

## Columns - Rubriche

Questa sezione di Avocetta ospita resoconti e comunicazioni ufficiali delle attività del CISO, report della Commissione Ornitologica Italiana, aggiornamenti relativi allo stato dell'avifauna italiana, forum, recensioni, news ed altre comunicazioni. I lettori che volessero proporre nuove rubriche sono invitati a contattare la Redazione.

Il fine ultimo delle rubriche è favorire lo scambio di informazioni tra il CISO e i soci, con particolare riferimento alle iniziative promosse dall'Associazione.

### NOTES

## Workshop about How to Harmonize monitoring protocols of Storm Petrel in the Mediterranean

Organized by PIM Initiative, IMEDEA (CSIC), the Direcció General de Medi Natural i de Evaluació Ambiental (Comunidad Valenciana) and the Benidorm Council, was held in Benidorm a Workshop about How to Harmonize monitoring protocols of Storm Petrel in the Mediterranean (Benidorm, 29th-30th June 2017).

Seabirds conservation, including the Storm Petrel *Hydrobatas pelagicus melitensis*, is a long-term process that needs gathering population parameters every year by studying several colonies in order to obtain solid evidences on their spatio-temporal population dynamics. The implementation of a long-term monitoring program is not easy, because the most frequent organizational tools, specially on the public administrations are rigid structures that usually obstructs a management adaptive model, needed when some of the aims are long-term ones. Therefore, some keys concepts to take into account are the following: to assume risks, to generate confidence, a constant evaluation and a vision shared within the management team -and outside (Mínguez *et al.* 2015). The main goal for the Benidorm Workshop was to propose a low-cost long-term monitoring method for the Mediterranean Storm-petrel colonies.

In spite of the generally quite difficult access, fortunately, some of the Mediterranean colonies are located on human accessible caves where marking nests, checking the breeding success (hatching and fledging success) and ringing chicks and breeding adults are possible. These data, gathered fortnightly along the breeding period provide several information to know better the dynamic population on each breeding colony with enough accuracy for the pro-

tected area/species managers. Some of the Mediterranean colonies located inside caves or galleries are Marettimo, Benidorm and S'Espartar, where nest-based monitoring methods are already implemented (Sanz-Aguilar *et al.* 2009a, Mínguez *et al.* 2015).

Also frequent are the colonies settled within boulder beaches and narrow crevices, where the nests are not accessible (Sanz-Aguilar *et al.* 2010). There, in spite of its low accuracy, net-capture is probably the unique method possible to approach population trends (using marking-recapture statistics methods). However, on Storm petrels there are not effective methods to discriminate between breeding adults and juvenile wanders (open populations), that could represent around 70% of the netted petrels (Cadiou 2016).

Combined studies among long-term monitored colonies as Marettimo, Benidorm and S'Espartar show a high variability on the Storm-petrel life-histories and population trends between colonies (and also within a colony!) (Sanz-Aguilar *et al.* 2009a, 2010, Albores-Barajas *et al.* 2011, Soldatini *et al.* 2014, Picorelli *et al.* unpublished data). That means that, as far as possible, monitoring and sharing information are needed to understand what's happen with the Mediterranean Storm petrels.

During the workshop different ponents (fishermen, scientists and environmental managers) explain their experiences on several Mediterranean storm petrel colonies:

Vicent Martinez (local fishermen) in his talk **“The Storm Petrel Island”** *“L'Illa dels Escaterets”* explained that

more than 50 years ago high numbers of Storm petrels bred at Benidorm Island. At that time Storm petrels coexisted with mice (also in large numbers) and rabbits that became extinct in the Island before the 80's.

Ana Sanz Aguilar (IMEDEA, CSIC-UIB) in her talk **"The importance of harmonizing seabird monitoring programs in the Mediterranean"** *La importancia de armonizar protocolos de seguimiento de poblaciones de Aves Marinas en el Mediterráneo* explained the importance of dispersal processes for seabird population dynamics. In particular, she showed the case of the Slender-billed gull and Audouin's gull to illustrate the importance of dispersal for Metapopulation dynamics (Sanz-Aguilar *et al.* 2014, Payo-Payo *et al.* 2017) and showed that Scopoli's shearwaters in a small colony in the Balearic Islands are being rescued by immigration (Sanz-Aguilar *et al.* 2016). She also showed that different survival, recruitment and population dynamics exist between the two Storm petrel colonies monitored at Benidorm Island (Sanz-Aguilar *et al.* 2009a).

