A review of the status of the Herring Gull *Larus argentatus* in Spain

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Abstract
The Herring Gull *Larus argentatus* is considered a regular but scarce visitor to Spain, but its detailed status is uncertain. Here I present a compilation of published (primarily annual bird reports) and unpublished information (internet forums, direct communications by local ornithologists, ringing recoveries) to clarify the distribution and numbers of Herring Gulls in Spain, and their origins. More detailed information on age composition and phenology is presented for Asturias (NW Spain), perhaps the region where the species is most studied. According to ring recoveries (n = 43), the majority of Herring Gulls visiting Spain belong to the subspecies *L. a. argenteus* (mainly from the British Isles), with only 7% coming from breeding areas of the Nordic subspecies *L. a. argentatus*. Most observations occur in autumn and winter, being scarcer in spring and summer, and numbers vary between years. Two-thirds of birds recorded were in their first two years of life, with adults comprising only a quarter of the total. Ringing recoveries suggest Herring Gulls were more common in Spain 30+ years ago than at present. Data from winter censuses in Asturias between 2002 and 2007 gave a mean proportion of 1.06% Herring Gulls amongst the Yellow-legged Gull *L. michahellis* contingent. It is estimated that between 250 and 400 Herring Gulls are present in Asturias in mid January, and between 500 and 700 in the whole of Spain at the time of the winter censuses. There are two possible but unconfirmed attempts of breeding.

Introduction

Historically, few Spanish ornithologists have dedicated time to gull watching, but in recent years there has been an upsurge in the number of people doing so. Many taxa of gulls require clarification of their status in Spain, both numerically and temporally, and one such species is the Herring Gull *Larus argentatus*. Herring Gulls breed along the Atlantic coasts of Europe, except in Iberia, the subspecies *L. a. argenteus* from France north through the British Isles to Faroe and Iceland, and *L. a. argentatus* from Norway and Germany east through the Baltic counties to northwest Russia, with an overlap zone in the Low Counties and western Germany (Malling Olsen & Larsson 2004). Northernmost continental populations are the most migratory, and both subspecies winter regularly as far south as the UK and France.

There is little relevant information about the species' status in Spain in older (e.g. García Sánchez 1990) or more recent studies (Álvarez Laó 2004; Sandoval Rey 2005), and the basic information remains that which was contributed by several ornithologists for the book *Seabirds of Spain and Portugal* (Aves marinas de España

y Portugal) (Paterson 1997). It was believed then that Herring Gulls were regular but scarce on the north coast of Spain (mainly *L. a. argenteus*), but accidental elsewhere. However, more recent information on Herring Gulls exists in regional annual reports, and to provide an update of its status in Spain, a compilation of these data was carried out, with special emphasis on more intensive observations in the Asturias autonomous community.

Material and methods

Records of Herring Gulls were extracted from annual reports from the late 1990s onwards (Bahillo Martín & Alonso Carrasco 1998; De Souza *et al*. 1998; García Sánchez 1998, 2003, 2004, 2006; Barros & Galan 2000; Copete 2000; Vidal & Salvadores 2000, 2003; Martínez 2001; Bermejo *et al*. 2002; Salvadores & Vidal 2002; Garrido Guil 2004; Romay Cousido 2004; Conde Teira & Lijó Pose 2006; Sales 2006; Estrada & Antón 2007). Searches were also made of internet forums, both regional (Galicia, Asturias, Cantabria, Basque Country, Catalonia, Valencian Community and Madrid) and national (*Avesforum*, *Forogiam*, *Rarebirdspain*), and of the Bulletin of the Iberian Seabird Group (GIAM), while ornithologists particularly interested in gull identification were also consulted.

The origin of birds was assessed through analysis of ringing recoveries, compiled by consulting the Spanish migratory species office and numerous ornithologists, and mainly carried out by Antonio Sandoval Rey, Antonio Gutiérrez and Javier Marchamalo.

