

**ECOLOGY AND CONSERVATION  
OF MEDITERRANEAN SEABIRDS  
AND OTHER BIRD SPECIES UNDER THE BARCELONA CONVENTION**

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## Results from ringing chicks of Audouin's Gulls *Larus audouinii* at Aspretto colony (Corsica) and controls in Corsica of chicks ringed in Italy

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The Audouin's Gull *Larus audouinii* breeds in the gulf of Ajaccio (Corsica, France ; 41°55' N, 08° 47' E) in a Natura 2000 area (SPA FR9412001, FR9410096), with 38 to 59 pairs. The ringing of young birds with alphabetical colour rings began in 2000 and 293 birds have been ringed in 9 years. Many birds have been controlled and these controls allow to map their dispersal and to estimate their survival and degree of philopatry. Furthermore, the controls in Ajaccio of birds ringed outside Corsica show exchanges between colonies. We have also estimated the age of first reproduction, the breeding success according to age and the sex-ratio in relation to the origin of birds.

The majority of Corsican Audouin's gulls are in Morocco in autumn and winter (Figures 1 & 2) and a first winter bird has been seen as south as Senegambia). In spring, a number of Corsican-born birds stay in Italy and Spain.

Most of the foreign birds seen at Aspretto are coming from Italian islands, above all Sardinian islands and Tuscany, also from Apulia (Figure 3). Despite the high number of birds ringed in the Ebro delta, Spain, only two Spanish Audouin's Gulls were seen at Aspretto. Six chicks ringed in Italy settled to breed on the study colony.

Corsican birds do not return to the colony in their first-year (Figure 4). First breeding occurs in the third or fourth year. Reproductive success is very low (Figure 5).

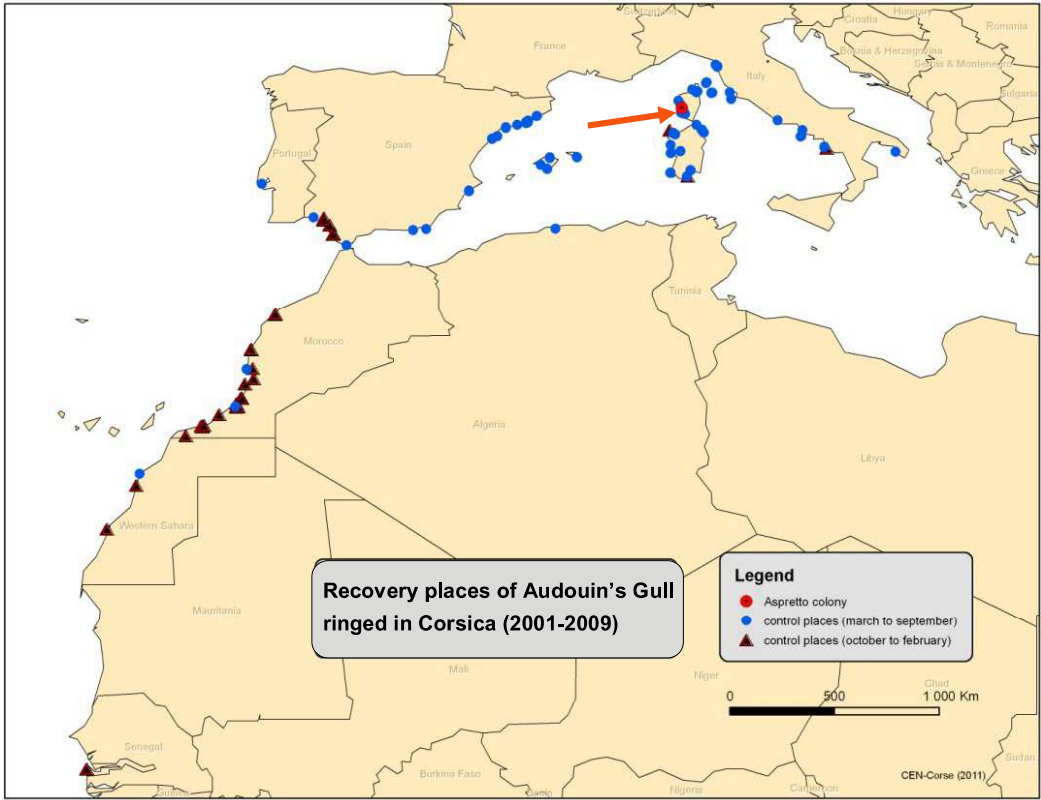


Figure 1. Map showing observations of Audouin's Gulls ringed as chicks at Aspetto colony (Corsica: red spot).