Bruno Massa (Palermo University), Cecilia Soldatini and Yuri Albores-Barajas (University of La Paz, Mexico) in his talk **"The colony of Storm Petrels of Marettimo Isle (Italy, Sicily): monitoring and some results"** reported a short summary of the long-term study on the colony of Marettimo, illustrating the size of the colony, the breeding cycle, results of ringing and recoveries, bioacoustics, sex ratio, diet, physiological conditions in different parts of the cave due to human disturbance, and general differences between the subspecies *melitensis* and that of Atlantic (*pelagicus*) (see Albores-Barajas *et al.* 2011, Soldatini *et al.* 2014, 2015, 2016).

Paulo Lago (BirdLife Malta) in his talk **"Monitoring of Storm Petrel colonies in the Maltese islands"** Seguimiento de las colonias de paños de las Islas Maltesas, described the location and size of the different colonies in the Maltese islands, including two found in the last 5 years. He summarized the monitoring work done in the main colony in Filfla since it was discovered (Sultana *et al.* 2011) and specially in the last 5 years during two EU-LIFE funded projects, the identification of marine IBAs for the species and the assessment of the inter-species conflict with Yellow legged gulls (Metzger *et al.* 2013, Barbara *et al.* 2015).

Virginia Picorelli (Govern Illes Balears), **"Seguimiento de la colonia de paño de Espartar, Ibiza"**, talked about how they implemented the Benidorm's methods to monitor the S'Espart colony four years ago. Both the field work and

how to manage population data proved to be effective and relatively inexpensive.

Alejandro Izquierdo (Servicio de Vida Silvestre - Conselleria d'Agricultura, Medi Ambient, Canvi Climàtic i Desenvolupament Rural) in his talk **Protocolos para la conservación del paño en la Isla de Benidorm, sistema anti-predación y recuperación de varamientos** explained the local procedure to recovery disorients fledgling storm petrels on Benidorm beaches.

The pioneers José Santamaría and Eduardo Mínguez (PIM) in their amusing talk **"In the beginning, long time ago..."** narrated how they started studying the Storm petrels colonies, unknown until then. On late 80's, the first studies on Storm petrel colonies located in Benidorm island showed the negative effects of the human presence on the surroundings of the colonies. Flying stormies collided to the monofilament lines from the numerous sport fishing gear in the entry of the breeding caves, and their nightly behaviour were affected by the fishermen torch lights). These days we also found a high rate of predation by Yellow-legged gull, mainly opportunistic individuals with their nesting territories inside the marine caves where Storm petrel colonies are located.

Finally, Eduardo Mínguez (PIM) and Ana Sanz Aguilar (IMEDEA-CSIC) gave their talk **"Monitoring protocol for Mediterranean Storm Petrels: emotive and administrative processes, fieldwork and data sharing"** Protocolo de seguimiento en colonias mediterráneas de paño: procesos emotivos y administrativos, trabajar en campo y compartir los datos . Eduardo Mínguez explained the organizing main cues and strategies that provided the long term project in Benidorm Island, based on adaptive management rather than in administrative procedures. Ana Sanz Aguilar detailed the monitoring program of Storm petrels carried out at Benidorm Island and highlighted several scientific and conservation outcomes of this long-term monitoring program (Ramírez *et al.* 2016, Hernández *et al.* 2017, Matovic *et al.* 2017). In particular, she showed how the installation of nest boxes and the selective culling of predators (Yellow-legged gulls) have being proved as successful measures to guarantee the conservation of Storm petrels (De León & Mínguez 2003, Sanz-Aguilar *et al.* 2009b, Libois *et al.* 2012).

On 30th June some of the workshop participants, guided by Ana Sanz Aguilar and Eduardo Mínguez, visited the colony of Mediterranean Storm petrel breeding in the islet of Benidorm.

