

## The Birding Sites of Nova Scotia

By B. Maybank. 2005. Nimbus Publishing Ltd., 3731 Mackintosh St., Box 9166, Halifax, Nova Scotia B3K 5M8 Canada. 654 pages, \$35.

There is a path that runs from a popular beach in southern Nova Scotia. If you know exactly where, you can leave this path and cross several hundred metres to the start of a more secret path. This second path runs through a spruce grove along a cliff. If you know exactly which spruce to slip behind, you will find a hidden rope that will allow you to drop several metres down a cliff face. You will be in a very secluded cove with a golden beach and blue water, sheltered from any cold wind. This secret spot must be the only place in Nova Scotia that Blake Maybank has not visited! His new book is an incredibly detailed set of directions to (almost) every tiny nook of this beautiful province.

The main purpose of this book is to give sufficient directions for the visitor or native Nova Scotian to find the numerous coves and special places that dot the province. This is not as easy as it sounds as some of the roads and tracks are obscure and hard to distinguish. For example, I know native-born people who did not know of the track to Cherry Hill Beach, even though they had driven past it many times. This is because it is tucked between houses and looks like a driveway. Very sensibly Maybank has given the GPS coordinates of this location and others where someone might have trouble.

At each locality the author describes the habitat and comments on the birds typically to be found there. He also includes cultural highlights such as churches, lighthouses, museums and other tourist attractions. Although the title suggests this book is only about birds, Maybank includes similar information on mammals, butterflies, reptiles and amphibians. Where noticeable he comments on the wildflowers but this is not a focus. Each section has icons representing the types of birds, plants or mammals found and other key features like washrooms to be found on the site.

Giving directions can, of necessity, be dry reading even (or especially?) when they are given in great detail.

## The Complete Fauna of Iran

By Eskandar Firouz. 2005. I. B. Tauris. London, New York. xiv + 322 pages. US \$90.

This book covers the vertebrate fauna of Iran, mammals, birds, reptiles, amphibians and freshwater fishes. It is a revised, English language version of a 2000 publication by the same author in Farsi (reviewed by Coad and Keivany 2002). Those fluent in Farsi might prefer that version at the bargain price of \$5.63!

Iran is a country that often appears in the political news for its great economic and strategic geographical importance. This is mirrored in its vertebrate

The writer's style is much more upbeat and entertaining in the other sections. I was amused to read (Meat Cove) is "beyond the radar ... its delights are shared by a privileged minority" (Meat Cove, despite its name, is indeed a beautiful place of seabirds, orchids and gorgeous scenery; naturalists should certainly go there). Maybank does not give a detailed account of all the birds likely to be seen at a given locality. He uses generic terms such as gulls, shorebirds and warblers. However he has set up a website where you can access bird lists and information on the key localities. I assume he plans to keep this site current, so it is much more useful than putting a list in the book (which would soon be dated).

There are a few items that I think need changing. Page 243B has lost part of its text, an obvious printing problem. The author states "There are no deer ticks ... hence no Lyme disease." It is not this simple. Dog ticks (*Dermacentor variabilis*) also carry the Lyme disease bacteria, *Borrelia burgdorferi* (technically they are "infected", but maybe not "infective"). Whether or not the *D. variabilis* tick transmits Lyme disease is not yet resolved, suggesting caution. I was dismayed to see he did not mention Grassy Island (and hence Roseate Terns) in his account of Pearl Island (perhaps the last pair has been extirpated). The book has no index, meaning you will need a map to get you oriented. (Find the county you want and use the index to get you to the correct chapter.)

Any traveler who has gone to the expense of traveling to Nova Scotia needs this book; it will be invaluable. They will get to more places and see things they would have missed. Nova Scotians will also benefit. I doubt if anyone has traveled so widely and could provide such a precise record as Maybank. I will be using this book for my upcoming trip to Ile Madame in Cape Breton. As my last trip was in winter, I look forward to more informed and interesting birding this time.

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fauna, which includes such famous economic species as the caviar-bearing sturgeons and many diverse species of interest to naturalists close to its location at the intersection of the Palaearctic, Ethiopian and Oriental realms.

