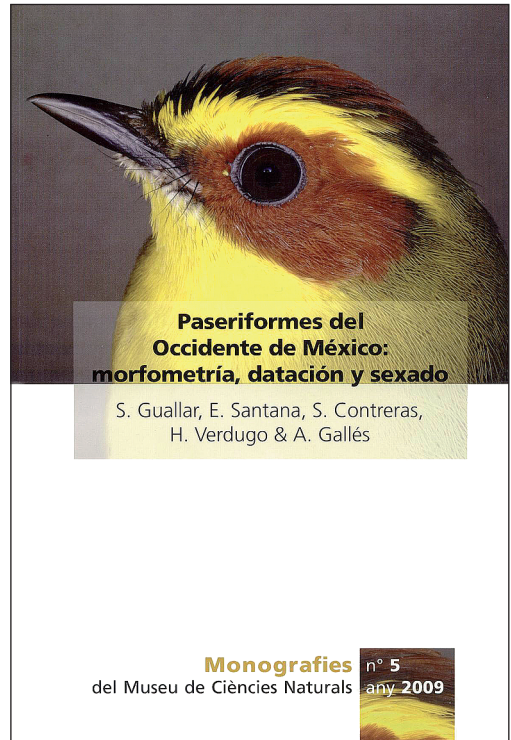


Ressenyes / Reviews

Guallar, S., Santana, E., Contreras, S., Verdugo, H. & Gallés, A. 2009. *Paseriformes del Occidente de México: Morfometría, Datación y Sexado*. Monografies del Museu de Ciències Naturals n° 5. Barcelona: Institut de Cultura de Barcelona.

Moult is a difficult topic for most ornithologists to comprehend, yet it is a vital component of almost all aspects of avian natural history. Bird conservation requires the protection of moulting locations and habitats, but because birds become very retiring while moulting we have almost no understanding on a species-specific basis of their requirements for this process. Our ability to determine the age and sex of birds, essential to tracking population demography, also depends almost entirely on an understanding of moult. In North America and Europe we are slowly making progress on this subject, but for the Neotropical Region we are still in the dark. For the 2006 North American Ornithological Congress in Veracruz, Mexico, I reviewed the literature and my unpublished notes, and calculated that we had some (but often very little) information on moult for only 24% of the 934 species of resident Neotropical landbirds, and for only 8% of the species did we have information on both extent and timing of moults.

Paseriformes del Occidente de México: Morfometría, Datación y Sexado by Santiago Guallar and collaborators (hereafter 'POM'), despite lacking the word *muda* ('moult') in its title (and I understand that this is my bias), is the most comprehensive treatment of moult in Latin American birds to date. It covers 76 species of passerine birds that occur in the biogeographically diverse Sierra de Manantlán region of Jalisco, Mexico, 52 of which are resident species or have resident breeding populations. Only *Birds of El Salvador* by D. R. Dickey and A. J. van Rossem (1938) treats moult in more Neotropical species (89), although in less detail than in POM. Furthermore, POM adds substantial value to our understanding of moult by treating the poorly known winter-ground moults of 24 winter visitors, by placing moult strategies of both resident and migratory species within



biogeographical and ecological contexts, and by linking moult with criteria for determining age and sex for each species. Biometric data on 11 characters (wing length, tail length, tarsus, mass, etc.), exceedingly complete feather-specific data on wing and tail morphology, and information on skull-ossification rates and reproductive characters defining breeding seasons round out the contributions for these 76 species, making it one of the most comprehensive collection of such data for any specific avifauna in the world.

The published version of POM occupies a full 488 pages, including 142 pages of introductory material, 330 pages devoted to the 76 species

accounts and 16 pages listing 523 citations in the published scientific literature. Only a limited number of copies were printed, but the entire volume is retrievable for free on line (see below), thereby making it easily available to biologists worldwide. The entire volume is in Spanish, which will facilitate access by the Latin American biologists who need such information most, but means that English-only ornithologists may have difficulty using it. An English translation could perhaps be considered.

The introductory material includes full details on the methods and terminology used to obtain capture data, examples and considerations of ways to analyze these data, and comprehensive summaries on use of morphometrics, sex-specific plumage and reproductive characters, moult and age-determination criteria, all of which are considered in the context of species' annual moult and breeding cycles. The ecological biogeography of the study area is well described and summarized findings are included relating to information on altitude, climate and the conservation requirements of the region. The introductory sections on morphometrics and moult are full of graphs and charts correlating these aspects of natural history with the surrounding environment, and also proposing hypotheses for how these surroundings shape life-history traits in this avifauna. Cutting-edge analyses consider trade-offs between wing morphology and migration, age and bird mass, and between biometrics and moult strategies. A full 45 pages are devoted to methods of determining age and sex in captured birds, making it the most comprehensive Latin American treatment of this subject in existence. Seven full pages are devoted to explaining the layout and presentation of the species accounts.