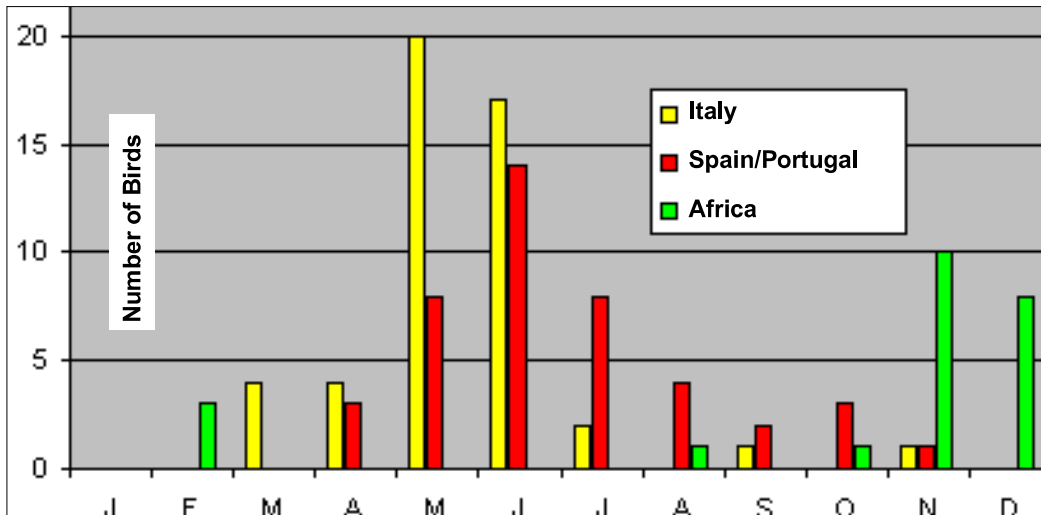


Figure 2. Number of Audouin's Gulls ringed as chicks at Aspetto colony (Corsica) observed by month in Italy (yellow) , Spain/Portugal (red) and Africa (green) .

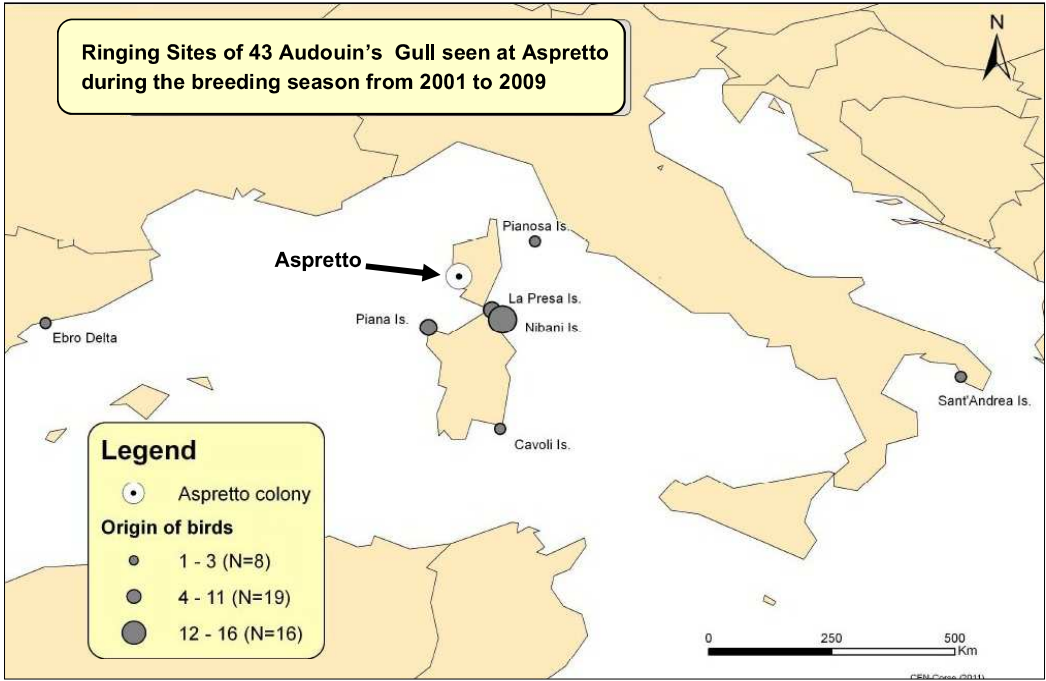


Figure 3. Sites in Italy and Spain where Audouin's Gulls were ringed and observed at Aspretto (Corsica).

Age class	Rate of global recapture	Rate of local recapture
First year	7 %	0 %
Second year	26 %	between 0% et 84%
Third year and more	64 %	64 %

Table 1. Recapture rate for Audouin's Gulls *Larus audouinii* ringed at Aspretto, Corsica, as calculated with M-Surge software (Lebreton *et al.* 1992, Choquet *et al.* 2004).

Age class	Global survival	Confidence interval	Local survival	Confidence interval
First year	0.64	0,52 – 0,74	0,46	0,36 – 0,56
Second year and more	0.87	0,81 – 0,92	0,9	0,83 – 0,95

Table 2. Global survival of Audouin's Gulls ringed at Aspretto, Corsica.