Data from the 2002–07 winter gull censuses in Asturias, where for 20 years particular attention has been paid to the identification of Herring Gulls, were analysed to allow a more detailed assessment of the species' status in that autonomous community. Fortnightly censuses in Avilés estuary (Asturias: 43°35'N 05°55'W) in 2001–03 paid particular attention to the Herring Gull, allowing an assessment of the phenology and age composition of the species at that site; counts were made at two main locations, the fish market and the Llodero inlet. Because the species was scarce in the study area during the winter 2002–03, the age composition data presented here are mainly derived from the winter 2001–02.

Identification of Herring Gull and separation from similar species (i.e. Yellow-legged Gull *L. michahellis*) can be difficult and requires some observer experience (Malling Olsen & Larsson 2004). Avilés provides good opportunities to study a range of gull species, allowing for the direct comparison between individuals that enables the observer to gain the experience needed for confident identification. In the study area, the local form of Yellow-legged Gull *L. michahellis* '*lusitanius*' is similar in size and structure to Herring Gulls, but its coloration is different (Malling Olsen & Larsson 2004). In first-winter Herring Gulls, the notably paler inner primary windows and paler wing coverts are diagnostic characters. Herring Gulls of the subspecies *argenteus* of older ages show an obviously lighter mantle colour than *michahellis*. However, because of the great variation in gulls, only individuals showing the typical features have been reported and it is likely that a proportion of the Herring Gulls were not detected. Nominate Herring Gulls are identified by

their larger size and heavier structure, while immature birds are lighter than *L. m. 'lusitanius'* and adults show heavily streaked heads.

Results

Status in Spain: The estimated average annual number of Herring Gulls visiting each autonomous community and the species' inferred status there is shown in Table 1. In the past decade, the species appears to be scarce in the northern Iberian coast, rare in southern Atlantic Spain, in inland Spain and Catalonia (NE Spain), and accidental elsewhere.

Table 1. The estimated annual number of Herring Gulls *Larus argentatus* occurring in each autonomous community in Spain in 2000–10, and its status there.

	Autonomous community	No. birds	Status
Northern Atlantic Spain	Galicia	150–275	very scarce
	Asturias	800–1000	scarce
	Cantabria	25–75	very scarce
	Basque Country	50–100	very scarce
Mediterranean coast	Catalonia	7–20	rare
	C. Valenciana	0–1	accidental
	Murcia	0	accidental
	Baleares	0–1	accidental
Interior	Interior	1–5	rare
Southern Atlantic Spain	Andalucía	1–5	rare
	Canarias	0	accidental
	Total	1034–1482	

Origins and subspecies: Thirty metal and 13 colour-ringed Herring Gulls were reported in Spain between 1952 and 2010, of which 23 (53%) had been ringed in the UK (no records from Ireland were found), nine (21%) in France, seven (16%) in The Netherlands, two (5%) in Denmark, and singles in Belgium and Lithuania (2% each) (Appendix 1). Only the Danish and Lithuanian recoveries came from the breeding range of nominate *L. a. argentatus*, the remaining 93% having been ringed within the range of *argenteus*, or in the overlap zone between the subspecies (Belgium and The Netherlands). Most (38, 88.4%) ringing recoveries and colour-ringed individuals were recorded on Atlantic coasts, with 28 (65.1%) in northern Spain and 10 (23.3%) in Atlantic Andalucia, including singles from Denmark and Lithuania. The few Mediterranean records might suggest a more eastern origin, with two from Holland, one from Denmark and only one from the British Isles. One UK recovery in southern Spain (Jaen province, 1985) was treated as an inland record, despite being close to the Mediterranean coast (Figure 1).

Wintering: It is difficult to comment on any changes in the wintering status of Herring Gulls in Spain, as there is very little historic information. However, the temporal distribution of metal ringing recoveries suggests reduced numbers since the 1980s. While Figure 2 might suggest a different conclusion, the data are biased by the increased effort in colour-ringing in the breeding areas in recent years (all colour-ring sightings were in 2004–10 and no metal ring has been reported since October 2003).

