

CONSERVATION OF MARINE AND COASTAL BIRDS IN THE MEDITERRANEAN — PROCEEDINGS OF THE UNEP-MAP-RAC/SPA SYMPOSIUM

Yésou, P., Sultana, J., Walmsley, J. & Azafzaf, H. 2016. The Regional Activity Centre for Specially Protected Areas (UNEP-MAP-RAC/SPA), Association “Les Amis des Oiseaux,” BirdLife Tunisia and Medmaravis, Hamamet, Tunisia. 172 pp., several maps, graphs and tables. Paperback: ISBN 978-99957-0-344-8 Free download from: http://www.rac-spa.org/sites/default/files/doc_birds/2nd_symposium/proc_2nd_symposium.pdf

Medmaravis is an international non-governmental scientific organization devoted to the study and conservation of marine birds in the Mediterranean Sea, including not only seabirds *sensu stricto*, but also other taxa that inhabit this region, such as raptors linked to the marine environment. This book presents the proceedings of the 14th Medmaravis Symposium, held in Hamamet, Tunisia in 2015. Several other proceedings have been published since the first symposium was held in 1986. The present volume is an update of the studies carried out to increase knowledge of Mediterranean marine birds, including their ecology and conservation status. As usual, an effort has been made to encourage contributions from the African and Asian sides of the sea, where funds, logistics, and history of research are in shorter supply than on the European side. Contributions have been classified into several chapters, including Species of Particular Mediterranean Importance; Regional and National Statements; Threats and Survey Techniques; and Conservation Networks. The range of topics covered is wide, from studies on spatial ecology (foraging habitats, wintering sites), population ecology (estimation of demographic parameters), conservation biology (status, key areas, pollutants, population assessments, effects of invasive species, and habitat changes), and methodological papers (censuses, ringing programs). Shearwaters, gulls, and raptors are the most intensively studied among the species inhabiting the region, whereas, for example, contributions on terns were much lower. Studies of storm petrels, shags, and some other species (such as pelicans, raptors, and flamingos) were proportional to the small number of taxa within each group.

The book should be especially interesting for seabird conservation biologists and managers because it contains updated information about the status of many taxa (population sizes, distribution), and interesting insights about some threats, such as invasive species and pollutants. For researchers working on seabird ecology, its interest is lower, because most of the ecological chapters have already been published (or will soon be published) in the scientific literature. The accuracy and reliability of data and results presented are variable: whereas some papers have high scientific standards, others represent natural history notes and recompilations of information already available on population status and threats of specific taxa. This is to be expected, because Mediterranean marine birds breed in remote sites (mostly islets and cliffs), requiring complex logistics to access, and have generally small and scattered populations. Most Mediterranean countries have limited (or totally absent) research funding for conservation monitoring and ecological studies. This is especially the case for African and Asian countries, with few, but meritorious, studies published from Morocco, Algeria, Tunisia, Libya, and Egypt. Of the 20 Mediterranean countries with a coastline, participants from only 13 were present in the last symposium, confirming a general trend in all previous symposia: the challenge for researchers studying these birds to attend meetings. Under this scenario, international collaboration between teams from northern and southern countries seems essential to ensure the follow-up of

these types of studies, and more multinational networks should be established to increase ecological and conservation knowledge of Mediterranean marine birds.

For the same reasons, Medmaravis *Proceedings* constitute valuable documents that have recorded, over the years, the conservation status of Mediterranean marine birds, their ecology, and natural history. Each *Proceedings* reports new breeding sites and population estimates. Thanks to this, scientists and managers more widely accept that populations of marine birds are not as closed as previously thought. These populations are strongly influenced by dispersal processes among breeding sites and between breeding and wintering regions, and conservation status should be viewed at regional levels or even at a global level, in the case of trans-equatorial migrants, because spatial scale matters.