My only disappointment with *POM* is the choice of antiquated moult and plumage terminology for use in the species accounts, rather than the clearly more scientifically defensible Humphrey–Parkes (H-P) system used by ornithologists in the Neotropics to trace moult and plumage homologies in an evolutionary context. I suppose in some respects it is unfortunate that Philip Humphrey and Ken Parkes were Americans; otherwise, Europeans such as Guallar and others in Europe would be more likely to accept

H-P terminology. Anti-Americanism may well be justified in some arenas, but I believe the theatre of moult and plumage terminology is not one of them.

Reasons given for using antiquated moult nomenclature (p. 28) are brief and outdated, and I believe that its use results in a number of misconceptions. Adult tropical landbirds largely have protracted prebasic moults and lack inserted prealternate moults and so tracing presumed homologies under the H-P system is not difficult; nevertheless, in *POM* the complete moult seems to be called by different names depending on where and when it occurs, making it difficult if not impossible to place moult strategies in an evolutionary context. Under older traditional systems, furthermore, a single protracted prebasic moult could be called a 'post-nuptial' moult when it starts and a 'pre-nuptial' moult when it ends, leading to the conclusion that there are two different moults when in fact there is only a single protracted moult. Above all in the tropics, it is important that moult terminology be divorced from terms related to breeding seasonality (as the H-P system does), given the protracted and variably seasonal breeding seasons and the suspended moults of many tropical species.

The species accounts are absolute works of art. A heading with a photo of the species is followed by a general description, complete biometric and morphometric data presented in three tables, a thorough section on ageing and sexing the species and a detailed section on moult with shaded diagrams showing the extent of moult. There are often additional graphs and a description of the annual cycle accompanied by easy-to-understand visual charts. For most of the tropical species these are the first descriptions of these characters, and I cannot wait to delve into the details of genera such as *Sittasomus*, *Mitrephanes*, *Myiozetetes*, *Henichorina*, *Melanotis*, *Cardellina*, *Granatellus*, *Diglossa* and *Cyanocompsa*, and to learn more about winter-ground moults and plumages in migratory species of *Vireo*, *Catharus* and *Setophaga* (*Dendroica*). Some day we will in a position to produce an 'Identification Guide' to Neotropical birds and *POM* plugs a large geographical hole, around which we can fill in gaps of knowledge

about moults and plumages. I highly recommend this book to the next generation of ornithologists who, I am convinced, will develop information on moult strategies and these other topics to

a far greater extent than previous and current generations.

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Two versions of this review have been published previously in Catalan in the Catalan Ornithological Institute bulletin *l'Abellerol* nº 42, 2011 and in the journal *Western Birds* vol. 42 (2), 2011. This book is available for free on line at:

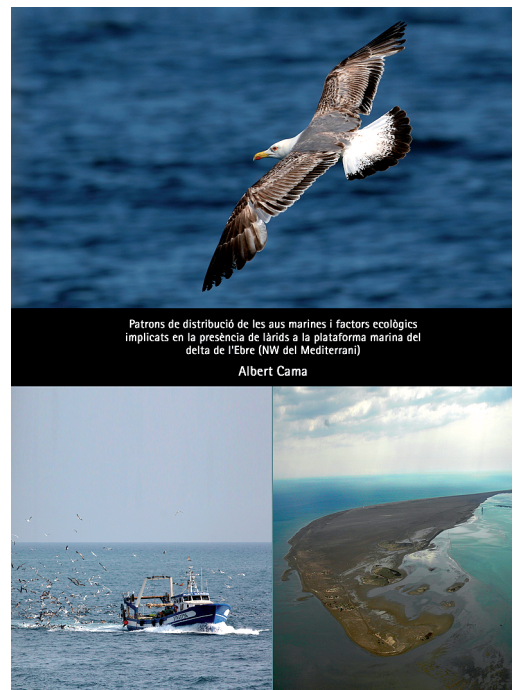
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Cama, A. 2010. *Patrons de distribució de les aus marines i factors ecològics implicats en la presència de làrids a la plataforma marina del delta de l'Ebre (NW del Mediterrani)*. Tesi doctoral. Barcelona: Universitat de Barcelona.