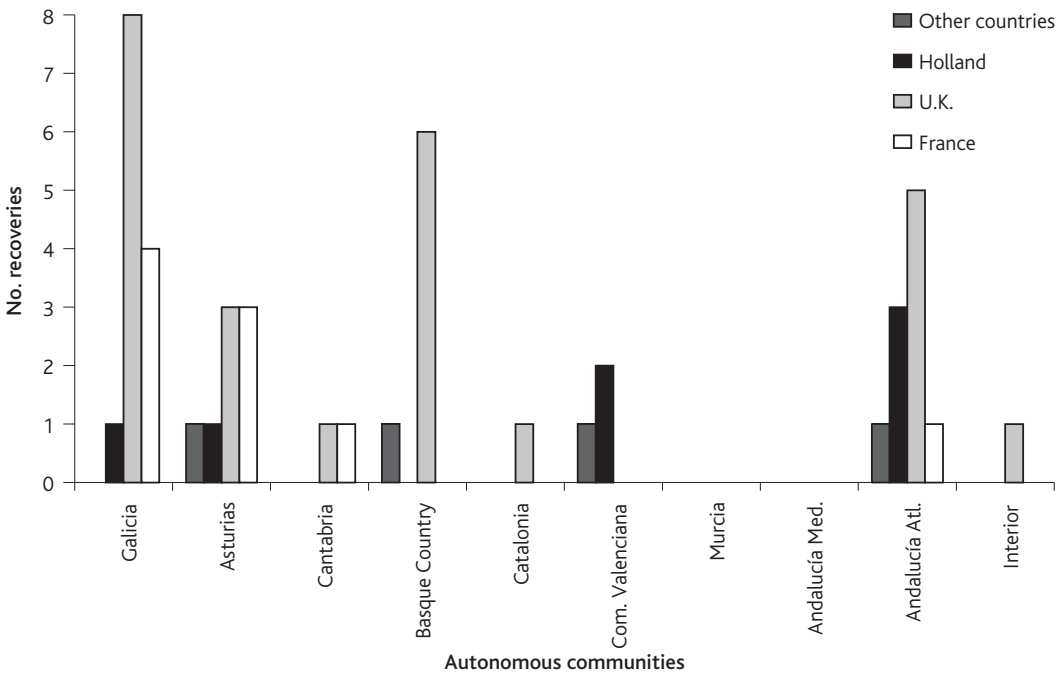

Figure 1. The distribution of Herring Gull *Larus argentatus* ringing recoveries and sightings of colour-ringed individuals (1950–2010) by Spanish autonomous community, according to the country of origin. One UK colour-ringed individual was seen in both Galicia and Asturias, and another in both Asturias and the Basque Country (Appendix 1). Percentages in the text refer to individual birds (43), whereas the numbers plotted here include the multiple sightings, i.e. 45.

