

# Book Reviews

## ZOOLOGY

### **Damselflies of Alberta: Flying Neon Toothpicks in the Grass**

By John Acorn. 2005. University of Alberta Press, Ring House 2, Edmonton, Alberta T6G 2E1 Canada. 156 pages. Can \$29.95.

I have a very strong interest in entomology, but no particular interest in Odonates, save for collecting the odd one for my odonatologist colleague. This small book has served to enlighten me and further my interest; I will look at damselflies more closely now.

In the bulk of the Preface, Acorn waxes about the restraints of scientific writing and laments about how dull it is to him. He prefers to write “in a frank and personal fashion, admitting to one’s influences, desires, uncertainties and dislikes.” However, much of “his” style (frank, admitting to influences and uncertainties) is the basis of scientific writing as well. Literature must be directed to an audience, and I don’t think an odonatologist would find “dull” the scientific writing directed to his or her guild. A quick look at the bibliography reveals that the vast majority of works consulted for Acorn’s book is from the scientific literature.

Having read the book, and having seen episodes of Acorn’s TV show and his video interpretations at the Tyrell Museum, I believe Acorn is a wonderful author for children (e.g. “A big, mean, scary female water spider” is part of one caption in this damselfly book), but I don’t think that writing for children alone is the intended extent of his scope. Acorn’s goal is to write for the general public and to get people interested in natural history, and this book helps in that. However, the author does not give credit to people’s intelligence...he changes names of structures on the damselflies simply because they sound too much like jar-

gon to him. I’m at a personal crossroads on this point – I firmly applaud Acorn’s message of natural history education for everyone, but to me, his writing style actually detracts from getting the most out of the information in the book. For example, I did not find the limericks at the beginning of each species description at all interesting, humorous or otherwise worth the space. I believe one must write appropriately for the intended audience; there is no such thing as a book for all ages. And I do not enjoy reading books that seem to be written for children.

Technically, the book has very good points, as well as a few unfortunate oversights. The book is of a convenient size, suitable for taking in the field. The photography, while not stunningly appealing, is still quite vivid. It is not clear why there is a photograph of a dragonfly nymph in the introductory chapter, and none of a damselfly nymph; the latter ultimately does appear later in the book. Acorn describes the *necessity* of using a 10x lens to be able to identify damselflies in the field, yet there are no photographs of *any* of the features at this magnification in the book (there are some useful line drawings at the back of the book). However, this small book *is* packed with a lot of useful information on identification, ecology and behaviour of Alberta’s damselflies, and for that reason alone would make a worthwhile addition to a naturalist’s library.

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## BOTANY

### **Flower Guide for Holiday Weekends**

By E. Larsen and B. Roots. 2005. National Research Council Canada, 1200 Montreal Road, Ottawa, Ontario K1A 0R6 Canada. vii + 149 pages. Paper.

This book is arranged to cover three key holiday weekends. The choice of weekends works equally well for both United States and Canada [Victoria Day/Memorial Day, Canada Day/Independence Day, Civic Holiday/Labour Day]. This is a good concept that will be most helpful to novices and visitors. By choosing your date you can readily see which of the common,

showy flowers are in bloom and thus narrow your search for the identity of a flower.

Each species is covered by a good strong narrative in layman’s terms. While this text is non-scientific it is enlightening and helpful. This is accompanied by one to four photos of the plant, its flowers, seed, etc. The photos are top quality and are artistically set in the book, adding to its charm. The edges of the pages are coloured yellow, orange or blue to make it easy to pick the weekend. The book is relatively small so will slip easily into a pack or pocket.

Although 64 flower species are covered, eight of these are repetitions. That is, the text and photos are virtually identical. I do not see the point of this. A list of plants with overlapping flowering times would have been sufficient. In the extra space the authors could have added some new plants.

### Orchids of Manitoba

By D. Ames, P. B. Acheson, L. Heshka, B. Joyce, J. Newfeld, R. Reeves, E. Reimer, and I. Ward. 2005. Native Orchid Conservation Inc., 117 Morier Avenue, Winnipeg, Manitoba Canada. \$17.95 + shipping charges.

This 158-page book with soft covers includes 36 orchid species known to occur in the province of Manitoba. It contains 218 absolutely beautiful colour pictures of different aspects of these delightful orchid plants in the text plus two more on the front and back covers.

