

Identifying stopover wetlands for the conservation of an endangered waterbird species: the role of Santoña Marshes for the Eurasian Spoonbill *Platalea leucorodia* during autumn migration

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INTRODUCTION

Santoña Marshes (Cantabrian Coast, Spain) provides roughly 1.500 ha. of intertidal areas, for spoonbills *Platalea leucorodia* and another waterbirds, inside the East Atlantic Flyway. For spoonbills, an endangered species (SPEC 2), their autumn passage begins in Santoña in mid-august and ends in mid-october, picking during September.

METHODS

Since 2000 to 2004 years we studied species use of the estuary, continuously at least from september 1st to 28th, and daily from 9h00 to 20h00. To obtain the total number of individuals that use the area during this period, we sum every flock that leave the area after using it. More than 250 volunteers had participate in this five year study. In 2002, 2003 and 2004, we studied simultaneously, the individual use of the estuary, at least from September 1st to 30th. For this purpose we located daily every ringed bird from a boat, during 1 hour before to 1 hour after low tide.

RESULTS

In this three-year study, we located a total of 233 PVC-ringed spoonbills during autumn migration that were correctly identified in databases (*). 80% of all ringed birds identified came from three of the most important breeding sites, located all in the Wadden Sea area.

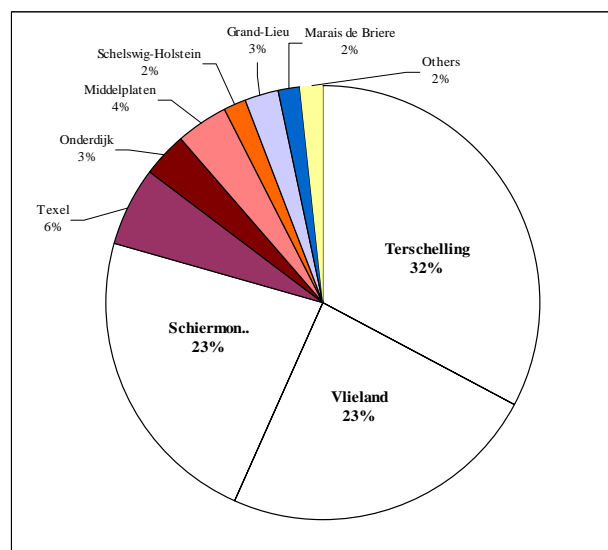


Figure 1. Origin of ringed birds located in Santoña during autumn migration (n=233).
(* International Spoonbill Workinggroup)

Every year, at least since 2000, more and more Spoonbills have been stopping at Santoña Marshes during post-breeding migration (Figure 2).

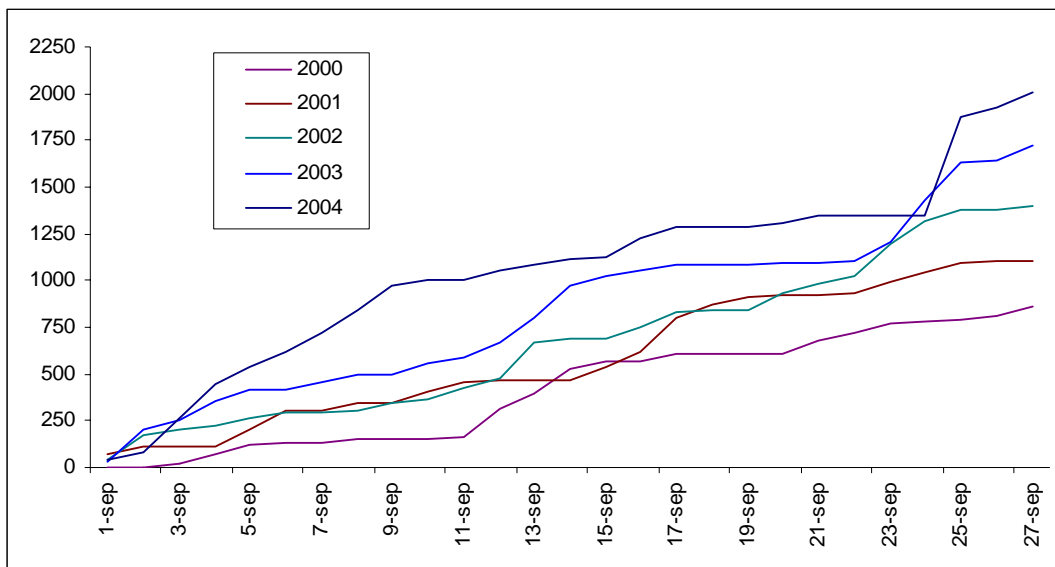


Figure 2. Summarize of results of monitoring spoonbill migration (2000-2004).