The probability of control of Audouin's gulls ringed as chicks at Aspretto increases with age (Table 1). The calculated survival for first-year Corsican birds (0.64, Table 2) seems to be lower than that calculated in the Ebro delta (0.79 according to Oro 1998), but this value might be underestimated. For second-year and older birds, no comparison is possible with Ebro delta since the used age-class

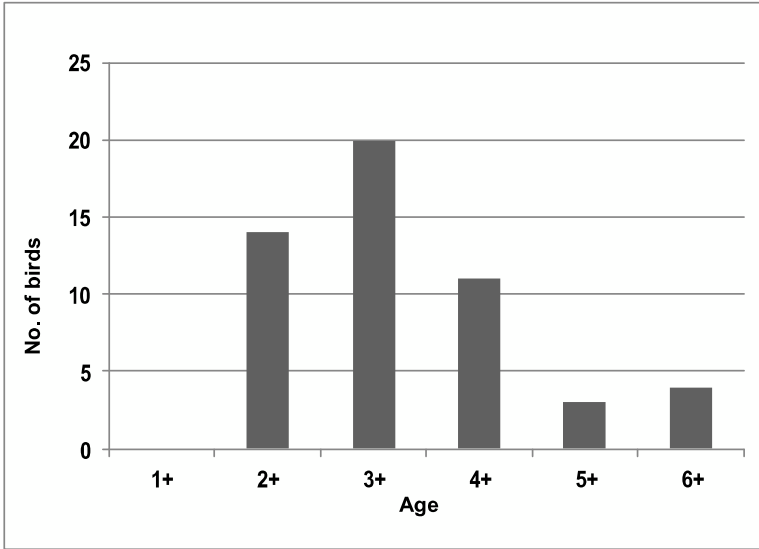


Figure 4. Age of the first return to the colony of Audouin's Gulls (N= 60),

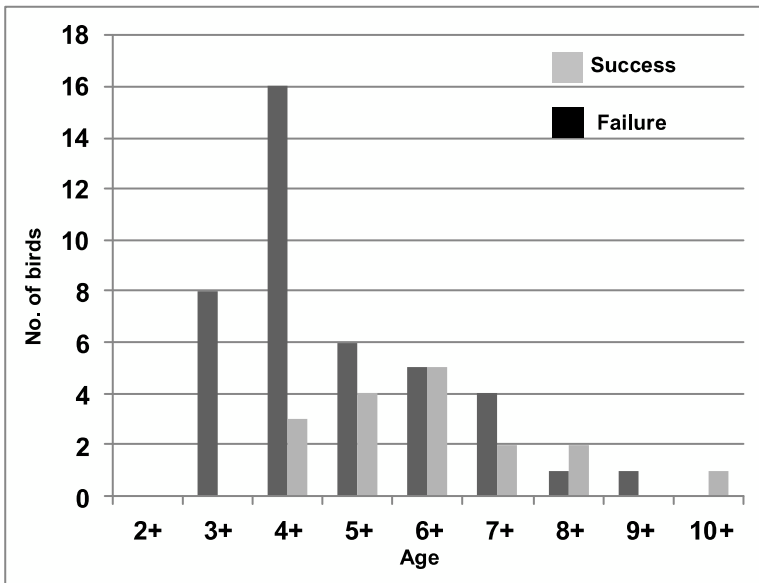
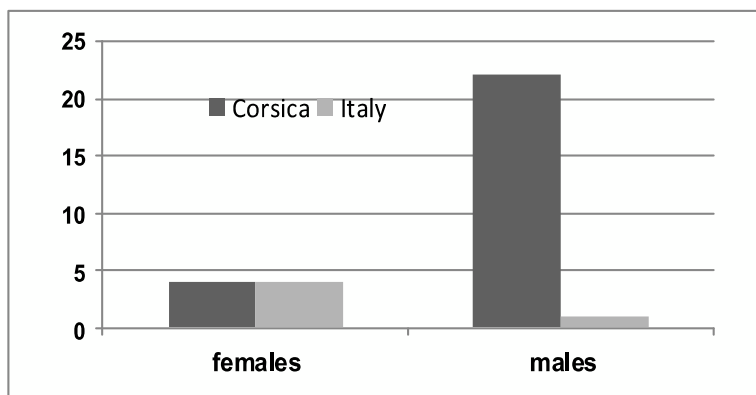


Figure 5. Breeding success of Audouin's Gulls ringed at Aspretto or in Italy in relation to age.

system differs. In any case, our sample size needs to increase in order to obtain more precise results, particularly through smaller confidence indexes.

Figure 5 shows that 84.7% of the ringed chicks at Aspretto and controlled at this colony were males. The recruitment of females from Italian colonies indicates exchange between colonies



**Figure 6. Sex-ratio of ringed Audouin's Gulls breeding at Aspetto, Corsica (N=31: 22 males and 4 females ringed in Corsica and 1 male and 4 females ringed in Italy).**

around Corsica, Sardinian and Tuscan archipelagos. We expect that the continuation of the ringing programme and more intensive reading of coded rings at breeding colonies (both in Corsica and in Italy) will improve the estimate of survival rates. It will also allow to compare the local survival of males and females, which might help to understand the apparent sex-biased philopatry. Overall, a better knowledge of reproduction failures and exchanges between colonies should help us to understand the mechanism of desertion of colonies.

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