

# Ringling of waders in Spain: the current situation

A. Barbosa & B. Asensio

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## INTRODUCTION

Waders are a very heterogeneous group of birds of great interest owing to the special wetland habitats they occupy. These are, of course, very threatened in Europe.

There have been many biological and ringling studies of waders in Europe. In Spain, however, waders are one of a group of less studied and infrequently ringling birds, and there are very few publications about wader migration or other studies (Bernis 1966, Souza 1978, Cordero-Tapia y Lopez de Villar 1985, Martinez-Vilalta 1985a, 1985b, Rubio 1986, Asensio y Carrascal 1987, Dominguez *et al.* 1987, Alberto y Velasco 1988, Dominguez y Souza 1989) except for census publications (Araujo y Garcia Rua 1974, Alberto y Purroy 1981, Limona *et al.* 1981, Motis *et al.* 1981, Alberto 1983, Alberto 1984, Alberto y Velasco 1984, Alberto 1986).

In this report, we present an overview of the wader ringling situation in Spain.

## RINGING RESULTS IN SPAIN

Table 1 shows the numbers of waders ringling and recovered in Spain between 1957 to 1988 from the ringling schemes run by the Museo de Ciencias and ICONA. In total, 38 species have been ringling, 21 species having had more than 100 individuals ringling but only 8 species have had more than 1,000 ringling individuals. The total number of waders ringling is 24,472. If compared with the total birds ringling in Spain over the same period (1,544,811), this gives an idea of the low rate of wader ringling (1.6% of total Spanish bird ringling).

Figure 1 shows the progressive increase in wader ringling with ICONA rings over the period 1980-1988.

## RECOVERY PERCENTAGES

Spanish wader ringling has produced 228 recoveries. Table 1 shows the percentage of recoveries by species. It also gives the total for the group, which can be significant from several viewpoints. For

Figure 1. Evolution of wader ringling in the period 1980-1988 with ICONA rings. Columns show total numbers of waders ringling each year.

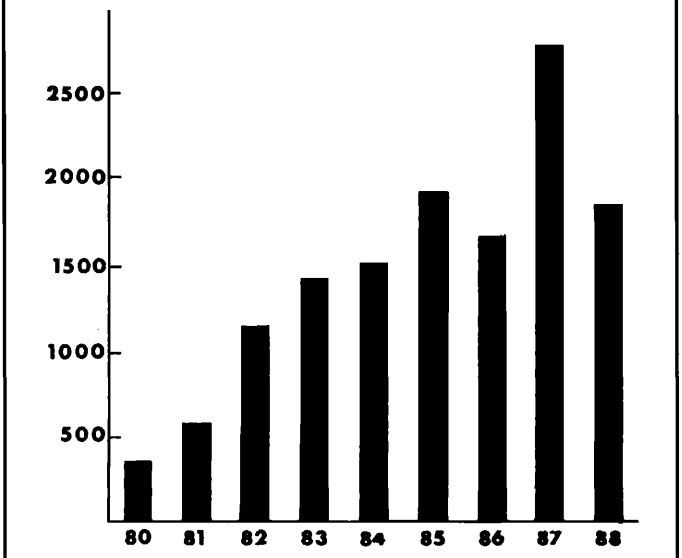


Figure 2.a. Number of recoveries of foreign ringling breeders in Spain by provinces; b. Density of recoveries of foreign ringling waders by provinces (total number of recoveries per 1,000 km<sup>2</sup>).

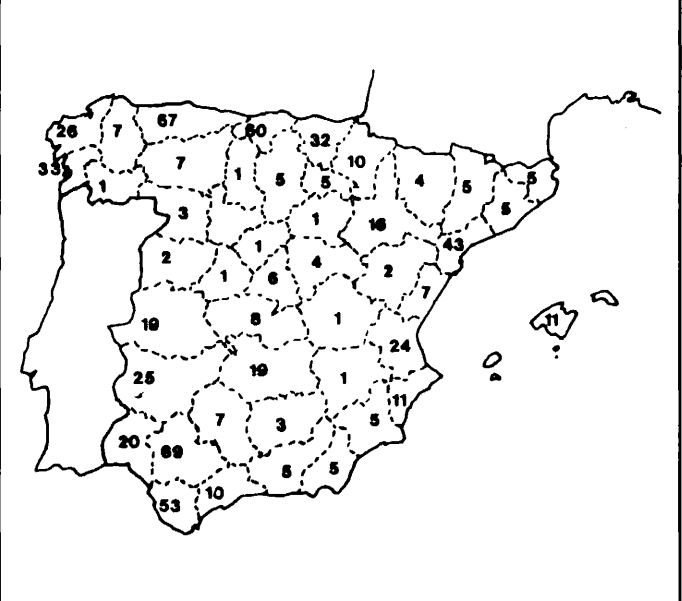


Table 1. Total number of waders ringed, recoveries and percentages of recoveries of MUSEO and ICONA rings in the period 1957-1988.