The text begins with acknowledgements to all the individuals who have provided suggestions towards the book's production, the Manitoba Conservation staff for their guidance and the use of their maps, Kromar Printing for their assistance and getting the colours just right, and the financial support provided by the Province of Manitoba Special Conservation Fund, Shell Environmental Fund, and The Winnipeg Foundation. It is also noted here that the Native Orchid Conservation Inc., the publisher of this book, is a non-profit organization formed in 1998 to protect unique mini-ecosystems and their plant communities. This is followed by "A Brief History of Orchids," "Conservation and Biology," "Protection of Species and Ecosystems," "Orchid Biology," "Orchid Habitat" (including a map of Ecozones of Manitoba and sixteen pictures of habi-

This book would make a delightful gift for a traveller, cottage owner or those who simply like a good walk.

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tats), a "Key to the Orchids of Manitoba" (when in flower), and an "Introduction to the Species Accounts." The latter provides information on scientific names, abundance, habitat, flowering time, description, aids to identification and range maps.

Pages 45 to 145 are devoted to the illustrations, the distribution maps, and the most interesting descriptive text for the 36 orchid species treated in this book. Each descriptive page provides information on the common and scientific names, abundance, habitat, flowering time, descriptive information, aids to identification, and additional comments. The flowering times for Manitoba orchids are presented in alphabetical order of the scientific names with the common names in brackets on pages 146 to 148. This is followed by a bibliography on pages 149 to 151 and a Glossary on pages 152 to 155 and an Index on pages 156 to 157 which contains scientific names, common names and selective descriptive names to help the readers. In addition, a "Foreword" was provided by Paul M. Catling.

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### ENVIRONMENT

#### Environmentalism Unbound: Exploring New Pathways for Change

By Robert Gottlieb. 2005. MIT Press, Cambridge, Massachusetts, USA. 2001. 287 pages. US\$74.25 Cloth, \$20.83 Paper.

Robert Gottlieb is professor of Urban and Environmental Policy at Occidental College in California, and his study area involves a variety of environmental policies and practices, mostly in the Los Angeles area. In our modern world, where diversity is publicized as the omen of political correctness, but where the survival of the richest is often the motivating factor, environmental awareness is reduced to single questions which can be handled by one-issue political campaigns. Single issues may facilitate winnable environmental battles but the strategy can leave other important areas without advocates. Gottlieb places the environment into the context of the whole sphere of life and shows connected parts interacting to create our quality of life-style. Unfortunately, as an urban environmentalist, his examples more often show how each of the parts has been contaminated by different political and com-

mercial interests and the big picture purposely left as a large unexamined grey area. This book is an attempt to reconcile many interests and show inroads which have already been made and can reasonably expect to be made in a number of industries by response to human needs, well-planned activism and some creative thinking.

The focus of the book is urban environmentalism exclusively in the United States, but as a study of that country, it informs us of the actions of environmental groups, the battles they fight and the progress they have been making. The ideas presented are ones which were studied in Los Angeles but the implications for change are important for the rest of North America. Is there an alternative in the dry cleaning industry to the solvent perchloroethylene? Can fresh fruits and vegetables be locally grown and marketed outside of multinational grocery and food distribution companies? And can the cleaning industry perform their service

with environmentally-friendly chemicals, just wages, and competition which allows independent operators to remain active?

In answering these questions the book includes a lot of data presented in a readable narrative telling how the system of business and human resources relates to the environment, and how the agents of change have to be real agents in people's lives and business interests. In our society respect of the environment also has to take into account our financial securities and business success or failure. Gottlieb gives us details of different cultures, situations, and businesses impacting on environmental justice and pollution prevention situations.

The book is divided into two parts. The first part is a discussion on the bounds and restrictions which people feel when confronted with issues of environmental justice. Corporate excuses, small companies' pressures to survive and individual citizens' concerns for cleaner, healthier living are all parts of the discussion. All of these human situations impose boundaries on action proposed by environmental concerns or pollution prevention schemes. Gottlieb shows us good news too, where some positive steps have been taken in urban areas and where work is in progress.

The second part tells stories of three industries which are embracing change under the conditions discussed in the first chapters, the dry cleaning industry, the janitorial cleaning suppliers and the community's supply of fresh, economical and local food. Gottlieb takes us into a history of the dry cleaning industry, its beginnings, growth, present status and the future of the industry. There has always been potential for pollution in that industry and our desire for hygiene has constantly been at odds with the very mechanics of maintaining the service which we have adopted. On the horizon for us, there are potentials for a cleaner service with less pollution, and the alternative of more efficient ways

of using the same service but with the same kind of pollution.

