 1979).

Although outside the scope of this article, a Ringed Seal must be mentioned found in 1970 near Porto da Folga, on Ile de Graciosa of the Azores archipelago (Le Grand 1981). This animal shows quite well how far from the normal habitat stragglers can be found. Except for the last one, all the afore-mentioned records are enumerated in table 1.

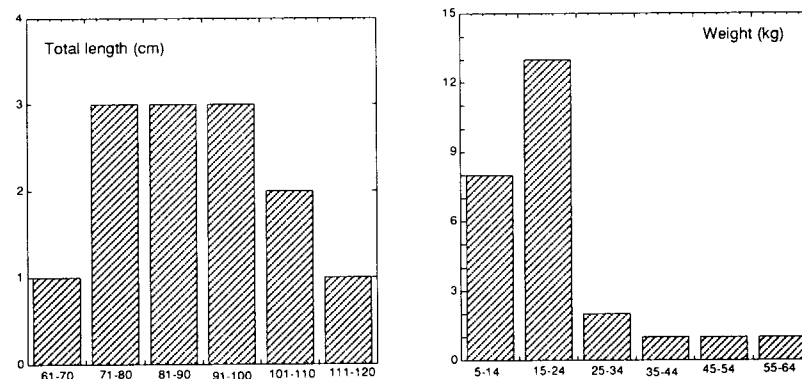


Fig. 1: Length and weight classes in a number of Ringed Seals found on the West-European continental coast. Note the rather short and light specimens.

Total lengths and weights are available for a number of specimens (see figure 1). It must be stated, however, that the measurements must be regarded with a certain caution because in many cases it is not known how exactly the total length was measured. Either from the tip of the snout till the fleshy end of the tail or from the tip of the snout till the end of the longest toe, with or without the nail. The lengths and weights are interesting if one realizes that Ringed Seals at birth weigh about 6.13 kg and are about 80 cm long (Smith 1987). At the end of the first year the males weigh about 21.7 kg and the females about 21.2 kg (Nazarenko 1968). Males of one year measure about 95 cm and females about 93 cm (Smith 1987). The total length of adult specimens ranges between 105 and 145 cm; the weight can be up to 100 kg. If we study the data in figure 1 in relation to the values enumerated above, it follows that on the West-European continental coast many Ringed Seals were found less than one year old, a fair number of juvenile specimens and only a few fullgrown animals.

There is, however, a complication. In 1921 Zukowsky described a small form of Ringed Seal, which he named *Phoca hispida pygmaea*. The type material of this tax-

Table 1: Extralimital records of Ringed Seals, *Phoca hispida*, on the West-European continental coast.

#	Date	Sex	Locality	Dept. etc.	Nation	Reference
1	before 1824	?	?	?	F	Robineau 1992
2	XII-1879	?	Rockanje	Zuid-Holland	NL	van Bree et al. 1992
3	29-VII-1889	♀	Zoutkamp	Groningen	NL	van Bree et al. 1992
4	20-XII-1911	♀	Ile de Batz	Finistère	F	Duguy 1988
5	VIII-1923	?	De Beer, Oostvoorne	Zuid-Holland	NL	van Bree et al. 1992
6	IX-1942	?	Wedel, near Hamburg	Schleswig-Holstein	D	Mohr 1952, Hagenbeck 1992 (in litt.)
7	20-VI-1957	?	Sylt	Schleswig-Holstein	D	Borkenhagen 1994
8	VII-1957	?	Eendrachtspolder, Texel	Noord-Holland	NL	van Haaften 1974
9	4-VII-1968	♀	S of De Koog, Texel	Noord-Holland	NL	van Haaften 1974
10	summer 1968	?	Tróia	Setubal	P	Teixeira 1979
11	23-VIII-1972	♀	Breskens	Zeeland	NL	Van der Straeten-Harrie 1974
12	29-XII-1972	?	Rilland-Bath	Zeeland	NL	van Bree et al. 1992
13	25-VII-1973	♀	Engelsmanplaat	Friesland	NL	van Haaften 1974
14	VIII-1975	♀	Friedrichskoog	Schleswig-Holstein	D	Drescher 1978
15	22-VII-1977	♂	Ameland	Friesland	NL	van Bree et al. 1992
16	1-VIII-1977	♀	near Zierikzee	Zeeland	NL	van Bree et al. 1992
17	5-VIII-1977	♀	Holwerd	Friesland	NL	van Bree et al. 1992
18	9-VI-1978	♀	De Slufter, Texel	Noord-Holland	NL	van Bree et al. 1992
19	21-VII-1979	♀	Schiermonnikoog	Friesland	NL	van Bree et al. 1992
20	4-IX-1979	?	Fedderwardsiel	Niedersachsen	D	Schumann 1992 (in litt.)
21	8-VI-1980	♀	Trischen	Schleswig-Holstein	D	Borkenhagen 1994
22	18-VI-1980	♀	Bergen-op-Zoom	Noord-Brabant	NL	van Bree et al. 1992
23	12-VIII-1980	♀	Ronce-les-Bains	Charente-maritime	F	Duguy 1988
24	16-X-1980	♀	Beneden Merwede	Zuid-Holland	NL	van Bree et al. 1992
25	12-VII-1981	♀	Cuxhaven	Niedersachsen	D	Schumann 1992 (in litt.)
26	18-VII-1982	♀	Rockanje	Zuid-Holland	NL	van Bree et al. 1992

