count, particularly the diatoms (e.g., F E Round et al. 1990. *The Diatoms, Biology and Morphology of the Genera.* Cambridge and New York: Cambridge University Press). I must also note that I doubt that it was necessary to divide the data into two volumes (the second volume was due in late 1997), given the small size and format of this book. Nonetheless, in spite of these caveats, the book is well worth purchasing or ordering for an institutional library.

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DARWIN'S DREAMPOND: DRAMA IN LAKE VICTORIA. *By Tijs Goldschmidt; translated by Sherry Marx-Macdonald. Cambridge (Massachusetts): The MIT Press.* $25.00. vi + 274 p; ill.; index. ISBN: 0-262-07178-9. 1996.

The more than 300 closely-related cichlid fishes endemic to Lake Victoria in East Africa delight biologists and amateurs alike with an astonishing array of form, colors, habits, and reproductive behaviors. These fishes are the subject of *Darwin's Dreampond* and, as the title suggests, Victoria cichlids would likely have astonished Charles Darwin had he only known about them. As it is, African cichlids have fascinated generations of ecologists and evolutionary biologists. Why are there so many endemic species? How could so many closely related species coexist? How could these hundreds of species have evolved so rapidly? In fact, up until 1996, it was thought the Victoria cichlid radiation could be as young as several hundred thousand years, but data have now been published to suggest this remarkable radiation is even younger—as little as 12,500 years old!

In a highly readable account, Goldschmidt describes the ecology and evolution of these remarkable cichlid fishes. He includes very accessible explanations of difficult biological concepts, ranging from sexual selection to cladistics to the nature of the genetic code. His admirable explanations of biology are woven into a personal narrative of his experiences as a field biologist working in Lake Victoria. Through this narrative, readers gain not only an appreciation for the natural history of the fishes, but also for the difficulties of fieldwork in an unfamiliar economic and cultural context. Throughout the book, Goldschmidt paints a fascinating backdrop of the landscape and the people of Tanzania.

An important theme of this book is conservation. Following the introduction of the Nile perch (*Lates*) into Lake Victoria, the diversity and abundance of cichlids plummeted. This effect occurred only after a long lag: *Lates* was first introduced in the mid-1950s, but its population explosion, consequent devastation of cichlid prey, and dramatic secondary effects did not occur until decades later. Lake Victoria is now covered substantially by a mat of blue-green algae and much of the lake is deoxygenated most of the time. Without cichlid predators, several invertebrates (including midges) have exploded in abundance. In only a few years, the Lake Victoria ecosystem has been totally transformed, but the expected population crash of the Nile perch has not yet happened.

At the close of the book, against the background of apparently wholesale extinction of Victoria cichlids, readers learn of a baffling discovery of several new species of cichlids. Are they hybrids? Are they newly evolved? Had we simply missed them previously? Goldschmidt's book is a fine reminder that, as with life itself, mystery continues: there is much about Lake Victoria and its biota that we still do not understand.

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AQUATIC PLANT BOOK. *Second Edition.* *By Christopher D K Cook. Amsterdam and New York: SPB Academic Publishing.* $69.00. v + 228 p; ill.; index to plant names. ISBN: 90-5103-132-7. 1996.

Happily, the new edition of this book is bound with a sturdy, green, hard cover. I was disappointed, however, that the title had not been changed to *The* Aquatic Plant Book, or something less terse. At first perusal, it is difficult to detect changes in the original text, yet there are many subtle corrections and revisions.

Occasionally a new reference appears in place of the old (e.g., *Wiesneria*). Sometimes a newer reference has not yet been added (e.g., the treatment of seagrasses by Philipps and Meñez). The use of "c." for species estimates has been replaced by "+" notation throughout. Species estimates have increased for *Hymenachne, Isachne, Ischaemum, Isoetes, Nymphoides, Oryza, Rotala* and *Sacciolepis.* There has been a decrease in species estimates for *Cabomba, Marsilea, Najas* and *Phragmites.* New references are provided in some instances (e.g., *Cabomba*), but in others (e.g., *Oryza, Phragmites*), the altered species estimates are not documented. *Zizania* changes from "3 rather variable species" to "4 rather variable species" without an explanation. A new reference is added for *Ceratophyllum,* one that does not support the accompanying reduction in species number.

In some instances further revision is necessary. Seventeen species are attributed to *Callitriche,* although studies indicate the number may be as high as 40–50. One newly described species of *Wolffia* has been added, but a second one was missed. Many authors recognize four (not two) species of *Barclaya.* Podostemaceae still comprise 47 genera with 268 species, despite the publication of at least one new genus (*Vanroyenella* in 1993) and a number of new species. The distinct genus *Cycnogeton* (= *Triglochin procera*) should be retained in the Juncagina-

ceae in addition to aquatic species in *Triglochin* (*T. maritima*; *T. palustre*). *Rorippa* should not include *Armoracia*, *Nasturtium*, or *Neobeckia*. Potamogetonaceae still includes Ruppiaceae, although recent studies show these families to be unrelated. Overall, these are minor criticisms that do not substantially detract from the accuracy of the work.

