

An Inventory of Breeding Seabirds of the Caribbean

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An Inventory of Breeding Seabirds of the Caribbean.-Patricia E. Bradley and Robert L. Norton, Eds. 2009. University Press of Florida, Gainesville. xxi + 353 pp., 78 tables, 51 maps, 44 black-and-white plates, 8 text figures. ISBN 0813033297. Cloth, \$75.00.—This volume is a contribution of the Society for the Conservation and Study of Caribbean Birds (SCSCB; formerly the Society for Caribbean Ornithology [SCO]). It consists of 31 chapters by 46 authors, including the editors, as well as a foreword by John Croxall, a preface by David W. Steadman, and an endorsement by SCSCB President Andrew Dobson. It includes an introduction (chapter 1), 25 chapters covering specific islands or island groups (called "national accounts"), a geographic-information-system (GIS) summary of nesting sites (chapter 27), a discussion of local, regional, and global threats (chapter 28), a summary of the status of Caribbean seabirds (chapter 29), a discussion of conservation recommendations (chapter 30), a bibliography of Caribbean seabirds (chapter 31), two appendices, and an excellent index. This work covers the northern, eastern, and southern Caribbean region, as well as the Bermuda islands, the Bahamas, and Turks and Caicos, but it does not address the western Caribbean (islands of Central America). This is a large-format cloth-bound book that is attractive and well constructed.

As the editors note in chapter 1, "The Inventory: An Alarm Call for the Caribbean," this work builds on the regional inventories of seabird species previously presented by Schreiber and Lee (2000) in a book that is now quite difficult to obtain and by van Halewijn and Norton (1984), and it continues the regional

approach initiated by van Halewijn and Norton. The chapters on individual islands provide a general overview of the species and nesting-site locations, so that readers or visitors not familiar with these islands may orient themselves to the species and sites found there. The data density in most chapters is not high, though this varies. The chapters on the Bahamas, Cuba, and Jamaica (chapters 3, 5, and 7), for example, provide more detailed information (and good maps) than most of the other chapters, as does the chapter on the U.S. Virgin Islands (chapter 10). The latter case is remarkable because a single individual (chapter author Judy Pierce) has been responsible for nearly all monitoring in this jurisdiction for the past two decades. Additional data are provided in the GIS chapter. In most cases, the various island accounts indicate negative trends or a need for more detailed monitoring. An exception is the case of Sooty Terns (Onychoprion fuscatus) on Aruba's Lago Reef (Chapter 23), which appear to be increasing. Plates 35 and 37, which show Masked Boobies (Sula dactylatra) nesting adjacent to human settlement on Middle Cay, San Pedro Cays, Jamaica, are astonishing.

The four summary chapters cover a series of general issues related to the status, trends, and management of breeding seabirds. The GIS approach in chapter 27 is an admirable effort but lacks sufficient detail in the narrative text and maps to be as useful as one would really like. Table 27.1 (regional population totals by species), table 27.2 (most important colonies), and table 27.3 (most endangered colonies) partly compensate for this. Chapters 28-30 cover the threats to, status of, and conservation of Caribbean seabirds. A positive development that can be gleaned from these chapters is that most of the significant nesting colonies are now on land that is owned or controlled by the public (government) and at sites with statutory protection as refuges or sanctuaries. Moreover, the wildlife refuges of the U.S. Fish and Wildlife Service in Puerto Rico (Culebra and other sites) now enjoy levels of funding and personnel resources that were unimaginable during the 1980s. However, despite nearly two decades of SCO and SCSCB efforts, the overall picture for Caribbean seabirds is not good, and the text's treatment of possible causes and possible solutions tends to be general and unspecific. The obvious and immediate needs whose remedies are within the reach of natural-resource managers, such as better management of nesting habitat (including exotic predator control, vegetation management, and protection from human disturbance) seem underemphasized in favor of sociopolitical approaches like advocacy and education. While meetings and presentations can be worthwhile parts of the mix, they are not adequate substitutes for the hard work on the ground that must be done in the nesting colonies.

The bibliography chapter (chapter 31, by James W. Wiley and Floyd E. Hayes) is very comprehensive and covers nearly 1,500 works from the 1700s to the present. It covers both peer-reviewed and secondary literature and has missed very little. It also serves as the Literature Cited section for the preceding chapters, yet there are some gaps, and inconsistencies in format, including the indexing and translation of an author's surname to English ("van Halewyn" is cited in various places in the text, but appears as "Halewijn, R. van.," in the bibliography). Also, the references to "Bradley and Norton 2007" in table 29.3 and elsewhere have no corresponding entry in the bibliography, though they seem to refer to material that occurs elsewhere in the book.

However, this bibliography provides for a revealing analysis of the history, current trends, and possible future trajectory of seabird research and conservation in the region. In order to assess research interest and productivity over the past five decades, I assumed that the time between field work and a resulting publication could have taken more than two years. I then counted the number of bibliographic entries per decade, and discovered waning productivity in recent decades. Of the 1,077 entries after 1952, 6% were published from 1953 to 1962, 13% from 1963 to 1972, 19% from 1973 to 1982, 30% from 1983 to 1992, 24% from 1993 to 2002, and 9% from 2003 to the present. The trend for Puerto Rico was even more dramatic and suggests an inverse relationship between resources and productivity in recent decades, with 5% of its 122 publications during 1953-1962, 7% in the 1960s, 20% during the 1970s, 57% during the 1980s, 11% during the 1990s, and just 1% from 2003 on-a dramatic decline in productivity after the 1980s. Moreover, the high productivity in Puerto Rico during the 1980s was dominated by university faculty and graduate students (mostly at Culebra), whereas subsequent work has been dominated increasingly by government personnel.

Today, unlike in the 1980s, invoking the specter of "unexploded ordnance" at Culebra's former naval bombing and gunnery ranges, where many nesting sites are located, has become a convenient means of keeping meddling researchers away, but it does not help the wildlife. The Sooty Tern colony at Culebra's Flamenco Peninsula is now considered one of the most endangered seabird nesting colonies in the Caribbean (chapters 9 and 27, and table 27.3). Currently listed as containing 8,000 nests, it has fallen below the 12,140 nests evident in 1994 (Schaffner 1995), and far below the 65,100 nests evident in 1971, when it was still actively bombed by the U.S. Navy (Kepler and Kepler 1978). The plight of this colony truly merits "An Alarm Call . . . " (chapter 1).

This book is a treasure for the careful reader willing to sift through the details and is a nice complement to the previous inventories by van Halewijn and Norton (1984) and Schreiber and Lee (2000). It is a must for anyone contemplating research on seabirds in the Caribbean region.—FRED C. SCHAFFNER, School of Science and Technology, Universidad del Turabo, P.O. Box 3030, Gurabo, Puerto Rico 00778, USA. E-mail: fschaffner@suagm.edu

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