Table 1: Extralimital records of Ringed Seals, *Phoca hispida*, on the West-European continental coast (continuation).

#	Date	Sex	Locality	Dept. etc.	Nation	Reference
27	28-VII-1982	♀	near Oosterhout	Noord-Brabant	NL	van Bree et al. 1992
28	4-I-1985	♂	Borkum	Niedersachsen	D	Schumann 1992 (in litt.)
29	2-VII-1985	♂	Borkum	Niedersachsen	D	Schumann 1992 (in litt.)
30	13-VII-1985	♂	Oudeschild, Texel	Noord-Holland	NL	van Bree et al. 1992
31	21-VII-1985	♂	Moddergat/Paesens	Friesland	NL	van Bree et al. 1992
32	25-VII-1985	♀	Terneuzen	Zeeland	NL	van Bree et al. 1992
33	6-VIII-1985	♀	St-Quentin-en-Tourmont	Somme	F	Duguy 1988
34	3-IX-1985	♂	Friedrichskoog	Schleswig-Holstein	D	Heidemann 1992 (in litt.)
35	3-II-1987	♀	Wenduinen	West-Vlaanderen	B	Van Gompel 1992
36	27-VI-1987	♂	Dieksanderkoog	Schleswig-Holstein	D	Heidemann 1992 (in litt.)
37	7-VII-1987	♂	Kallo near Antwerpen	Oost-Vlaanderen	B	Van Gompel 1992
38	7-VII-1987	♀	Zeebrugge	West-Vlaanderen	B	Van Gompel 1992
39	15-VII-1987	♀	Granville	Manche	F	Duguy 1988
40	15-VII-1987	?	Ouddorp	Zuid-Holland	NL	van Bree et al. 1992
41	1-VIII-1988	♂	near Pieterburen	Groningen	NL	van Bree et al. 1992
42	10-IX-1988	?	Spiekerooog	Niedersachsen	D	Schumann 1992 (in litt.)
43	10-IX-1989	♀	De Haan	West-Vlaanderen	B	Van Gompel 1992
44	14-VII-1990	♂	Breezanddijk	Friesland	NL	van Bree et al. 1992
45	18-VII-1990	♀	De Hors, Texel	Noord-Holland	NL	van Bree et al. 1992
46	6-IV-1991	♀	Wangerooog	Niedersachsen	D	Schumann 1992 (in litt.)
47	24-VII-1991	♂	Ria de Vigo	Pontevedra	E	Santiago Lens 1992 (in litt.)
48	7-XII-1991	♂	beach near Wassenaar	Zuid-Holland	NL	van Bree et al. 1992
49	18-VIII-1992	♂	Norddeich	Niedersachsen	D	Schumann 1994 (in litt.)
50	12-II-1994	♂	De Panne	West-Vlaanderen	B	't Hart & Vedder 1994 (in litt.)
51	20-VII-1994	♀	Schiermonnikoog	Friesland	NL	't Hart & Vedder 1994 (in litt.)
52	26-VII-1994	♀	Blankenberge	West-Vlaanderen	B	't Hart & Vedder 1994 (in litt.)