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## Book Reviews - Recensioni

*Publishers and Authors are invited to submit a copy of their books for a review in the journal. Books are to be sent to the CISO secretary (Tommaso La Mantia - Dipartimento SAF (Scienze agrarie e forestali), Università di Palermo - Viale delle Scienze, Ed. 4, Ingr. H - 90128 Palermo (Italy) – Editori e Autori sono invitati a sottoporre una copia dei loro volumi per una recensione. I volumi devono essere spediti alla segreteria CISO (Tommaso La Mantia - Dipartimento SAF (Scienze agrarie e forestali), Università di Palermo - Viale delle Scienze, Ed. 4, Ingr. H - 90128 Palermo (Italy).*

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**Elphick J., 2014.** *The World of Birds. Natural History Museum, London. £ 40.*

This quite praiseworthy, dense volume of 608 pages in large format, with over 1,000 colour photographs, maps and diagrams, surveys in its second part (Ch. 10, pp. 268–585) all 195 bird families, arranged by order. Even just this would make it a book worth having. The first part (Chs. 1 to 9) is both intricate and intriguing. For example, it discusses at length the various physiological functions, as well as an array of other topics about birds, and faced with this daunting task, it manages to be both readable and poignant. The chapters in the first part are typically internally subdivided, and comprise “Early Birds” about bird evolution (down to the subfossil moas and elephant birds), “Anatomy and Physiology”, “Flight”, “Food and Feeding”, “Bird Society and Populations”, “Breeding”, “Where Do Birds Live?”, “Migration”, and “Birds and Humans”.

To give an idea of chapters’ internal organisation, consider that “Birds and Humans” comprises its own “Introduction”, then “Habitat Loss and Other Environmental Hazards” (itself consisting of an untitled short preamble and the section “Damage to habitat”, which is subdivided into “Grasslands and savannahs”, “Wetlands”, “Mountains”, “Farmland”, “Urban sprawl, industry and other infrastructure”, “Oceanic islands”, and “The seas”), “Introduced Animals and Plants” (which includes a box, “Not off the hook”), “Hunting and the Cage Bird Trade” (with two sections for those two themes), “Pollution and Other Threats” (including “Pollution”, “Ocean pollution”, and “Other environmental threats”, with the box “Overfishing”), “Climate Change and Global Warming”, “Levels of Threat-IUCN/Birdlife”, “Extinction”, the box “Human overpopulation”, and then the section “Conservation” (comprising “Habitat protection”, “Species protection”, “Predator control and translocation”, and “Captive breeding and return to the wild”).

On occasion, one comes across boxes whose lines

point to sections in the book’s second part: inside the chapter “Where Do Birds Live?”, for example in the section for “Neotropical region” one finds boxes for “Major radiations” and “Endemic families/subfamilies”; in these, every line points to a page range.

Elphick has organised his material well and enticingly. For example, in Ch. 4, “Food and Feeding”, the section “Seabird Feeding” comprises the box “Mass feeding of gannets” and subsection “Walking on the water”. Section “Bird-eaters” comprises e.g. subsection “Specialist bird-eating raptors that catch birds in the air”, and the box “Raptors eating raptors” (an example of this is that owl species that are strongly territorial in forests, may attack and not just chase away, but even eat members of a nomad owl species).

In the back matter, a glossary is followed with an appendix: “Definition of Birdlife/IUCN Red List Threat Categories”. Then, for each chapter, a selection of books is suggested, but admittedly, none of the hundreds of journal articles consulted is listed. There is a list of organisations and websites, then a subject index (pp. 592–606 in small type), and picture credits.

In the book’s second part, for each bird family, the discussion is preceded by a grey box, comprising the vernacular English and scientific names of that family, how many genera and species it includes (these are not enumerated), length range and weight range (both metric and imperial measurements), then the rubrics “Range and Habitat”, “Social behaviour”, “Nest”, “Eggs”, “Incubation”, “Fledging Period”, “Food”, “Voice”, “Migration”, and “Conservation Status”. “10cm (2.5 in)” (274) is an error. “Igauzu Falls” (405, for “Iguazu Falls”), and “Montagne des Francais” (207, missing cedilla), are the typos I noticed. The lavishly illustrated book under review is rigorous, year readable, presenting a huge amount of information judiciously.

**Ephraim Nissan** (London)

**Hume R., Still R., Swash A., Harrop H. & Tipling D., 2016.** Britain's Birds: An Identification Guide to the Birds of Britain and Ireland. Princeton University Press, Princeton, New Jersey. £ 19.95.