This thesis is a new and interesting work on the seabird community of the Ebro delta and its surrounding area. Other studies on seabirds have been conducted in this area, but none with the novel focus used by Albert Cama in this thesis. Using data from systematic aerial surveys, and taking into account other data sources such as Darvic ring readings and boat and coastal seabird counts, this study aimed to assess both the distribution patterns of seabirds at sea at different scales and their interaction with human activities. These are key issues for the implementation of management and conservation measures that will help in the preservation of seabird communities and their environments, and improve our knowledge of these birds.

The work is based on the results of an applied study aimed at assessing the viability of a project to build a wind-farm off the coast of the Ebro delta; a study of this nature is essential when analyzing the potential impact on seabirds of projects of this size. The study evolved into a Ph.D. thesis thanks to the willingness and skills of the student and his supervisors (Xavier Ferrer and David Vieites), who managed to combine novel and rigorous work on seabird ecology.

The thesis consists of six scientific papers preceded by a general introduction and followed by a chapter of conclusions that gives a sense of coherence to the whole work. Most of



the manuscripts are based on the aerial surveys carried out during the wind-farm evaluation project, but also include complementary data from sources such as boat and coastal seabird counts, and PVC rings. The central subject of this thesis is the study of bird distribution patterns at sea, which were accurately assessed due

to the velocity of the aerial surveys (allowing for 'snap-shot' views of the study area).

The six chapters are divided into three different sections: a first, primarily descriptive part (chapters 1 & 2) is followed by another bloc focused on habitat modelling (chapter 3); finally, a more extensive section assesses the impact of fishing activity on the distribution patterns of seabirds at sea (chapters 4-6).

Chapter 1 describes the distribution patterns of the seabird communities in the study area throughout the year. Data are presented at a resolution of 2 x 2 km, an improvement in the detail of all previous studies within the Mediterranean. Regrettably, the censuses were restricted to the inner half of the continental shelf and therefore the information is incomplete for some species, particularly the most pelagic ones.

Chapter 2 presents an overview of the wintering distribution and population estimates of the Mediterranean Gull *Larus melanocephalus* at three different scales of resolution: local (based on coastal counts in the study area), regional (seabird transect counts during an oceanographic cruise over the Mediterranean Iberian shelf) and global (expert consultations and bibliographical review). Results suggest that the global population of this gull may be substantially overestimated and therefore its conservation status may be poorer than previously assumed. If so, the study area would gain international relevance because the results show that it holds the world's largest winter concentration of the species, with up to 50% of the total population present at some point in the year.

Chapter 3 is devoted to the study of distribution patterns at sea of the Slender-billed Gull *Larus genei*, a species typically associated with salt marshes and lagoons, but, as revealed by this study, also to marine environments. Its reliance on marine environments is more pronounced in

the northern half of the Ebro delta, where salt marshes are absent and the gulls choose instead to forage in coastal waters mainly associated with the plume of the river Ebro. This chapter has an important methodological component and several techniques for habitat modelling are tested to assess their adequacy.

The last three chapters deal with a very interesting topic, namely the influence of fishing activities on the distribution patterns over time of seabirds at small and medium spatial scales. Chapter 4 takes advantage of moratoria on trawling in the north (May-June) and south of the study area (July-August) to assess the influence of trawling activities on the distribution patterns of Audouin's Gull, a species that mainly depends on fishery discards. Accordingly, these gulls always had higher densities in areas of trawling activity. Chapter 5 assesses the activity rhythms of the opportunistic Yellow-legged Gull *Larus michahellis* in relation to fishing activity. Results show that these gulls move offshore coinciding with the peak in trawling discard activity, suggesting that this species' exploitation of this predictable resource is optimal. Finally, Chapter 6 assesses the interaction of Yellow-legged and Mediterranean Gulls when feeding on trawling discards. As indicated before, Yellow-legged Gulls exploit this resource when it is most abundant and easily predictable, whereas Mediterranean Gulls, presumably outcompeted, exploit discards when Yellow-legged Gulls are less abundant at trawlers.

In summary, the author has acquired good background knowledge of both seabird ecology and up-to-date analytical tools (particularly habitat modelling), while at the same time showing a natural ability for social relationships, essential for successfully addressing research on applied issues wherever diverse stakeholders play a key role. The layout of the thesis and, in particular, the paintings by the young artist Martí Rodríguez provide an added touch to this excellent work.

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