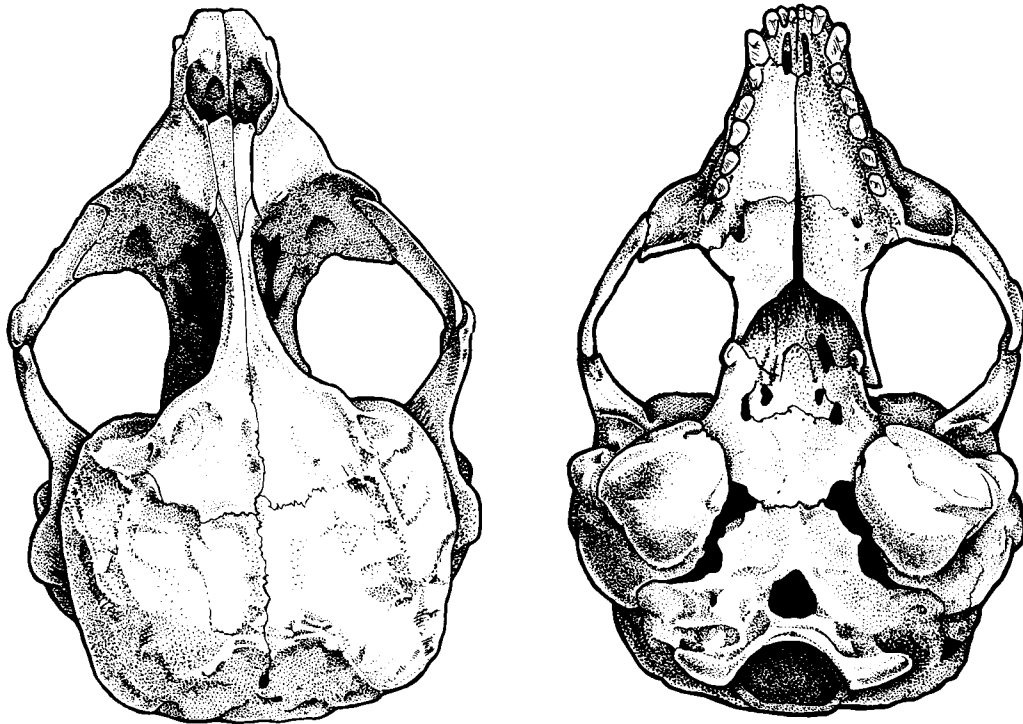


Fig. 2: Dorsal and ventral view of the calvarium of a female *Phoca hispida* forma *pygmaea*, found on the coast of Iceland, which lived in the Duisburg Zoo for more than two years. Total length of the animal 67 cm. Condyllo-basal length 145 mm. Note the rather small facial part of the skull and the rather large orbits. J. Zaagman fecit.

