

Foreword

The crossing of ecological barriers represents the most challenging and potentially risky phase of migratory flights. However, each spring huge numbers of migrants cross large stretches of the Sahara desert and Mediterranean Sea with fast and energy demanding endurance flights to reach the breeding grounds as early as possible.

From the energetic point of view, all these migrants need suitable stopover habitats while confronted with the sea crossing. And the system of Mediterranean islands, widely distributed across longitude and latitude, offers a unique opportunity to investigate the fascinating patterns of migratory flights from Africa towards Europe.

The Mediterranean is a centre of biodiversity and endemism, and during the migratory seasons it is also a key area for a large array of species breeding across the Western Palaearctic. Mediterranean countries therefore share a great responsibility for the monitoring of these movements across the sea and for the conservation of huge numbers of migratory birds.

Traditionally, bird migration studies in Europe originated and developed in northern countries and were mostly concentrated on autumn movements; much less was known, in fact, on the patterns and strategies followed by return spring migrants.

Italy is a natural bridge stretched across the Mediterranean and has a large number of islands widely distributed mainly across its western seas. As a student, I had the unique chance to study bird migration through ringing on the remote, wild and fascinating island of Montecristo, where I had realised the great potential of Mediterranean islands for ringing studies, especially through the amazing numbers and diversity of spring staging migrants.

For all these reasons, and also for testing the potential of Italian ringers in carrying on co-ordinated and standardised ringing projects, in 1988 I launched the Progetto *Piccole Isole*. After 24 years, it is with my greatest pleasure that I salute the publication of this beautiful monograph, presenting results obtained by the *Piccole Isole* in Spain and North Africa.

It is amazing what the enthusiasm, commitment, efforts and capabilities of all the Spanish and Moroccan friends have produced during 16 years of their involvement in the project. When I started contacting colleagues in oth-

er Mediterranean countries to propose them to join the project, I would have never dreamed having the honour today of writing these few words of preface to this comprehensive, detailed and most interesting scientific report.

The colleagues and good friends involved in the *Piccole Isole* in the Western Mediterranean could realise the crucial link between North Africa and the Mediterranean for the study of migratory movements in act, offering now new insights on seasonality of movements, species distribution across stopover areas, differential migration of sex- and age-classes, conditions of staging migrants, stopover duration, morphometrics and connectivity of a wide sample of species of both intra-Palaearctic and trans-Saharan migrants.

If the Mediterranean acts as an important barrier between Africa and Europe, it also has, in fact, the important role of a link between the two continents for migratory birds, whose seasonality of passage across the basin is governed, as we could show thanks to results of the *Piccole Isole*, by ecological factors acting both in Africa and Europe.

The volume you will have now the chance to read provides with the most detailed data inventory ever produced on ringing studies in the Western Mediterranean. These results also confirm the amazing potential and productivity of the different research institutions involved in the project as one of the most important and promising ornithological realities within, as well as outside the Mediterranean.

I hope the activities of the *Piccole Isole*, which next year will celebrate its –first!– 25 years, will continue also in Morocco and Spain, producing long time-series of migration data which are of crucial importance to monitor and understand the environmental effects of global climate change, as measured through that most sensitive group of indicators represented by migratory birds.

I warmly congratulate the Museu de Ciències Naturals as the publisher, and the institutions making possible the *Piccole Isole* network in the Western Mediterranean for this volume and wish all the best for the continuation of a joint initiative which has also created a most pleasant and positive exchange of experiences, enthusiasm and friendship across our *Mare nostrum*.

Fernando Spina

Head, ISPRA Italian Ringing Centre
Co-ordinator Progetto *Piccole Isole*