The providers of office cleaning service have an industry which is rampant with low-salaried workers using volatile chemicals with little or no training nor protection from fumes, skin contact or emergency response. Smaller operators are forced to compete or go under and use the same chemicals also without training. Illegal aliens, underage and family workers are all involved to make a small business operate successfully. And when the family and the underpaid workers spend their wages, they often have to shop in neighbourhoods which are under-served by the large grocery chains because their urban area is too poor to support a store which will guarantee a supply of fresh nourishing fruits and vegetables so readily available to the more affluent areas. Local urban bylaws will also keep open-air markets from operating in poor neighbourhoods, and local growers and suppliers would not be able to market independently due to health by-laws or zoning bylaws heavily influenced by the same chain superstores which will not locate in the poor neighbourhoods.

The book has a wealth of information from careful scholarship and even has some good news for the future. As most of the environmental literature, it shows the amount of work which is going on and the lack of or limited successes which environmental policies can gain. Much more work remains to be done, but the story is being told and Gottlieb tells the story well holding our interest in each part.

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## **The Love of Nature and the End of the World: The Unspoken Dimensions of Environmental Concern**

By Shierry Weber Nicholzen. MIT Press, Cambridge, Massachusetts, USA. 2002. 199 pages. U.S.\$67.50 Cloth, \$18.90 Paper.

Nicholzen attempts to bring together the thoughts and philosophies of great nature writers, teachers and thinkers as well as thoughts and writings of artists and psychologists to make her points in this work of nature study and doomsday warning. The book wants us to consider our place in the development of the world, to consider and reconsider the place of people within the natural world unfolding, and our presence so strongly felt in each part of the world. Human presence is an essential part of the world rather than opposition to the world, and nature does not need to be suppressed in order for us to have a fullness of life. But nature has to be meaningful to us first, since our capacity to appreciate the world around us impacts upon our own

interior life and perception of what will sustain our lives. If we cannot see the world around us, we cannot care for it.

The text reads as much like a poem as a discussion in many places, with quotes from a great variety of writers illuminating the points which Nicholzen tries to make. I found myself leafing through the book to reread quotes from Thoreau, Paul Shepherd, Gary Snyder, Aldo Leopold and Jack Turner. Many other writers from a variety of traditions are included illustrating the views of nature synonymous with art, spirituality, philosophy and psychology. In fact, the Name Index lists 135 different authors, some of them quoted several times, a large number of source authors for a 200-page text. The number of authors included shows us the magnitude of literature supporting Nicholzen's thesis; love of nature is one of the defining aspects of art, spirituality and philosophical thinking over the ages.

We are faced with a crisis but we have responded with apathy, and unconsciously decided not to react to the crisis at all. At the same time, everyone we meet is has some concern and appreciation for at least part of the environment. How does this split in our thinking persist? Our society has grown so used to taking the world for granted that we can neither be shocked nor shamed into doing anything about the ecological crisis because we are inundated with other more shocking news every day and we have made the decision that we will continue to exist without paying attention to the evidence before our eyes. This decision, expressed by psychologist Harold Searles, gave NicholSEN the idea for the book. Our decision, NicholSEN wants us to know, is wrong and a denial of the evidence we can see as well as denying North American Native wisdom, Christianity, Islam, and Buddhism among other teachings of the ages. Artists, philosophers, and teachers of nature all give evidence of what we are missing, and what we are destroying, but we do not

respond because we have already made up our minds not to take the wisdom into account.

The book recognizes that our relationship with our world is destructive and has always been so, from the moment when we began to kill wildlife and uproot plants to nourish ourselves. However, killing and uprooting are only the beginning and not the end of our relationship with our world as we know, but could well become the fulfilment and fate of the world if we cannot see beyond incidentals. This book is an opportunity to see beyond where we are, which direction we seem to be going and an invitation to visit the wisdom of the ages. The sages teach us that the progress of nature does not despair of the possibilities of the future and neither should we. NicholSEN shows us a bleak path of destruction, but with the thread of hope that nature itself interpreted by writers past and present can lead us back to a positive relationship with the world in which we live.

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### **Survival by Hunting: Prehistoric Human Predators and Animal Prey**

By G. Frison. 2004. University of California Press, Berkeley. xix + 266 pages. Can \$47.25 Cloth.

The archaeological excavations in which I have been involved in interior western Canada often yield large amounts of animal bone, eloquent testimony to the importance of hunting for people in the past. Like most modern urban people, however, I have never hunted or butchered animals and so my ability to understand what I see in the archaeological record lacks this source of enrichment. In his fine book, *Survival by Hunting*, George Frison argues that direct hunting experience is a fundamental source of knowledge for archaeologists and laments the fact that most know nothing of this activity. He expresses his "dissatisfaction with ethnographic and archaeological interpretations of human hunters and hunting that fail to acknowledge the years of experience and the accumulation of knowledge of animal behaviour required to become a successful hunter." In Chapter 9 ("Concluding Thoughts"), he reiterates his frustration "that human hunting has wrongly been viewed as a kind of instinctive behaviour not worthy of serious anthropological study." On the contrary, he states that "'killing an animal' hardly describes the body of learned behaviour acquired over a long period of time that leads to that final act." He argues persuasively for an experiential approach to archaeology, using his own life and career as exemplars. As such, this book contains a great deal of information about animal behaviour and biology, though viewed from the perspective of a hunter.