This paperback with a sturdy yet flexible, resistant cover (so birdwatchers can make practical use it on the field), of 560 pages in octavo, combines text and images (3,298 colour photographs showing key identification features, as well as distribution maps) so seamlessly, that it becomes immediately apparent why it had to be produced and designed by *WILDGuides* in Old Basing, Hampshire, England (one of the authors, Andy Swash, is managing director of *WILDGuides*, whereas Robert Still is its co-founder and publishing director).

The book, which was “only now made possible by advances in digital photography and graphic design”, is published by Princeton under license from the Royal Society for the Protection of Birds (RSPB).

This volume depicts 648 species (all birds of the British Isles, also “a few species that have recently been identified but not yet officially added to the lists”), and shows all distinctive plumages of those species. “Each regular breeding, wintering and migratory species has a map, annotated where appropriate to show the destination of birds migrating to, from or through Britain and Ireland”. “While primarily an identification guide, the book also presents up-t-date population estimates for regular breeding, wintering and migrant birds, and, for rarities, a summary of the number of records”.

A key to the maps and codes appears inside the front cover flap (which faces an image of a sample page with its structure explained; cf. in further detail on p. 6 ff.), whereas a short index of bird groups or genera by vernacular name, from Accentors to Wren and Wryneck, appears in the back flap, a longer list than under “The Species Accounts” in the one-page contents. A fuller index is on pp. 552–560. But for initial orientation, “The types of birds” (pp. 8–13) inside the “Introduction” provides arrays of photographs of birds (both flight displays and standing or

perched or in the water) with identification of the group with a pointer to a page range; for example, on p. 8, the first row of images in the table for “‘WATER’ BIRDS Swans | Geese | Ducks” comprises “Swans”, “Geese”, “Shelduck”, whereas the second row is for “Ducks (dabbling)”, “Ducks (diving)”, and “Ducks (sea)”.

The exemplary manner of organising the information, so it would be most helpful for identification, can be seen e.g. on pp. 14–15, where in the context of introducing the category of such ducks that are surface feeders (i.e., most of them), not only we are told: “Some feed by upending”, but this is a label in a photograph of two swimming mallards, male and female, shown from behind with their tails raised. At the bottom of p. 15, in a different colour, a caveat entitled “POSSIBLE CONFUSION GROUPS” is accompanied with silhouettes in profile with pointers to a page or page range. Sensibly, a page of “Bird of prey groups: flight silhouettes” (293) - also corvids - is followed with pages each dealing with an individual eagle species, and then two facing pages in colour (296–297) show eagles in flight and then kites in flight, e.g., for the Golden Eagle, four immature individuals and then an adult (296).

The description of voice is traditional; e.g., of the White-fronted Grouse (*Anser albifrons*) we are told: “High, laughing, yodelling with a catch in the middle: ‘kyu-yu’ or ‘lyo-lyok’. Flock chorus high, yapping/yodelling” (30); or, for the Garganey (*Anas querquedula*), “Infrequent: spring male has curious dry rattle; female has nasal ‘ga ga ga’ and weak quack” (43).

Towards the end of the book, birds of uncertain origin and escapes are described, before turning to “the official lists of species recorded in Britain and in Ireland, together with a summary of their status and the legislative protection afforded them” (524). This comprises text, and then tables with a colour code. Photographic credits for 251 photographers follow, before each author’s personal acknowledgements, and the index. This enjoyable book sets very high standards.

**Ephraim Nissan** (London)

Perrow M.R. (ed.), 2017. Wildlife and Wind Farms, Conflicts and Solutions. Vol. 1 Onshore: Potential Effects, 290 pp; Vol. 2. Onshore: Monitoring and Mitigation, 218 pp. Pelagic Publishing. £ 34.99.