One criticism I have is that the criteria used to establish what actually is aquatic vary tremendously, and some "good" aquatics have been excluded. The taxonomic treatment of aquatics for the southeastern U.S. includes 17 orchid genera; Cook's own treatment of aquatic plants in India includes *Zeuxine strateumatica*, but all orchids are omitted from the present book. *Orontium* is described as "seasonally submerged," although it is a true aquatic that grows submersed year-round at the bottom of many rivers. *Phalaris arundinacea* is described as "aquatic" although it is a helophyte restricted to wetland habitats. *Gratiola* (Scrophulariaceae) is described as a genus of helophytes with "few aquatics" that are sometimes "seasonally submerged," even though *Gratiola aurea* (forma *pusilla*) grows as a truly submersed plant. *Impatiens capensis* is a common aquatic annual but only *Hydrocera* is listed under Balsaminaceae.

There are some lingering typos, and as in the first edition, the initials of cited authors have been omitted, an annoying (even if space-saving) convention.

My picky comments aside, *Aquatic Plant Book* is the definitive work; a magnificent achievement and one of my most cherished possessions. Users of the first edition (or the earlier *Water Plants of the World: A Manual for the Identification of the Genera of Freshwater Macrophytes*. 1974. The Hague: Junk), will continue to find this book an invaluable reference. The well-constructed dichotomous keys are devoid of complex technical terminology and makes this book accessible to both expert and amateur botanists. Nowhere is there a more comprehensive work that catalogues, illustrates and describes water plants on a global scale with this level of professional care and quality.

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PROCEEDINGS OF THE *EXXON VALDEZ* OIL SPILL SYMPOSIUM. *Based on a symposium held in Anchorage, Alaska, 2–5 February 1993. American Fisheries Society Symposium 18.*

Edited by Stanley D Rice, Robert B Spies, Douglas A Wolfe, and Bruce A Wright. Bethesda (Maryland): American Fisheries Society. $35.00. xii + 931 p; ill.; author and subject indexes. ISBN: 0-913235-95-4. 1996.

The *Exxon Valdez* supertanker ran aground on 24 March 1989 and spilled approximately 40 million liters of crude oil into Prince William Sound; the spillage was subsequently dispersed over a wide area of the northern Gulf of Alaska. This book is the proceedings of a major symposium on the fate and effects of the *Exxon Valdez* oil spill (EVOS). In the Preface the editors state that "[t]he overriding purpose of the proceedings [was] to provide a lasting record of the unprecedented effort on behalf of the governments to determine the extent and nature of injuries caused by the *Exxon Valdez* oil spill. No other oil spill has been as intensively investigated" (p xi). This volume follows two other recently published collections of scientific papers on the EVOS (T R Loughlin. 1994. *Marine Mammals and the* Exxon Valdez. San Diego (CA): Academic Press; P G Wells et al. 1995. Exxon Valdez *Oil Spill: Fate and Effects in Alaskan Waters.* Philadelphia (PA): ASTM).

The 62 peer-reviewed articles in this volume are grouped into the following sections: Introduction (1 paper); Fate and Toxicity (8 papers); Intertidal (10 papers); Treatment Effects (5 papers); Subtidal (3 papers); Herring (2 papers); Salmon (12 papers); Other Fish (4 papers); Birds (8 papers); Mammals (2 papers); Archaeology (1 paper); Subsistence (4 papers); and Human Impacts (2 papers). There are also helpful author and subject indexes.

The majority of the articles are medium length (about 15 pages), high-quality reports of original research. A wide range of topics are addressed. There is an excellent introductory chapter by Spies et al. that highlights the main findings of EVOS research. The next eight papers cover topics that include: sampling, chemical analysis, and spatial and temporal distributions of EVOS petroleum hydrocarbons in the water column and sediments; hydrocarbon bioaccumulation by caged mussels; sediment toxicity; and microbial biomarkers and oil degradation. Polynuclear aromatic hydrocarbon fingerprinting is used in several papers to identify the EVOS as the source of the oil contamination. Five papers focus on the damage caused by the treatment methods used to remove oil from the shoreline. Oil removal treatment effects are also cited as an important confounding variable in several of the intertidal papers. Papers by Means, Lees et al., and Houghton et al. include insightful discussions of the efficacy of oil removal treatment methods.

Most of the remaining papers focus on direct and indirect effects of the EVOS on populations of invertebrates, algae, fishes, birds, and mammals. The methods used to assess EVOS impacts include field manipulation experiments, prespill versus postspill comparisons, oiled versus nonoiled comparisons, postspill recovery, and dead animal counts. Hilborn, in a thoughtful comparison paper on statistical methods, argues for the use of Bayesian statistics and a chain-of-evidence approach to infer oil spill impacts. The last seven papers address the impact