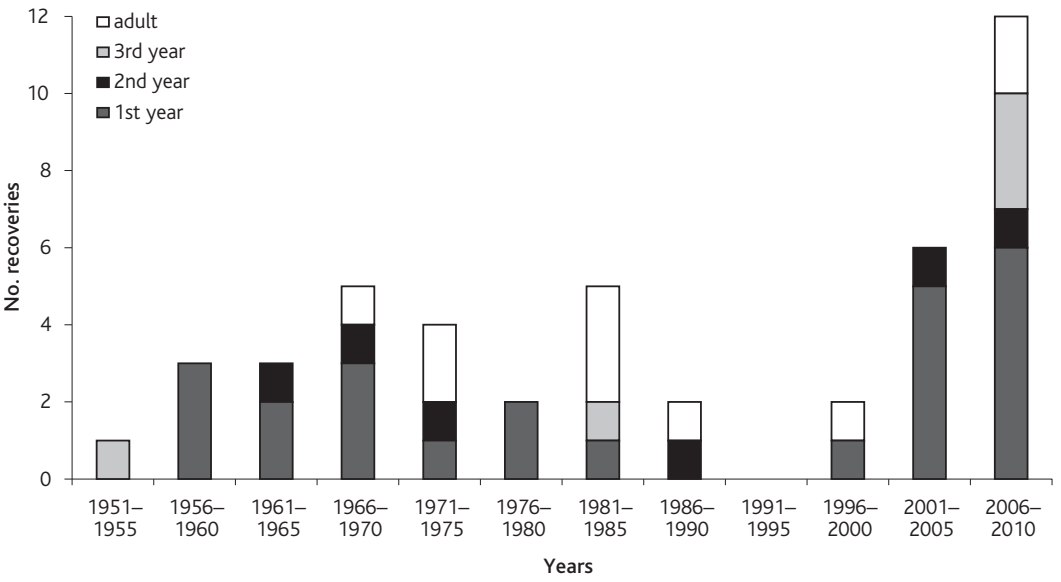

Figure 2. The temporal distribution of ringing recoveries of Herring Gulls *Larus argentatus* and sightings of colour-ringed individuals in Spain, by age-classes.

Breeding: There are two records of incubating adult Herring Gulls at Cape Pasajes (Basque Country, N Spain), in 1993 (G. Gorospe in Paterson 1997) and 1999 (González 2002), the latter apparently having been seen in another year not specified by the author. However, there are concerns about the correct identification of these birds, which may have been Yellow-legged Gulls with flesh-coloured legs (pers. obs). On the other hand, a Herring Gull was observed in courtship with a Yellow-legged Gull in the Ebro Delta (Catalonia, NE Spain), in 1995 and 1996, but breeding was not confirmed (Oro 1997; Estrada *et al*. 2004).

Status in Asturias: Herring Gull is most frequent in autumn and winter, when some birds can be found on most beaches and estuaries between August and February. Very few are seen in April or May, and it is rare in June and July. *L. a. argenteus* is the commoner subspecies, but in all years some birds with features of *L. a. argentatus* were observed.

The proportion of Herring Gulls among flocks of Yellow-legged Gulls during the winter censuses in Asturias was estimated at a mean of 1.06% (range 0.36–3.33%), for those areas where care was taken over the identification of Herring Gulls. Using these data, a total was obtained of 329–392 Herring Gulls present in 'normal' years, falling to 244 birds in the 'poorer' year. Thus, it is possible to estimate the number of Herring Gulls in Asturias in mid-winter as being between 250 and 400 birds. This figure is lower than that shown in Table 1 for Asturias because the latter refers to observations throughout the year while the former is derived only from the international winter census conducted in a single day in January.

Status at Avilés: With the exception of April 2003, Herring Gulls were seen throughout the year in both 2001–02 and 2002–03 (Figure 3). Numbers were highest in autumn and winter, and the species was very scarce in spring and summer. Numbers also varied between years; in 2001–02 a total of 116 birds was observed, while in 2002–03 only 56 were seen. Two-thirds of birds in autumn were in their first two years of life, immatures were present throughout the year, whilst adults appeared only in autumn and winter, with a large movement of adults detected in mid February 2002 (Table 2, Figure 4).

Origins and subspecies at Aviles: As in Asturias generally, most Herring Gulls identified at Avilés belonged to *L. a. argenteus*. The season 2001–02 was the best

Table 2. Age composition of Herring Gulls *Larus argentatus* observed in the Avilés estuary in 2001–02 and 2002–03.

Age in years	2001–02	2002–03
1st	51 (44.0 %)	27 (48.2 %)
2nd	26 (22.4 %)	13 (23.2 %)
3rd	6 (5.2 %)	5 (8.9 %)
adult	33 (28.4 %)	11 (19.7 %)
Total	116	56

on record for sightings of nominate Herring Gulls in the area: between October 2001 and April 2002 up to five individuals showing features typical of *L. a. argentatus* were observed, three first-year birds, one second-year bird and one adult. Thus, in 2001–02 Nordic birds comprised 4.3% of the total number of Herring Gulls observed (116), whereas in 2002–03 when the species was scarcer, no *argentatus* was identified.

