

Osprey *Pandion haliaetus* breeding numbers in the Western Palearctic

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INTRODUCTION

Up to date information on numbers of breeding Ospreys in the Western Palearctic is compiled as a result of rapid population changes, new census work and the reformation of nations. The breeding population was reduced in numbers and range by human persecution early in the 20th century and by pesticide poisoning in the 1950s and 60s. Habitat destruction and tourism played another role in the decline of some populations. From the early 1970s on the species recovered through protection, especially with the ban of DDT and new hunting regulations, with a significant increase in some populations in the late 1980s. However many populations have not yet reached their former breeding numbers. Especially in the Mediterranean some of the small remaining populations are still threatened by extinction.

METHODS

Based on the reviews by Saurola (1987), Poole (1989) and Gensbol & Thiede (1991), data were assembled through literature research as well as personal and written inquiries. Sources of data in Table 1 are marked "pers." (= personal), when data were obtained through inquiries. The period considered is 1980 - 1994. Nations without already known populations were not regarded, with the exception of Bulgaria.

RESULTS

The breeding population of Ospreys in the Western Palearctic is currently estimated at 8000 ± 400 pairs (Tab. 1), summarising census results from the 1980s and early 1990s. The main concentration (90 %) is in northern Europe and Russia. The Baltic states with Poland and Germany form a branch of the range towards

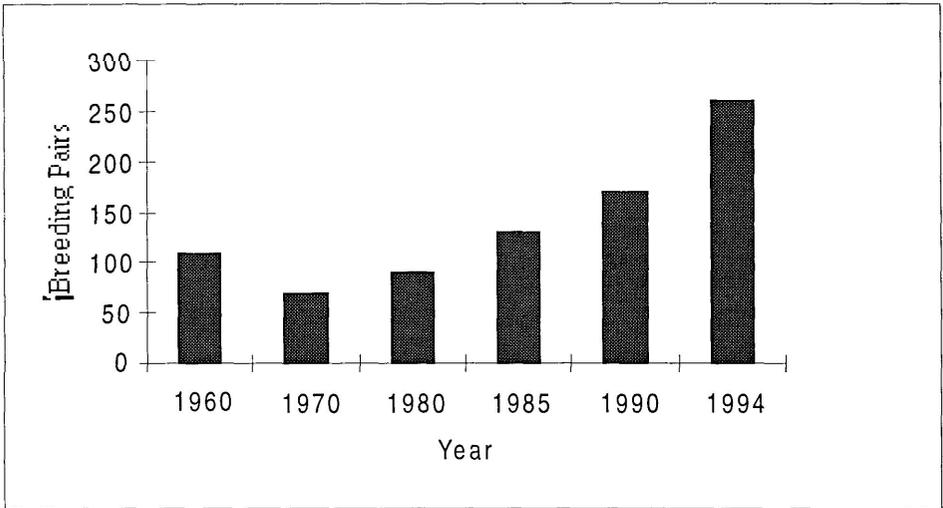
Central Europe. In the Mediterranean a few small and scattered populations breed in the West. The small numbers of pairs in Denmark, continental France and Bulgaria are noteworthy, because they could be the nucleus of new growing populations. Evidence for broods on Cyprus (Meyburg & Meyburg 1984) could not be found (J.-C. Thibault, pers. 1994, FLINT & STEWART 1983). Also four pairs on mainland Spain (Poole 1989) were not reconfirmed (J. Mayol, pers. 1994), although in recent years more and more Ospreys winter in south-western Spain (FUENTES *et al.* 1995). The breeding population of Turkey is probably extinct by now (M. Kasperek, pers. 1994) and in Portugal the last pair that bred in 1994 is threatened by extinction as well (L. Palma, pers. 1995). In spring 1996 the author received information that on the Cape Verde Islands between 14 and 25 (perhaps up to 35) pairs of Osprey are currently breeding on trees and on cliffs (S. Hille, pers. comm. and in prep. 1996).

Table 1: Osprey *Pandion haliaetus* breeding numbers in the nations of the Western Palearctic. Population trends: +) increasing, -) decreasing, ±) stable, (x) local trends, ?) unknown.

Nation ^(no. of reference)	No. of breeding pairs	(per year/period)	Trend
Algeria ⁽¹⁵⁾	9-15	(1989-93)	±
Bulgaria ⁽²⁰⁾	3	(1994)	-
Byelorussia ⁽¹⁶⁾	120-180	(1990)	±
Canary Islands ⁽¹⁾	12-15	(1987)	?
Cape Verde Islands ⁽⁵⁾	?, almost extinct?	(?)	-
Denmark ⁽¹⁹⁾	3-4	(early 1990s)	+
Egypt ⁽⁸⁾	> 100	(1982)	?
Estonia ⁽¹³⁾	20-25	(1986)	+
Finland ⁽¹⁰⁾	ca. 1000	(1994)	+
France: (14)- Corsica- Central France	- 25- 6	(1993)(1994)	++
Germany ^(7 & 11)	260	(1994)	+
Great Britain (Scotland only) ⁽²⁾	94	(1994)	+
Israel ⁽⁸⁾	45	(1982)	?
Latvia ⁽¹²⁾	100-120	(1985-89)	+
Lithuania ⁽³⁾	20-30	(1991)	±
Marocco ⁽¹⁵⁾	19-21	(1993)	±
Norway ⁽⁶⁾	150-200	(until 1987)	± (-)
Poland ⁽⁹⁾	50-60	(1985-1991)	±
Portugal ⁽²¹⁾	1	(1994)	-
Romania ⁽¹⁷⁾	0	(1986-1992)	-
Russia (European part only) ⁽⁴⁾	3000	(1993)	± (+)
Spain -Balearic Islands ⁽¹⁵⁾	17	(1993)	+ (-)
-Canary Islands ⁽¹⁾	12-15	(1987)	?
Sweden ⁽¹⁸⁾	2900-3200	(1985)	+
Turkey ⁽²²⁾	?, extinct?	(1994)	-
Total:	7968 - 8413 = 8000 ± 400	(1980-1994)	+ (-)

(18) M. Hake, pers. (1994); (19) H.E. Jorgensen, pers. (1994); (20) P. Iankov, pers. (1994); (21) L. Palma, pers. (1995); (22) M. Kasperek, pers. (1994).

Figure 1: Reconstruction of trend in Osprey *Pandion haliaetus* breeding numbers in Germany 1960 - 1994, after Kölher (1995) and Sömmmer (1995) and several other authors. The strong increase of the numbers after 1985 is due to a higher reproduction rate and improved census techniques.



DISCUSSION

Data from various nations differ in the way they were collected. Small populations as in the Balearic Islands, in Corsica or in Scotland, are comparatively easy to estimate. Very high figures from Sweden and Russia are based on calculations and errors could be included. Furthermore not all authors make a difference between occupied eyries and active nests. The estimation for Finland derives from 968 known occupied eyries in 1994 (P. Saurola 1995, pers.). Compared to earlier reviews (Poole 1989: 5175-5550 pairs; Gensbol & Thiede 1991: 6548-6676 pairs), there is an increase in the number of pairs. This is most obvious e.g. for Germany (Fig. 1) or Scotland (Dennis 1995). Taking inaccuracies into account the breeding population of Ospreys in the Western Palearctic is roughly calculated at 25-30 % of the estimated world population (*c.f.* Poole 1989).

Results shown here should also be compared with Tomialojc in Tucker & Heath (1994) to find generally similar figures for the population sizes, but some differences in the population trends. In Germany for example there has been a strong increase in recent years (Fig. 1).

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