

Clearly identifying gulls is fraught with lots of pitfalls for the less than careful. Identification of vagrant gulls need to be done with vast care and all the field marks need to be examined. Likewise we should not pass off our local crowd of gulls as being the usual species; a great treasure could be hidden in the flock.

The pros and cons of gull taxonomy notwithstanding, this book is a wealth of information. The same exacting detail is given for all the species in the book, making it a treasure trove for the dedicated birder. Regardless of your opinion on the status of the species

splits, there is much material for good scientific discussion and a basis for careful field observations. This all leads to the final question – why not go all the way and write *Gulls of the World*. After all it is only 13 more species, barring splits!

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Literature Cited

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The Monarch Butterfly: Biology and Conservation

By Karen S. Oberhauser and Michelle J. Solensky, Eds. 2004. Cornell University Press, New York. vii + 248 pages, illus. \$39.95 US.

This book consists of a collection of scientific papers on the Monarch, divided into chapters on reproduction, migration and overwintering biology as well as some miscellaneous papers on general topics. Each of the four chapters is prefaced by a brief overview written by the editors. Karen Oberhauser is an Assistant Professor at the University of Minnesota, while Michelle Solensky is with the Department of Biology at the University of St. Thomas. The information presented includes observations from each of the three major Monarch populations worldwide (eastern and western North America and Australia).

This book contains a great deal of interesting information, presented as original scientific literature. The majority of the papers are well-written, although some are likely to be overly technical (especially in terms of the statistical analyses) for some readers. Of particular interest are the papers on citizen-based research programs, which present data collected by widespread networks of volunteers. These papers demonstrate how, with relatively modest training and logistical support, public participation can be used to enable research into wide-ranging populations which could otherwise prove difficult or impossible to monitor effectively. The overviews which introduce each of the four chap-

ters help to make the information presented in the book more accessible to a broader audience (including, perhaps, some of the volunteers whose efforts are reported).

The black-and-white photographs which accompany each overview are excellent. However, the overall paucity of illustrations (other than the numerous graphs contained within the various papers) is regrettable. With such a colourful and attractive subject as the Monarch, surely it would not have been difficult to find more photographs to include in the book? Aside from their purely aesthetic value, additional photographs or drawings could have been used to enhance the text by illustrating some of the features, behaviours and methodologies described (e.g., growth and development, wing damage caused by courtship, experimental equipment design, etc.).

In short, this book presents interesting data on every major aspect of Monarch biology, with additional emphasis on the need to extend and incorporate such data into ongoing and future conservation efforts. However, the scientific format of the text may deter some readers, which is unfortunate considering the widespread public interest (as acknowledged in the book) in this familiar and beloved butterfly species.

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The Behavior and Ecology of Pacific Salmon and Trout

By Thomas P. Quinn. 2005. American Fisheries Society in Association with the University of British Columbia Press, Vancouver, Canada. 378 pages, illus. Cloth CDN \$85.00; paper CDN \$44.95.

The vast amount of literature on the Pacific salmon is rather intimidating. Indeed, several years ago when I first began conducting research on this group of fish after leaving the Midwest, it was difficult to know where to begin. Today there is a clear starting point I would read *The Behavior and Ecology of Pacific Salmon and Trout* by Thomas Quinn. This book is an excellent resource for students and fisheries scientists, providing a broad overview of Pacific salmon ecology. However,

this book also has broader appeal to animal ecologists and naturalists. Thomas Quinn is a prominent ecologist (Professor at the University of Washington) who has devoted his career to research on Pacific salmon. He shares his passion and experience in the first comprehensive book to focus on the ecology and behaviour of the Pacific salmon. This book is complementary to other compilations on this group of fishes such as the *Physiological Ecology of Pacific Salmon* by Groot, Margolis, and Clarke.