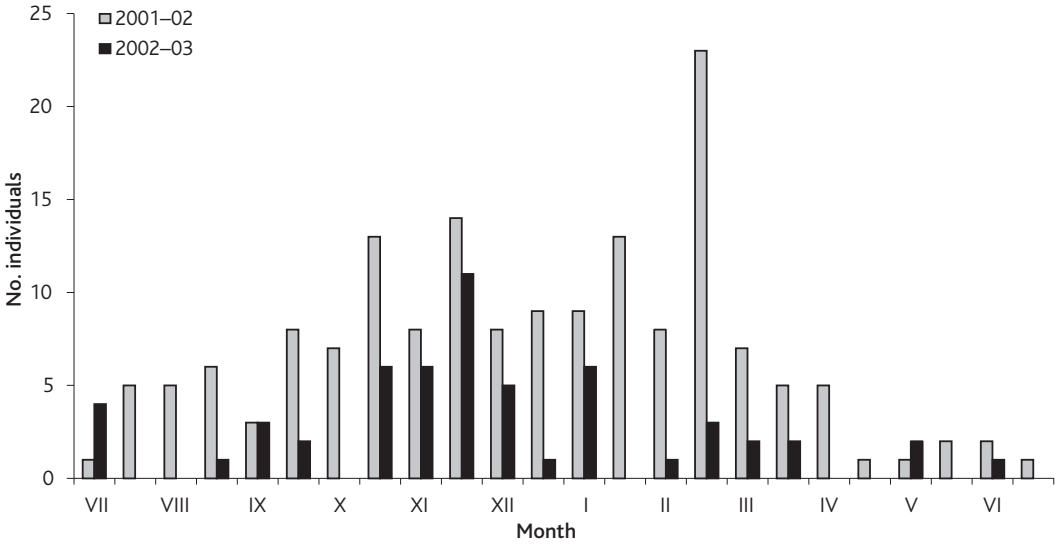

Figure 3. Fortnightly occurrence of Herring Gulls *Larus argentatus* in the Avilés estuary in 2001–02 and 2002–03.

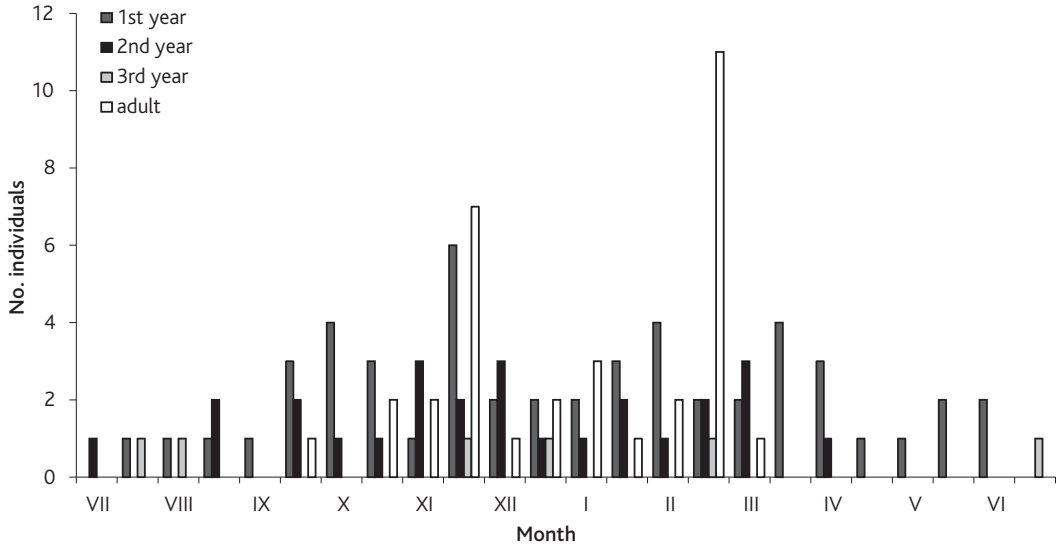

Figure 4. The occurrence by age of Herring Gulls *Larus argentatus* recorded on fortnightly censuses in the Avilés estuary in 2001–02.