The Introductory sections of the book are particularly valuable for readers not familiar with this part of the world, and encompass 48 pages. A transliteration system is explained for the Farsi common names of organisms (a local language name list is always useful as scientific names may be more of a barrier than a

help outside academia), the distribution of Iranian provinces is mapped, major freshwater drainage basins outlined, and topography summarized in colour. A summary of zoological work in Iran follows with accounts of the transition between hunting and falconry to conservation and protection. Iran now has an impressive list of 16 National Parks, 13 National Nature Monuments, 33 Wildlife Refuges and 92 Protected Areas. Summaries of physical geography, climate, vegetation, zoogeography, threatened species and some fossils follow, illustrated by colour habitat photographs. Appendix I lists all the parks, their area, year established and a grid reference for a map in the Introductory section. Appendix II describes the Pardisan project (from the Old Persian for paradise), a 270-ha park in Tehran intended to replicate Iranian environments as an innovative educational project and centre for research in all fields related to the natural world. Conceived by Firouz, Pardisan was meant to be an academy of sciences, a zoo, herbarium, aquarium and museum. Hopefully it will come to fruition. The Bibliography encompasses 7 pages and is a general introduction to the literature on Iran. This literature is surprisingly diverse and could not be covered in this book – that on freshwater fishes, for example, numbers over 2900 items (see [www.briancoad.com](http://www.briancoad.com)). The book ends with indices to Latin and English names of vertebrates and a general index.

The mammals occupy 60 pages, birds 88, reptiles 54, amphibians 10 and freshwater fishes 34. The number of mammal species referred to is 168, birds 514, reptiles 199, amphibians 20, and freshwater fishes 173, for a total of 1074. Because of space limitation, not all species are described. Introductory sections give an overview of work on each group and an update from the 2000 edition in Farsi; e.g., six species of mammals have been added to the fauna. Iranian scientists became very active in the 1990s and subsequently, as evidenced by their publications in such journals as *Zoology in the Middle East*. Comments are made on conservation and the destruction of habitats that threaten so many species, here as in the rest of the world.

As an example, the first family dealt with, the hedgehogs, number four species which are listed by English name, Farsi name in English script, Latin name and a numbered listing of the provinces in which they occur. This requires the reader to find the map of provinces at the front of the book, and these maps are very small (15 by 10 mm), and would require a knowledge of Iranian geography to interpret easily. Any illustrated species is indicated by a diamond next to the English name. A general review of hedgehog biology precedes this list. No mention is made of the absence of hedges in Iran (where hedgehogs are found in burrows, bushes and rock crevices), and the disconcerting habit shown by some species of hissing loudly when disturbed is also omitted, an attribute not noted in the more sedate English hedgehogs.

Mammals of note, and evidence of the land bridge that Iran forms between Europe, Asia and Africa, include lions and tigers (both now, sadly, extinct), Egyptian fruit bats, wolves, red foxes and jackals, cheetahs, leopards and lynx, hyenas and badgers, deer and gazelles, and jerboas and hares. The plan to re-introduce lions from India to southern Iran is noted but not whether this actually took place. Rumours in the 1970s had them introduced, but quickly wiped out by local villagers who were not ardent conservationists when faced with a potential predator on their sheep and goats, not to mention sleepy goatherds and shepherds. The illustrations are a mix of photographs and colour drawings.

The birds are illustrated mainly from colour drawings provided by Birdlife International and are a good summary of that fauna. Necessarily, this section in particular must be quite abbreviated in its text, given the bird diversity, but books devoted to birds are widely available for the fauna of the Middle East. Status symbols are given for each species rather than provincial distributions as with mammals; e.g., R = common resident, r = scarce resident, again a system that requires reference back to the page listing 16 possibilities. These could certainly have been included with each species' name in an abbreviate form.

The reptiles are well-illustrated with colour photographs. The fauna is varied and interesting but not evident without effort in field situations. I seldom saw snakes and lizards while living in Iran although small geckos could be found on house walls (and had a ferocious bite). One of the largest lizards readily encountered is the Bengal Monitor which reaches 2.75 m. Chasing one of these rapid lizards across the desert could be quite tiring if they did not try to hide behind a bush much too small to conceal their length. Marsh crocodiles live in the southeast of Iran, much decimated by drought in the late 1990s. They are here reported as not attacking people, a fact I wish I had known in the 1970s when I might have sampled their home streams for fish less nervously. Five species of marine turtles are known from the Persian Gulf, all badly in need of protection.

The amphibian fauna is small in species although toads and frogs are common in and near water. Tree frogs are found on banks of streams, trees being rare in much of desert Iran.

Extensive critical comment on the freshwater fishes would be inappropriate given the input by this reviewer. Only freshwater fishes are dealt with, although this includes Caspian Sea fishes where salinities are about one-third of sea water. The diverse fauna of the Persian Gulf and Sea of Oman are not covered—a recent summary work is Assadi and Dehqani Posterudi (1997). One loss of information is that space does not always allow for a full explication of evocative Farsi names. The enormous sturgeon, *Huso huso*, reaching 1.5 tonnes and 6 m in length, is known as fil mahi which

translates appropriately as elephant fish while the pike, *Esox lucius* is ordak mahi, duck fish from its duck-like snout.

