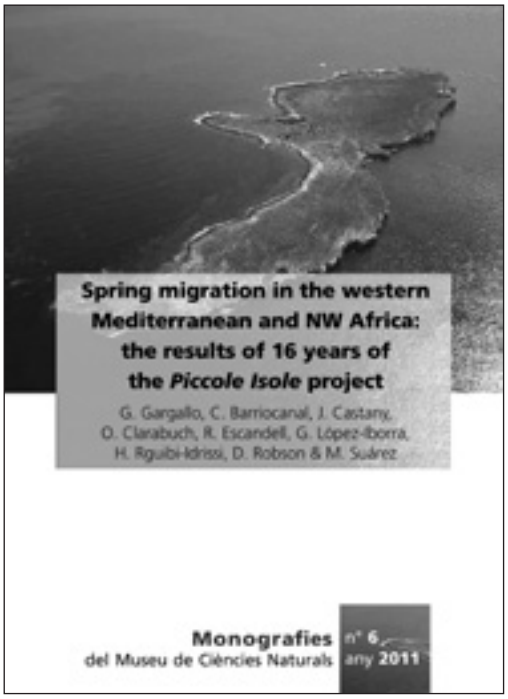
Ressenyes / *Reviews*

Gargallo, G., Barriocanal, C., Castany, J., Clarabuch, O., Escandell, R., López-Iborra, G., Rguibi-Idrissi, H., Robson, D. & Suárez, M. 2011. *Spring migration in the western Mediterranean and NW Africa: the results of 16 years of the* Piccole Isole *project.* Monografies del Museu de Ciències Naturals nº 6. Barcelona: Institut de Cultura de Barcelona.

The Mediterranean area is of prime importance for trans-Saharan migrants given that the crossing of the Sahara desert and the Mediterranean Sea is a challenge for billions of migrant birds. Many details of how these birds handle and manage the crossing of these two great ecological barriers are still unknown and comprehensive information such as that found in this report is of crucial importance to our understanding of this question. Return migration in spring is, as pointed out here, even more demanding than the autumn crossing. The southern edge of the desert move southwards during the dry winter, thereby increasing the distance to be crossed; furthermore, the predominant headwinds make flight energetically more costly. On the other hand, winter rain in North Africa might result in better stopover conditions when birds reach this area.



This report consists of an overview of results from 16 years of ringing at sites along the Spanish Mediterranean coastline, in the Balearics Islands and in Morocco, all part of the *Piccole Isole Project* (PPI) started in 1988 by the Italian Bird Ringing Centre. In the western part of the Mediterranean the project began to operate at one site in 1992 and spread to more sites during the following years. In total, 23 different sites have contributed to information to this report, even if the number of seasons and length of periods for which information is available vary between sites.

The main part of the report is devoted to the 30 detailed species accounts, which include a lot of information and comparisons between sites and/or between the seven areas into which the sites are grouped. Included here is information regarding morphometrics, the intensity of passage, fat score and recapture rates, as well as details of temporal variation in size, physical conditions, fat score and body mass. Recoveries are shown on maps for each species and include birds ringed or recovered in the study area. The overall phenology is shown in graphs and, since the periods of operation varied from site to site and year to year, calculations have been made that take these differences into account. In some species the phenology is also given for different sexes, age classes and subspecies. Although the same throughout the report, some of the figures are somewhat difficult to evaluate since they include different information on different axes; nevertheless, this has enabled the authors to include more information. At the end of the report there is an appendix with the mean, standard deviation and

sample size for third primary length, body mass and fat score for each species and for different areas and pentads of spring period.

The report also includes some very interesting concluding remarks. In this section the authors have made comparisons between wet and dry habitats in the Balearic Islands, which show that dry sites attract birds that are on average in poorer body condition. As well, in some species there is a difference in size between dry and wet habitats, whereby birds found in dry habitats have shorter wings and this is suggested to be a result of poorer flight capacity. Most of the dry sites coincide with the first available landing possibilities and had much greater capture indexes than the wet sites, indicating that birds in poor condition are forced to stop at the first opportunity. Both body mass and fuel deposition rates also differ between habitats and the authors suggest that this might also be an effect of the fact that a larger proportion of birds in wet habitats might have been present at the sites or in the surrounding areas for a few days. This is an interesting issue and a general problem when analysing data of birds on migration – are birds newly arrived after a night of flight or have they been around for some days when trapped? This section also includes comparisons between mainland and island sites, between the western and central Mediterranean, and between autumn and spring migration.

By including sites in different parts of Morocco the authors were able to extend the study area and to evaluate the role of NW Africa during spring migration. A comparison of mean body mass in S and N Morocco indicates that mass gain in NW Africa is generalized in the species studied and this finding is indeed interesting and agrees with earlier suggestions.

I would like to congratulate the authors and all the ringers involved in this very interesting and valuable report describing spring passage through the western Mediterranean. I am sure that this report will stimulate efforts to continue monitoring and analysing bird migration in this region as a means to increasing knowledge of how birds manage to cross the Sahara and the Mediterranean. A continued monitoring of migrants in this area is of great importance due to on-going climate change, which could have detrimental effects on this critical phase of the Palaearctic-African bird migration system.

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