Discussion

Status in Spain: The identification and separation of Herring Gull from Yellow-legged Gull requires a good knowledge and wide experience of plumages. The data given here for Asturias are believed to be relatively accurate, but this is not necessarily so for other regions, and the number of Herring Gulls visiting Atlantic northeast Spain might be greater than is presently known because of a relatively low observer effort there. Equally, Herring Gulls almost certainly occur in Galicia more frequently than is currently estimated. The ten ringing recoveries in the Atlantic (western) part of Andalusia (but only two of which were since 1987) and a lack of recent observations there, despite increased observer effort, contrasts with the five recoveries and 12 colour-ringed individuals sighted along the Cantabrican coast from Lugo to Guipúzcoa. This suggests Herring Gulls may once have been at least as common in southwest Spain as they are now on the Cantabrican coast, and that their status in Cádiz and Huelva provinces has changed considerably in the past 20 years. It would be interesting in a future study to complement the information presented here with a similar analysis from Portugal.

Origins and subspecies: Most Herring Gulls of known origin (i.e. ringed) recorded in Spain were British (53.5%). However, the origin of the birds could differ between regions. Up to 1997, there had been no recoveries from the Mediterranean of Herring Gulls ringed as pulli in Britain and Ireland (Calladine 2002) and this analysis found only one such individual, a UK-ringed first-winter bird recovered in Girona, Catalonia in October 2003 (Appendix 1). The other three Mediterranean recoveries traced had been ringed in The Netherlands (2) and Denmark (Appendix 1). Although the numbers are small, these recoveries might indicate that Herring Gulls visiting the Spanish Mediterranean are more likely to come from the contact zone between the two subspecies (i.e. the Low Countries) or populations further east. Herring Gulls ringed in eastern Germany, Poland and Finland have been recovered in Italy and Greece in winter (Malling Olsen & Larsson 2004).

A study at Gijón, Asturias in 1989–90 indicated that most Herring Gulls observed there belonged to the subspecies *L. a. argenteus*, with only a few *L. a. argentatus*, but no details of numbers or ratios were provided (García Sánchez 1990). Only 5.3% of the total of ringed Herring Gulls recovered in Spain belonged to *argentatus*, a similar proportion to that observed in the field at Avilés in 2001–02 (4.3%). There are many Herring Gull colour-ringing programmes in Northern Europe (www.cr-birding.org), and while many of these gulls winter in France, they do not normally appear to move as far south as Spain (Malling Olsen & Larsson 2004).

A compilation of observations of nominate *argentatus* Herring Gulls in Galicia and Asturias found 34 records up to 2003 (Álvarez Laó 2004), with the number of birds fluctuating annually, as has been observed at Avilés (pers. obs). Initially, it appears surprising that 19 (56%) of these records refer to adult birds, whereas at Avilés most *L. a. argentatus* observed are immatures (80%, pers. obs.). It is believed that this may be a result of two identification errors made by many observers, namely

the lack of knowledge of plumage features to differentiate immatures of the two races, and confusion between fourth-year Yellow-legged Gulls still showing some immature features (principally pink legs) and adults of *L. a. argentatus*.