Two sections devoted to regional and national population status and conservation networks are good examples of the paradigm change. A French initiative to develop a regional database for seabird ringing is also a great step forward for covering large spatial scales. Unfortunately, some reification (i.e., myth development), such as the concept of “good” and “bad” species, is still present in this book after all of these years, despite the wealth of scientific evidence refuting these ideas. The Yellow-legged Gull *Larus michahellis* and its predatory habits is a paradigmatic example: controlling predators should be a conservation priority only when they are alien and/or when their impact is quantified and there is an extinction risk for prey species. This is not the case for Yellow-legged Gulls, except for very specific, well-documented cases.

Particularly interesting are contributions that challenge previous global population estimates; this is especially true for one of the most endangered European birds, the Balearic Shearwater *Puffinus mauretanicus*. Shearwaters and petrels are difficult to census at breeding sites, so their population estimates at regional levels used to be unreliable and often lacked any associated error estimate. However, Maltese researchers have been able to record population trends for the three tubenose species present over 30 years; these researchers rightly acknowledge the number of potential biases when counting breeding pairs at or near the breeding sites (e.g., in rafts on the water). Using alternative methods (outside inaccessible breeding areas), such as transects from research vessels and counts at two key migration points (Bosphorus and Gibraltar Straits), Spanish and Turkish researchers have found that populations of these species may be much larger than previously thought. There are two possible explanations: either breeding populations at many breeding colonies are underestimated, or a very large non-breeding population exists at sea, outside colonies. These facts should be common to all burrow-breeding shearwaters and petrels in the world. Greek researchers have also highlighted the importance of non-breeders for pelicans in the Mediterranean–Black Sea region. Finally, Italian researchers have made a great contribution in

their review of their experience eradicating rats on islands for the conservation of breeding seabirds, which considers social aspects and thus goes beyond the benefits for wildlife provided by eradication programs. The review is of worldwide interest, since rats constitute a global threat for native island fauna and flora as well.

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LAB GIRL

Jahren, H. 2016. Toronto, Canada: Alfred A. Knopf Press. 290 pp. Hardcover: ISBN 978-11-0187-4936, \$C34.00. E-book: ISBN 978-11-0187-4943.

You may wonder why a review of a book about a plant biologist is appearing in *Marine Ornithology*. I feel that Hope Jahren's story is one common to many of us, and one that needs to be told. It is a story of an idea of who we want to be, of what inspired us along our path, and the long trek we took or are still taking to become who and what we want to be. It is a story that should be read not only to have someone verbalize the thoughts and fears that are in all of our heads and that we are afraid to expose to others, but also to see how having perseverance, a dream, and the right people in our lives help us to achieve perhaps not exactly what we want, but surely something that is satisfying and valuable. The book also taught me a lot about plants — and that is valuable in and of itself, because we are all naturalists, and being observant of nature and learning its mysteries is part of who we are.

Dr. Jahren begins, as many of us did, by being exposed to science early on, getting inspiration from a teacher (or in her case, a father) who did not put limits on her. She glosses over much of the content of her PhD studies, getting to the heart of being a newly hatched academic: worried that no one will take her seriously (many did not), worried that she will not get grant money (she often did not), but still enjoying the process — the science — of her studies, and loving the questions and the discovery. It is her journey that is inspiring, and her many setbacks and failures are a common thread for all of us.

The main thing that keeps her sane, besides her belief in her ideas, is a colleague — a mentor who is not an experienced scientist, nor even a peer, but a brilliant student-turned-collaborator who also believes in her science, and whom she hires and who follows her

from university to university. And, no, it is not a love story; the two are colleagues who inspire each other. Perhaps we all need that one person, be it a professor, a mentor at our first job, or a colleague who tells us to pick ourselves up and keep going and keep believing in the science we do.

The anecdotes and daily life in the Jahren lab will give you many laughs as well as many moments when you think, "I can relate to this." The book inspires mainly because it rings true. It is an easy read. And interspersed along Jahren's scientific journey of carbon isotopes in moss, opals found in pits of hackberry fruit, and how plants control their environment are two-page vignettes about various aspects of plants — about how willows reproduce (you will be surprised), how the Arctic once was verdant even with three months of darkness, why leaves in different parts of plants are darker or larger than others, and many other facts about plants you probably did not know.