	ICONA		MUSEO			TOTAL
	1973-1988		1957-1982			1957-1988
recovered	ringed	recovered	ringed	recovered	ringed	recovered %
<i>Haematopus ostralegus</i>	6	-	41	-	47	-
<i>Himantopus himantopus</i>	993	2	1,864	9	2,857	11
<i>Recurvirostra avosetta</i>	1,246	7	929	5	2,784	12
<i>Burhinus oedicephalus</i>	129	1	57	-	186	2
<i>Cursorius cursor</i>	-	-	1	-	1	-
<i>Glareola pratensis</i>	140	2	397	4	537	6
<i>Charadrius morinellus</i>	6	-	20	-	26	-
<i>Charadrius dubius</i>	627	4	643	5	1,270	9
<i>Charadrius hiaticula</i>	462	9	221	4	683	13
<i>Charadrius alexandrinus</i>	1,155	6	1,068	6	2,223	12
<i>Pluvialis apricaria</i>	15	1	5	-	20	1
<i>Pluvialis squatarola</i>	90	2	21	-	111	2
<i>Vanellus vanellus</i>	129	1	167	3	296	4
<i>Calidris canutus</i>	76	1	144	-	220	1
<i>Calidris alba</i>	44	-	10	1	54	1
<i>Calidris minuta</i>	455	3	234	2	689	5
<i>Calidris temminckii</i>	38	1	13	-	51	1
<i>Calidris melanotos</i>	4	-	-	-	4	-
<i>Calidris ferruginea</i>	195	-	98	-	293	1
<i>Calidris alpina</i>	2,593	18	1,134	7	3,727	30
<i>Philomachus pugnax</i>	254	4	166	2	420	6
<i>Lymnocyptes minimus</i>	53	1	13	-	66	1
<i>Gallinago gallinago</i>	1,010	24	441	15	1,451	39
<i>Scolopax rusticola</i>	19	-	3	-	22	-
<i>Limosa limosa</i>	64	3	80	3	144	6
<i>Limosa lapponica</i>	44	-	36	-	80	-
<i>Numenius phaeopus</i>	14	-	2	-	16	-
<i>Numenius arquata</i>	18	-	6	-	24	-
<i>Tringa erythropus</i>	34	-	50	-	84	-
<i>Tringa totanus</i>	931	17	1,231	14	2,162	31
<i>Tringa stagnatilis</i>	3	-	5	-	8	-
<i>Tringa nebularia</i>	76	2	27	-	103	2
<i>Tringa ochropus</i>	221	2	187	2	408	4
<i>Tringa glareola</i>	278	2	64	2	342	4
<i>Actitis hypoleucos</i>	2,015	15	1,543	16	3,558	31
<i>Arenaria interpres</i>	45	-	19	-	64	-
<i>Phalaropus lobatus</i>	1	-	-	-	1	-
<i>Phalaropus fulicarius</i>	49	-	-	-	49	-

example, the overall recovery percentage of 0.93, is lower than for other European countries like The Netherlands (a middle latitude country: 3.78%), or Finland (a high latitude country: 2.83%).

The geographic position of Spain has been suggested as the reason for the lower percentages of recoveries of our ringed birds. But for waders, the particular differences in recovery rate could also be attributable to the scarce attention paid to this group.

#### INTERESTING AREAS FOR RINGING WADERS

To establish those general areas which are the most interesting for ringing waders, we have mapped the recoveries in Spain of birds ringed outside the country. This is useful as the reporters (generally hunters) are more numerous than ringers and they are more widely distributed throughout the country.

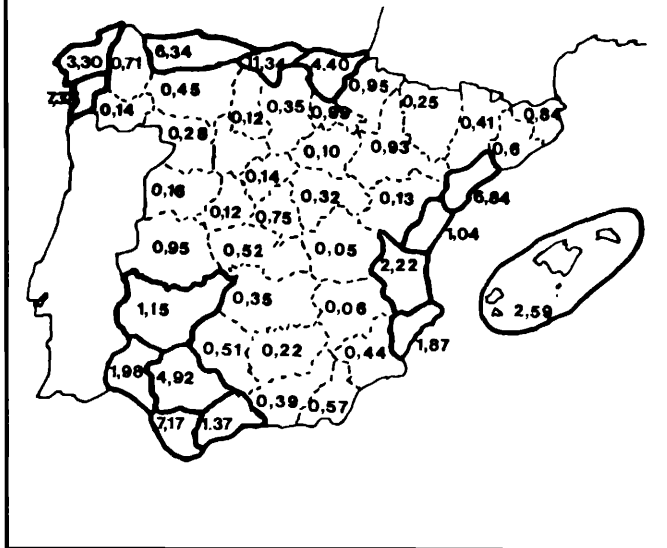
Figure 2a shows the foreign recoveries obtained up to date. As the rings are foreign, this map is not influenced either by Spanish ringer preferences or the geographic distribution of ringers. Nevertheless, it is necessary to be careful with these maps as the recoveries obtained in a particular area does depend on other factors such as human density, numbers of hunters, etc.

Figure 2b shows the density of recoveries by provinces (total number of recoveries per 1,000 km<sup>2</sup>). This map shows the higher density areas (>1 recovery per 1,000 km<sup>2</sup>) to be the Cornisa Cantabrica and Galicia (except for Lugo), Tarragona (Delta del Ebro), Valencia (Albufera de Valencia), the Balearic Islands and the Straits of Gibraltar, perhaps because of the influence of Donana and the flyway towards Africa.

These areas are coincident with main important wintering areas given by Alberto y Velasco (1988).



Figure 2b



Asensio, B., & Carrascal, L.M. 1987. Migratología de las Agachadizas Comunes (*Gallinago gallinago* L.) invernantes en la Península Iberica. *Ardeola* 34: 225-242.

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## CONCLUSION

It is necessary to increase the ringing effort for these birds in our country. As there are only a few important areas, the effort should be concentrated in these places. In this way we might obtain very interesting results with a low investment of resources.

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A. Barbosa (\*) & B. Asensio, Oficina de Anillamiento, Instituto Nacional para la Conservación de la Naturaleza, Gran Vía de San Francisco, 35, 28071 Madrid, Spain.

(\*) Present address: Museo Nacional de Ciencias Naturales, Jose Gutierrez Abascal, 2, 28006 Madrid, Spain.