Phenology: At Avilés, post-breeding migration of Herring Gulls begins in the second fortnight of July when, in some years, the first juveniles are seen. The autumn maxima may fall in either October or November. Pre-breeding movement is evident at Avilés between February and April, and in some years there are spring records of adults (pers. obs.). In contrast, records in the Asturias annual reports (García Sánchez 1998, 2003, 2004, 2006), suggest Herring Gulls are more frequent in January than in autumn, as do data in the Galician annual reports (Sandoval Rey 2005). This could be due to a bias in observer effort, however, as most observers tend to show a greater interest in this species during the winter census. Therefore, the most appropriate way to determine the phenology of this scarce species is through specific studies, rather than the use of casual records. Appendix 2 details the phenology of some colour-ringed individuals.

Age groups: In the 1989–90 study in Gijón, adults comprised 24% of the Herring Gulls seen, first-year birds 45% and the remainder were immatures; there were no data on sample sizes (García Sánchez 1990). These percentages are similar to those observed in Avilés (this study), and elsewhere in Asturias (García Sánchez 1998, 2003, 2004). In contrast, 88% (n = 76) of records in Galicia refer to adults (Sandoval Rey 2005). While not discounting the possibility of some age segregation along the north coast of Spain, this difference may also reflect the difficulty some observers have in separating juvenile and immature Herring and Yellow-legged Gulls.

Wintering: The temporal distribution of ringing recoveries suggests a decline in the occurrence of Herring Gulls in Spain in the last 10–20 years, which would be in agreement with reductions in breeding populations in parts of Western Europe, especially the British Isles (Madden & Newton 2004; Malling Olsen & Larsson 2004).

García Sánchez (1990) estimated 1.30% of Herring Gulls amongst the total number of *L. michahellis / argentatus* wintering at Gijón in 1989–90, a figure similar to that obtained for the wintering total for all Asturias (1.06%) in 2002–07 in this study. If we extrapolate from this more recent ratio, the number of Herring Gulls wintering in Asturias would be 500–1,000. It had previously been estimated that 500–700 Herring Gulls were present in the whole of Spain at the time of the January census (Álvarez Laó 1993). That the more recent estimate for Asturias is higher than the earlier one for all of Spain is probably due to a greater appreciation of identification features and greater accuracy of specific identification, compared to the early 1990s.

Nesting: The two reported attempts of breeding by the Herring Gull involved single birds, either in courtship behaviour with a Yellow-legged Gull in Catalonia (Oro 1997) or incubating at the nest in the Basque Country (Paterson 1997; González 2002). Therefore successful breeding in Spain has not been confirmed

yet. Moreover, given the lack of proper descriptions or photographs of these birds, the possibility of confusion with adult Yellow-legged Gulls showing immature features such as flesh-coloured legs should not be discounted.

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Appendix 1. List of Herring Gull *Larus argentatus* ringing recoveries in Spain. **Sightings of live colour-ringed individuals are shown in bold.** Recovery provinces are in Northern Atlantic Spain (NAS), Southern Atlantic Spain (SAS), Mediterranean (MED), or Interior (INT).

Country	Ringing date	Recovery or sighting month and year	Recovery province	Age at recovery or sighting
UK	VII.1952	I.1955	Cádiz (SAS)	2 years, 6 months
UK	VI.1956	VII.1970	Sevilla (SAS)	4 years, 1 month
UK	VII.1964	XI.1973	Pontevedra (NAS)	9 years, 4 months
UK	VI.1965	XII.1965	Cádiz (SAS)	6 months
UK	VI.1966	V.1967	A Coruña (NAS)	11 months
UK	VI.1966	I.1968	Cantabria (NAS)	1 year, 7 months
UK	VI.1969	VI.1975	Vizcaya (NAS)	6 years
UK	VII.1970	XI.1970	Pontevedra (NAS)	4 months
UK	V.1980	IV.1987	Huelva (SAS)	ringed as adult, > 6 years, 11 months
UK	VI.1980	XII.1996	Pontevedra (NAS)	16 years, 6 months
UK	VII.1982	VII.1985	Jaen (INT)	3 years, 1 month
UK	VII.1989	XI.1990	A Coruña (NAS)	1 year, 1 month
UK	VII.1998	I.1999	Guipúzcoa (NAS)	6 months
UK	VI.2000	VII.2001	Cádiz (SAS)	1 year, 1 month
UK	VI.2003	X.2003	Girona (MED)	4 months
UK	**VI.2003**	**III.2006, VIII.2007, XII.2007, I.2009, VIII.2010 to XI.2010**	**Vizcaya (NAS)**	**2 years, 9 months to 7 years, 5 months**