If you are at all interested in self-reflection, on figuring out how you came to be where you are now in your scientific life, how other people have traversed their zigzag path, what will help when a project turns into a total failure, and what you really need in your scientific journey, this is the book for you. And if you also want to have a few arcane facts about plants to throw around at the next meeting, just to keep your colleagues on their toes, this book is worth a read.

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ISLES OF AMNESIA: THE HISTORY, GEOGRAPHY, AND RESTORATION OF AMERICA'S FORGOTTEN PACIFIC ISLANDS

Rauzon, M.J. 2016. Honolulu, HI: University of Hawai'i Press. 271 pp. including notes and index, 6 maps, 62 black and white photos, numerous in-text drawings. Paperback: ISBN 978-0-8248-4679-4, US\$20.

This book tells the little-known, unheralded story — hence the title — of the history behind, and the designation and restoration of, the islands encompassing the Remote Pacific Islands National Wildlife Refuge (RPINWR), as well as the surrounding waters designated as the Remote Pacific Islands National Marine Monument (RPINMM) and the Mariana Trench Marine National Monument (MNM) and National Wildlife Refuge. While not called a marine protected area (MPA), the RPINWR/RPINMM as well as the Mariana Trench MNM — all first designated under the Bush administration and expanded under the Obama administration — likely have been and will be truly effective MPAs, ecologically speaking, owing to the no-fishing provision, i.e. no-take, in large expanses of ocean around most of the islands — out to 200 nautical miles for several. Because of this designation, the critical space needed for the birds, mammals, and fish that make up the communities in these areas, through all phases of their natural cycles, will be protected. Size and level of protection of MPAs matter critically (Edgar *et al.* 2014). Unfortunately, for a few of the islands, the fishing industry would not agree to such large expanses that preclude fishing; hence, boundaries of the MPAs extend out from those islands just 12 nautical miles.

The history, with each of the more than nine islands treated individually, begins with the Polynesians and passes through a sequence of human contact, starting with “discovery,” usually by Europeans; continuing with the guano miners who established US possession, the re-taking of the islands from Imperial Japan during WWII, further use by the military (e.g., testing hydrogen bombs), the islands' turnover to US Fish & Wildlife Service; and ending with the restoration, or attempts at restoration, of each of these islands' ecosystem. In most cases, the author works in the geologic origins of each island as well. Clearly, he conducted a huge amount of research to unearth and then read critical information sources, sometimes needing the *Freedom of Information Act* to gain access to this information. A huge amount of historical information is woven together quite effectively.

The main theme of the book, however, is island ecosystem restoration, including assessment of effectiveness, and the role that the author has played over the past 35 years in those processes, one island after another. Clearly, feral cats, along with the brown tree

snake, are the supreme culprits in the devastation that has befallen the avian communities on all of these islands. Other alien species, such as ants, snails, rats, mice, pigs, and various hoofed creatures, and various species of plants, have also played their part. In many cases, hunting and the application of poisons have succeeded in eliminating these invaders, including efforts conducted in a way to avoid killing everything indiscriminately. It is curious, although certainly consistent with human history and values going back to the Egyptians, that the author waxed at length about his personal difficulties in obliterating feral cats, but expressed no difficulties in dispatching snakes. Yet both are equally good at completely transforming ecosystems in which they have become aliens and, thus, must be targets for eradication.

Mark Rauzon must have a personal diary that spans many feet on his bookshelves. The details he provides, almost as if it was yesterday, about his trials and tribulations as well as the joys over the past few decades, while occupied in the exploration, discovery, and restoration of these islands, are really the highlight of the book. The author's treatment of what lies beneath the waves in the Mariana Trench, even if just bacteria miraculously exploiting geologic and physical processes unheard of above the beach, was exquisite. Rauzon is quick in his acknowledgement of the contributions of collaborators. We owe a huge thanks to him and the workers of the US Fish & Wildlife Service and National Oceanic and Atmospheric Administration, and their contractors, for their accomplishments. There are now many, many more millions of seabirds, as well as reef fishes, in the central-western Pacific than had existed just a short time ago, before these restoration efforts. I recommend that all seabird enthusiasts read this book, as I guarantee its story will make your heart soar.

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