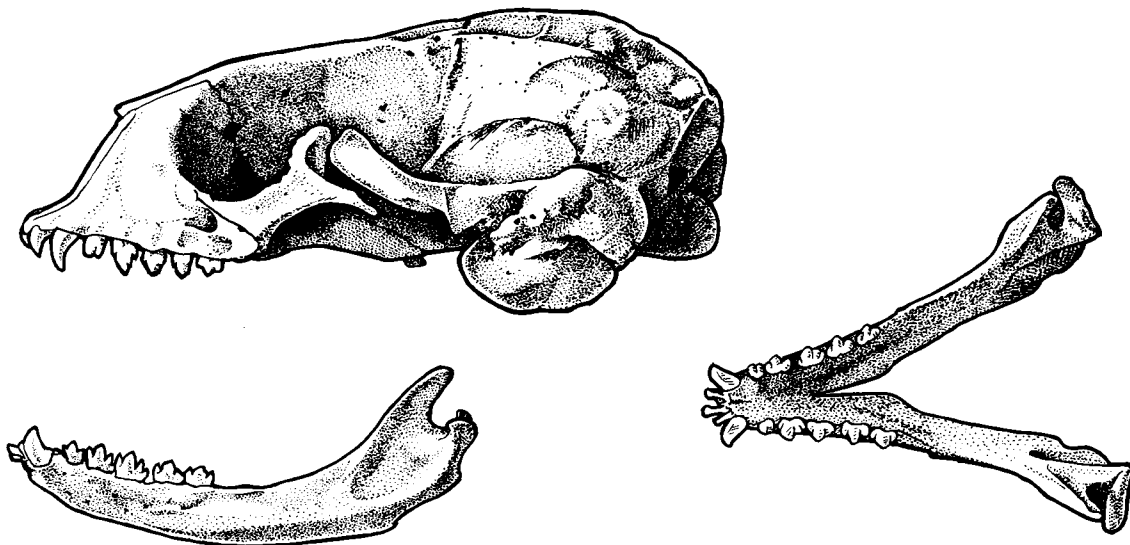


Fig. 3: Lateral view of the skull of *Phoca hispida* forma *pygmaea* and dorsal view of its mandibles. For more data, see legend of figure 2. J. Zaagman fecit.

on was destroyed during the last World War. Later studies (e. g. Mohr 1952, Smith 1987) showed that *pygmaea* animals do not form a geographically isolated population but can be found over the whole distribution area of the species, singly or together in small numbers. These small animals are stunted in their growth and do not represent a meaningful taxonomic unit. Among the animals found on the West-European coast were also a number of these small Ringed Seals (e. g. specimens 28, 35, 43, 46, 48, 52).

To identify, however, with certainty these stunted animals, one has to determine the age of the specimens (e. g. by studying thin tooth sections). However, most Ringed Seals found (often in a pitiful condition) had been brought to seal recovery centres and after some time were set free again. Therefore museum specimens showing the mentioned stunted growth are very rare. We can, however, show the skull of a female "dwarf" Ringed Seal found on the coast of Iceland, which lived from 16-II-1978 till 17-VII-1980 in the Duisburg Zoo (fig. 2 and 3). The skull and the skin are in the collection of the Zoo. For an earlier dwarf specimen in captivity, see Zukowsky (1914).

Ringed Seals are normally born in lairs covered by snow on stable fast ice in the Arctic North during early April. They are nursed till about the end of May. At the end of the nursing period they are fat and cylindrical but afterwards when they have to look for their food they become lean. At that period many start to wander. It is therefore not odd that most of the young Ringed Seals are found on the West-European coast during the months July and August. Rather unusual is the sex ratio of the animals found on the coast; in the sexed animals there were 27 females against only 14 males. In most mammal species the males wander more.

That Ringed Seals are able to cover long distances in relatively short times is demonstrated not only by the very young specimens found on the coast during July and August but also by the two afore-mentioned tagged specimens. They were set free in the Dutch Wadden Sea (nr. 13) and near Saint-Quentin-en-Tourmont in France (nr. 33) and were found later on the Danish Atlantic coast. The first animal covered about 260 km in 8 days, the second one about 1037 km in 44 days. This would mean average speeds of about 30 km/day and 23.5 km/day, respectively.

A question that urges itself upon the reader is why Ringed Seals were so seldom found before the Second World War and so much more afterwards. As has been stated already in the article by van Bree et al. (1992), the author believes that three causes can be advanced, viz. many more people interested in field biology, better identification manuals and the creation of seal recovery centres where animals brought in can be studied close by and at leisure.

The author gratefully acknowledges the help he received from E. Bøgebjerg Hansen, W. N. Ellis, W. Gewalt, C. Hagenbeck, L. 't Hart, G. Heidemann, E. Santiago Lens, W. Schumann, E. Van der Straeten and E. J. Vedder. He also wants to thank F. MacIntyre for reading the article and for his linguistic advice. H. Felten is thanked for his translation of the abstract into German.

Zusammenfassung

Nachweise der Ringelrobbe, *Phoca hispida* Schreber, 1775, an den westeuropäischen Festlandküsten. — Es wird eine Übersicht über Nachweise der Ringelrobbe, *Phoca hispida*, an den westeuropäischen Festlandküsten (nördliches Dänemark bis südliches Spanien) gegeben. Vor dem 2. Weltkrieg wurde die Art hier nur selten beobachtet; gegenwärtig jedoch werden Exem-

plare fast jedes Jahr an den erwähnten Küsten festgestellt. Meist handelt es sich um junge Weibchen. Diese größeren Fundzahlen beruhen auf verstärkten Beobachtungsbemühungen, besseren Identifizierungsunterlagen und der Schaffung von Robben-Rettungszentren, wo die Tiere nicht nur behandelt, sondern auch aus der Nähe beobachtet werden können.

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