The author is eminently qualified to write on this topic having been the Director of the Department of the Environment and vice-president of IUCN. He is regarded as the father of Iran's environmental movement. The Farsi version of this book won the Iranian Publisher's Association top award.

This book is highly recommended as a well-written overview of a fascinating fauna.

## Fishes of the World

By Joseph S. Nelson. 2006. John Wiley & Sons, Hoboken, New Jersey. Fourth Edition. xvii + 601 pages. U.S. \$125.

This book covers all the 515 families of fishes in the world in 62 orders and 5 extant classes. Fossil families are more briefly treated. Each class, subclass, order, suborder, family and subfamily receives a brief description. In this way the reader is treated to a tour of the world's fishes through their higher classification and relationships. This being the fourth edition, 30 years after the first, proves the need, and success, of such a work. Scientists and students look to this work for an overview of fish classification and, with an estimated 28 400 species at the end of 2006 compared to about 26 730 tetrapods (mammals, birds, reptiles and amphibians), the fishes need this structure. At the individual species level, constantly changing as new ones are described or old ones revised, the online "Catalog of Fishes" from the California Academy of Sciences is the update source ([www.calacademy.org/research/ichthyology/catalog/index.htm](http://www.calacademy.org/research/ichthyology/catalog/index.htm)).

A website, <http://members.shaw.ca/fishesoftheworld/index.htm> contains errata, a list of new families post-1958, student exercises and links to relevant websites. Changes in the numbers of taxa between the four editions of the book are listed in the table below.

Variation in the number of families is mostly due to lumping and splitting as Nelson points out at the website mentioned above. Discovery of new families is a rarity in fishes. However, the estimated number of known fish species for the end of 2006 cited above is almost 10 000 more than in 1976, showing that this field of endeavour has been most active.

The text has continued to be expanded over the earliest editions, with families once without a description now provided with one. Much necessarily remains the same from the last edition as relationships, anatomy and species content remain unchanged in certain families.

## Literature Cited

- Assadi, H., and R. Dehqani Posterudi.** 1997. Atlas-e Mahian-e Khalij-e Fars o Dary-ye Oman/Atlas of the Persian Gulf & the Sea of Oman Fishes. Iranian Fisheries Research and Training Organization, Tehran. 10 + 226 + 23 pages. In Farsi and English.
- Coad, Brian W., and Yazdan Keivany.** 2002. Review of "A Guide to the Fauna of Iran." E. Firouz. 2000. Iran University Press (University Publication Centre), Tehran. ISBN: 964-01-0956-8. vi + 491 pages. 45,000 Rls (\$5.63) (hardbound)". *Copeia* 2002(4): 1164-1166.

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Not all genera are listed within each family, although a couple listing would be a great convenience, and not all families have a line drawing (about 74% do). Some families have undergone significant changes, with new information on species numbers, ecology and fossil members added, including the new coelacanth found in a fish market. Several groups (e.g., Characiformes, Osphronemidae) have been rearranged based on new systematic studies, and Nelson makes a concerted effort to follow a cladistic framework. However, as Nelson notes in his preface, it is naive to accept the latest proposals as being the best. Nelson has used his own considerable judgment in determining which groups are sufficiently systematically stable to include. This has also resulted in some families (e.g. Cichlidae) losing some structure, as new studies have shown past taxonomic groupings to be non-monophyletic.

The literature on fish classification is extensive, sometimes arcane in its arguments, and scattered in journals worldwide. Having an author mull over this literature and provide an interpretation and digest for consideration is a great service to students and to those professionals who need to dip into these waters at intervals.

In this new edition, Nelson has included many more references, providing the most recent literature. The Bibliography is comprehensive and covers 54 pages. Some authors may be disappointed that not all their papers are cited, but Nelson has generally included good summary papers that will provide, within their own references, many titles of more specific articles.

The Index at 63 pages is also most useful in locating particular taxa but certain genera will not be found (as noted above) and the reader will have to resort to *Catalog of Fishes*. Additionally, the previous edition used the names of orders as the running header throughout the text. The use of the more inclusive class level as the running header in the new edition is less helpful in flipping through to find the desired pages.

Year	Species	Freshwater	Marine and Diadromous*	Families	Orders	Classes
1976	18,818	6851	11,967	450	46	4
1984	21,450	8411	13,312	445	50	4
1994	24,618	9966	14,652	482	57	5
2005	27,977	11,952	16,025	515	62	5