UK	VII.2003	I.2004, III.2006	Vizcaya, Guipúzcoa (NAS)	6 months to 2 years, 8 months
UK	VI.2005	XII.2005 to V.2006, XII.2006 to II 2007, III.2007	Asturias, Guipúzcoa (NAS)	6 months to 1 year, 9 months
UK	VI.2005	I.2007, III.2008	A Coruña, Asturias (NAS)	1 year, 7 months to 2 years, 9 months
UK	VIII.2006	III.2007	Vizcaya (NAS)	7 months
UK	X.2008	I.2009, II.2009, III.2009	Lugo (NAS)	3 months to 5 months
UK	V.2009	XII.2010	A Coruña (NAS)	ringed as adult, > 1 year, 7 months
UK	VI.2009	I.2010, III.2010	Asturias (NAS)	7–9 months
Holland	VII.1958	IX.1958	Valencia (MED)	2 months
Holland	VII.1957	XII.1957	Cádiz (SAS)	5 months
Holland	VI.1966	I.1967	Pontevedra (NAS)	7 months
Holland	VI.1974	XI.1975	Cádiz (SAS)	1 year, 5 months
Holland	VII.1975	VII.1976	Asturias (NAS)	1 year
Holland	VI.1979	XII.1984	Valencia (MED)	5 years, 6 months
Holland	VI.2001	XI.2001	Cádiz (SAS)	5 months
France	VI.1958	VIII.1958	Cantabria (NAS)	2 months
France	VII.1960	I.1962	Pontevedra (NAS)	1 year, 6 months
France	VI.1961	V.1962	Sevilla (SAS)	9 months
France	VI.1979	II.1982	A Coruña (NAS)	2 years, 8 months
France	VI.1980	X.1980	Asturias (NAS)	4 months
France	VI.1981	XI.1981	A Coruña (NAS)	5 months
France	VIII.2006	IV.2008, VIII.2008, IX.2008	Lugo (NAS)	1 year, 8 months to 2 years, 1 month
France	VIII.2008	I.2009	Asturias (NAS)	5 months
France	VII.2010	IX.2010	Asturias (NAS)	2 months
Denmark	VI.1969	II.1974	Castellón (MED)	4 years, 8 months
Denmark	VI.1982	XII.1985	Cádiz (SAS)	3 years, 6 months
Belgium	VI.2004	II.2005	Asturias (NAS)	8 months
Lithuania	VI.2009	XI.2009	Vizcaya (NAS)	3 months

Appendix 2. Some sightings of individual colour-ringed Herring Gulls *Larus argentatus* in northern Spain.

Green L:Y : Ringed on 29 June 2005 as a pullus in Wales, it was still in Britain on 12 December 2005, but nine days later was seen in Avilés, where it remained until 19 May 2006. On 23 May 2006 it was in France, and was then observed in its natal colony between August and October 2006. It was seen again in Avilés on 21 December 2006 and remained until 19 February 2007, before being seen in Zarautz (Basque Country) on 5 March 2007.

White 0P0 : Ringed on 19 June 2005 as a pullus in Guernsey (Channel Islands), it was seen in A Coruña in January 2007 and in Avilés on 19 March 2008.

White 7M6/2.AP6 : Ringed on 25 June 2003 as a pullus in Guernsey, it was seen in Getxo and Lemoiz (Vizcaya) on 6 and 12 March 2006, and again there on 22 August 2007, 14 December 2007, 19 January 2009, and from 29 August 2010 to 5 November 2010.