Arriving flocks are composed of a smaller number of birds than leaving ones (Figure 3).

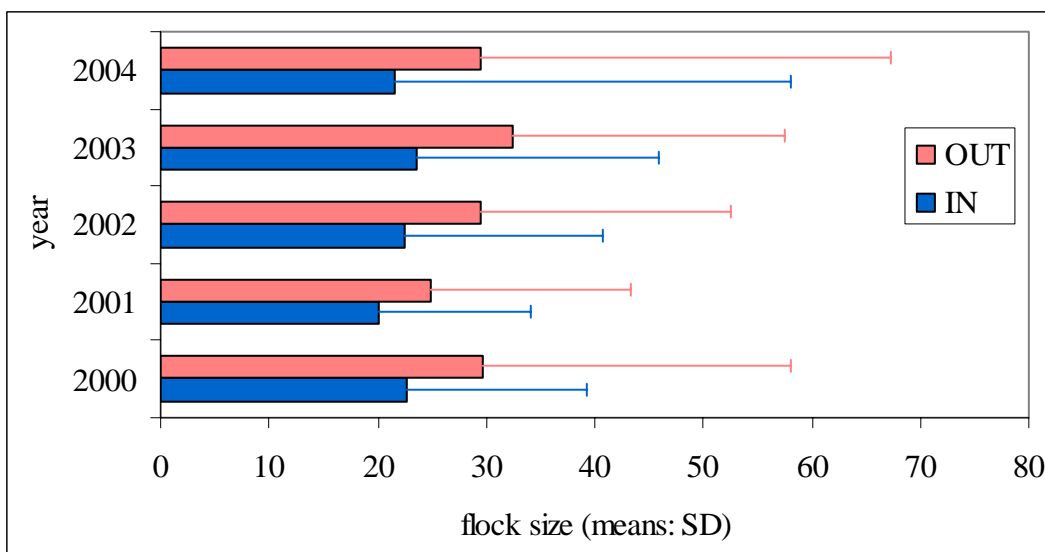


Figure 3. Mean size of flocks arriving (IN) and leaving (OUT) the estuary (2000-2004).

Birds from different breeding areas, and from different age class, stop in Santoña Marshes at different periods of September (Figures 4a and 4b).