This is a series of volumes that provide a comprehensive overview of the interactions between wind farms and wildlife (other two volumes on offshore wind farms have been published by the same editor). Volume 1 documents the

current knowledge of the potential impacts upon wildlife during both construction and operation. An introductory chapter on the nature of wind farms and the impact assessment process is followed by a series of in-depth chapters documenting effects on climatic conditions, vegetation, terrestrial invertebrates, aquatic invertebrates and fish, reptiles and amphibians, birds, bats and terrestrial mammals. Volume 2 provides a state-of-the-science guide to monitoring and mitigation to minimize or even eliminate im-

pacts on wildlife from wind farms. The survey and monitoring section includes detailed chapters on birds and bats, followed by chapters on modelling of collision risk and populations, and the statistical principles of fatality monitoring. The mitigation section comprises chapters on spatial planning and effective mitigation strategies for bats, birds and raptors. A best practice approach to future planning concludes the volume.

Contributors of the volume 1 are 40, those of the volume 2 are 31 from USA, Canada, Australia, Germany, United Kingdom, Ireland, Norway, Sweden, Switzerland, Bulgaria, Spain and Portugal.

When the generation of electricity became sufficient for industrial purposes at the end of the 19<sup>th</sup> century, the first prototypes of modern wind turbines were built using technology based on the classical windmill. The climate change research undertaken in the 1970s and 1980s led to the development of the United Nations Framework Convention on Climate Change and Biodiversity (1992). Later, targets were set for ratifying countries to reduce their greenhouse gas emissions as defined by the Kyoto Protocol. The 'Paris Agreement' (2015, December) has been established with almost 200 world leaders, pledging commitments of reducing greenhouse gas emissions and holding the decrease in global average temperatures to below 2 °C over pre-industrial levels.

Wind farms now are component of renewable energy policy. There is, however, considerable concern over the impacts of wind farms on wildlife. The World Wind Energy Association reported in 2015 a global installed capacity of nearly 370,000 megawatts of wind power, the majority of which is distributed across Asia, North America and Europe. There are wind farms with hundreds of turbines in California, Texas, China, Romania and Scotland. It is estimated that wind power supply 19% of global energy requirements by 2030. In Europe the year 2014 saw a decrease in rates of wind farm installations of between 75% and 90% in Denmark, Spain and Italy, probably for the territory saturation. This is not surprising given the lack of political support in the past few years.

The Habitat and Birds Directives are particularly pertinent to European wind farm developers as they are required to carry out a Habitats Regulation Assessment, where a plan or project is likely to have a significant effect upon an European site.

Wind farms can modify ambient environmental conditions to create their own microclimates. There are very few specific studies on the impacts of wind farms on vegetation compared to fauna such as birds or bats. The construction

phase of a wind farm involves the removal of the existing vegetation and earth moving for the construction of wind farm foundations, platforms and opening up new access. The frequent presence of technicians and the maintenance of underground cable networks can necessitate frequent vegetation removal and site disturbance. Terrestrial invertebrates are often dominant consumers and pollinators of plants, are a major food resource for birds, bats, mammals, reptiles and other invertebrates. Although invertebrates are vital to ecosystems, are keystone members of terrestrial communities, and changes in their populations may have effects on multiple trophic levels, few published studies have investigated the potential effects of wind farms on terrestrial invertebrates.

Conversely, many studies provide convincing evidence of local-scale displacements of birds due to wind farms, and displacement can generally be regarded as a commonly occurring impact of such development. A range of species have been identified that appear to be particularly vulnerable to collision. Several raptors, as Golden Eagle, Griffon Vulture and White-tailed Eagle, are among the most vulnerable; but other species, including passerines, continue to be found under turbine blades. Griffon Vultures in particular is the species most frequently killed by collision with wind turbines in Spain, and especially Tarifa in Cadiz province, which contains the second highest number of breeding pairs of the species in the country (0.228 Vulture deaths per turbine per year!).

Overall, the populations of most species recorded as collision victims do not seem to be significantly affected by this additional source of mortality. However, some species of conservation concern sometimes suffer the highest collision risk, and there are examples where collision mortality has reduced the local population.

Improved visibility of the rotor blades may alert diurnal birds to the turbine structure, either by painting one rotor blade black to reduce motion smear or by using ultraviolet-reflective paint on rotor blades for ultraviolet-sensitive species (gulls and passerines are sensitive within the ultraviolet spectrum 355-380 nm; raptors and owls within the violet spectrum 402-426 nm).

This 2 volumes book represents an important updating of the wind farms subject; indeed, it is important to disseminate the rich results of these studies, because they may be the base for the impact assessment process for future projects or for the repowering of existing installations.

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