The book is focused on the salmon and trout in the Genus *Oncorhynchus*. This multi-species approach is one that could easily lead to confusion. However, Quinn

has provided the necessary context and background on basic life-history/natural history so readers, even if unfamiliar with Pacific salmon, will be able to follow. In fact, throughout the book he contrasts and compares interesting characteristics among species (and among populations) to reveal their incredible diversity. Quinn has also provided enough background on techniques in fisheries science that readers can gain an appreciation for the challenges in answering some questions. For example, in the migration chapter he discusses techniques for monitoring individual behaviour (e.g., conventional tagging, acoustic telemetry). For most trained fisheries scientists, some of the background material will be superfluous. However, it is necessary considering the broad audience. In the end, I believe that even the most experienced fisheries scientists will find the writing style and content to be refreshing and not too simplistic.

The book includes coverage of some rather novel topics within the 19 chapters. For example, this is the first fish ecology book that I have encountered that includes a chapter on the ecology of dead fish. Several years ago such a chapter would have been rather short. However, the explosion of research in the past few years on the role of salmon carcasses in the environment, much of which has been conducted by Quinn and his associates, enables such a chapter to be developed. This chapter in particular will be of interest to more general ecologists and naturalists. The chapters associated with adult migration and reproduction (2 through 6) are also exceptionally strong coincident with the authors expertise in those areas. That said, there were no chapters that I would consider weak, with my preference for some perhaps reflecting my personal interests and biases.

The text is well referenced but not to the extent that one feels like they are wading through a scientific manuscript. Quinn provides ample detail on the studies he summarizes, but more importantly, he provides extensive commentary and interpretation. He also poses questions that will serve as a springboard for countless graduate student projects. This is what really separates this book from other works that are available. His syntheses draw together data from disparate studies, often using this information to develop original figures or

conceptual diagrams. His goal was to “inform and excite” the reader – a goal that I would argue he has more than achieved. The chapters are not exhaustive in coverage. Instead, Quinn has focused on selecting examples that contribute to an overall understanding of Pacific salmon and are interesting. Although his intent was not to advocate (as he reveals in the preface), the last chapter did provide some interesting final thoughts. As “the” authority on Pacific salmon, I would have appreciated if Quinn had expanded these sections on the current status and prognosis of Pacific salmon. It was this section that I found particularly fascinating, but it left me desiring more.

The book is available in both hard and paperback form and is reasonably priced. The photograph on the cover is stunning (taken by the author). Other photographs and plates within the text are equally interesting and of high quality. Exceptional care has been taken in developing crisp and clear figures that have consistent formatting throughout (e.g., axis, font, symbols). The author has eliminated details of most statistical tests presented by other authors and urges readers to consult original sources. Brief summaries are provided at the end of each chapter and the book concludes with an extensive index. Collectively, these characteristics further elevate the value of this work and contribute to its flow and ease of reading.

There are few groups of fishes, or other animals for that matter, where one could develop a book such as this that would have appeal to anyone with an interest in animal ecology. The book is extremely engaging and will leave the reader with a desire to don a pair of waders and explore some of these topics first hand. I am confident that Quinn’s book will become a well-read and well-cited contribution. Shortly this book will be found on the office shelves of most salmon biologists, but I suspect it will be equally common in the personal libraries of armchair naturalists, anglers, and others with broad interests in ecology.

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Venomous Reptiles of the Western Hemisphere

By Jonathan A. Campbell and William W. Lamar. 2 volumes. 2004. Comstock Publishing Associates, Cornell University Press, Ithaca, New York. 870 pages.

This is a second edition, revised and expanded, of the authors’ *The Venomous Reptiles of Latin America* published in 1989. Added to the southern species covered in that book are those occurring in North America. The authors are from the University of Texas at Arlington and at Tyler, respectively. Additional contributors are Edmund D. Brodie III and Jr. Indiana University and Utah State University, Ronald L. Gutbertlet Jr. and

Michael B. Harvey University of Texas at Tyler and East Tennessee State University, Robert Norris Stanford University Medical Center, David A. Warrell, Centre for Tropical Medicine, University of Oxford, and Vinicius Xavier da Silva Universidade de Sao Paulo.

Theirs is an accomplishment of monumental proportions in size and collation of information. It is of coffee table format and includes a staggering 1500 colour photographs, 135 of them pictures of snakebite effects about which the authors’ relate that a the first edition reviewer termed them their “hideous picture album”.