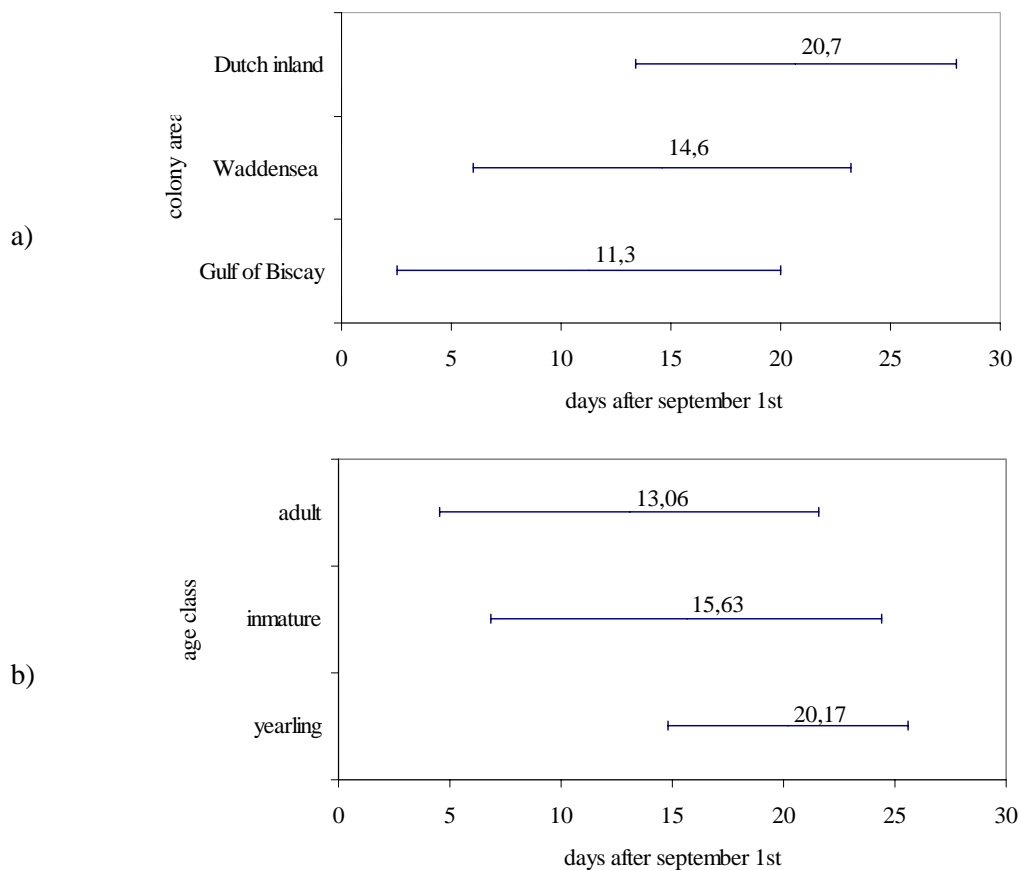


Figure 4. Arrival date related (n=233): (a) to colony area; (b) to age class.

Birds follow two migration routes, although SW direction is the most important (table 1). Flocks exhibit different behaviour when they leave the area: after circling to gain altitude to be able to cross the mountains of the Cordillera Cantábrica (SW direction); or at low altitude following the coastline (W direction).

	2000	2001	2002	2003	2004	ROUTE
SW	83%	80%	86%	76%	72%	79%
W	17%	20%	14%	24%	28%	21%

Table 1. Direction of flocks observed leaving Santoña marshes.

DISCUSSION

Around 35-40 % of the North Atlantic population of spoonbills use Santoña marshes during post-breeding migration (table 2). This site is, therefore, of crucial importance to the species during this period.

	2000	2001	2002	2003	2004
Birds using Santoña	859	1248	1445	1918	2455
Dutch population *	3468	3960	5157	4473	5013
% (minimum)	25%	32%	28%	43%	49%

* Overdijk, O. pers. com.

Table 2. Percentage of Dutch population that stops at Santoña marshes.

Flock size arriving in the estuary was smaller than leaving one, and a high percentage of the North Atlantic population (around 50% of the West Palearctic pop.) stop in the area. It suggests that Santoña Marshes could be the most important meeting point for these population of Eurasian Spoonbill, in the time when flocks were migrating south, and not every bird can follow the flock until they reach the next staging area. These birds that loss the flock they were flying in, meet other spoonbills in Santoña.

Adults precede yearlings, so there could be a different age migration pattern in order to minimize competition for food on key staging areas. Moreover, birds from different colonies reach the stopover area in different periods, so there could also be a different migration pattern related to birds breeding area.

Santoña Marshes could represent a “migration crossroads” for Spoonbills, since birds that continue to the West (around 21%) probably overwinter in the wetlands of the Atlantic coast of Iberian Peninsula, whereas birds that fly to the Southwest (around 79%) overwinter further south.

Therefore, we identify Santoña Marshes as a key staging area for the species during migration. Any ecological or social trouble in this little estuary (less than 1.500 ha) -fuel disaster, casual pollution event (probability to occur?), steep increase in recreational practices-, could lead a drop in the population of this endangered species, since a big part of these birds (e.g. Spoonbills that migrate across Iberian Peninsula) could not be able to reach the next key staging area in their flyway.

Spoonbills need Santoña and Santoña needs Spoonbills

Thus management of this SPA area during this season can play a crucial role for the conservation of the species in the frame of a sustainable development. Particularly, it is essential to develop special policies due to prevent increasing disturbances brought with recreational practices.

Acknowledgments

We thank Alejandro García Herrera, Juan José Aja, Álvaro Bustamante, Virginia Iturriaga, Ana Casero, Máximo Sánchez, and every volunteer that participated in the study, for field assistance. SEO/BirdLife and Reserva Natural de las Marismas de Santoña y Noja had support the volunteer program. Otto Overdijk have improved our work with his efficiently answer of information about ringed birds every migration. We wish to thank Santoña and Bárcena de Cicero councils for helping during the study. María Ruiz and Jose Ángel Valle had help with translation. We also thank Dr. J.A. Masero for his constructive comments.