Although he does not express it in quite these terms, my reading of Frison's argument suggests that he is impatient with the attitude of students who regard hunting and killing an animal as easy, whereas they regard the butchering and use of the remains as the difficult part requiring interpretation. Perhaps this is because the

process of hunting, as opposed to the kill and carcass use, leaves scant archaeological remains. Certainly, there are sites, such as Head-Smashed-In Buffalo Jump in southwest Alberta, where drive lanes and terrain configuration allow some reconstruction of the hunting strategy. But in most cases, especially where sites are deeply buried, this level of information cannot be recovered. The hunting process, as Frison describes it, involves an intimate knowledge of animal behaviour with a sophisticated understanding of terrain, and demands adaptability, persistence, and considerable strength and physical skill. Much of this, therefore, resides in the mind of the hunter and not in the material culture or discarded faunal remnants found at an archaeological site.

The first two chapters ("Where the Buffalo Once Roamed" and "The Education of a Hunter") draw largely on Frison's own life experience. He describes how he grew up in northern Wyoming in the 1920s and 1930s, learning to ride and hunt with his grandfather, partly to undertake predator control, and partly to supplement the food supply on the ranch. He spent much of his early adult life as an outfitter and guide. He recounts how his interest in archaeology grew from his encounters with sites and artifacts while he was out on the land. His fascination with this material and the people of the past who made it increased, until finally, in the 1960s, he was persuaded to enter the academic world, gaining formal training in the field that absorbed him. In the decades since then, he has excavated and published accounts of many of the most widely-known archaeological sites in the interior northwestern United States. These include the Casper site, Agate basin site, Horner site, and Mill Iron site. Perhaps because he was an outdoorsman first and an archaeologist second, his work has always included, perhaps to a greater ex-

tent than many other contemporary archaeologists, an appreciation for the subtleties of the terrain around the sites.

The heart of the book concentrates on the hunting of the large mammals that were major food sources for people through the past eleven millennia. The regional focus is the interior of North America, mainly the northern Great Plains and adjacent Rockies of the United States, the areas where Frison has spent most of his life and career. Frison begins his survey by considering Paleoindian, notably Clovis, hunters and the approaches they might have taken to hunting the now extinct megafauna, especially mammoths, around 11 500 to 10 000 years ago. This chapter is more speculative than the rest and, because there are no mammoths around to hunt today, it is obviously less based in personal experience. Elephants, perhaps, are the nearest one can now get to mammoths, though it is unclear how closely their behaviour and reactions to hunting are analogous. Frison describes some butchering experiments undertaken during elephant culls in Zimbabwe. From his account, cutting up an elephant with a stone knife is a lengthy, messy, and tiring process!

The next three chapters each focus on one of the "big three" prey mammals of the northern plains and Rockies: Bison, Pronghorn, and Mountain or Big Horn Sheep. As merits its importance in the archaeological record, the bulk of this discussion (almost 60 pages) focusses on Bison. This chapter begins with a consideration of the palaeontological evidence for different Bison species – a subject about which there is still much debate – followed by a survey of selected archaeological Bison kill sites. Frison reviews the several strategies that were used to hunt and kill Bison, resulting in kill sites of different types including arroyo traps, Bison jumps, and corrals. He then presents some interesting observations of Bison behaviour based on Bison ranching, knowledge that is needed in order to judge how the animals might react to various situations. One point that comes through strongly from these accounts is that cattle are not a good analogue for Bison because their behaviour and biology are quite different. Frison structures sections on Pronghorn and Big Horn Sheep in the same way, with an introduction to the animals' biology, ecology, and behaviour, emphasizing traits, such as herding, that would affect hunting strategies. He summarizes ethnographic accounts of hunting and then describes the archaeological signatures of procurement. These are often different and characteristic for each animal: corrals for Pronghorn and small traps or pens made of logs for Big Horn Sheep in the high country.

Chapter 7 deals with the hunting of various other animals in the same region. These include large animals – specifically deer, both White-tailed and Mule deer, Elk, and Black and Grizzly bear – and small mammals, especially rodents, and birds. Although sometimes present, these tend not to feature as promi-

nently in the faunal assemblages from archaeological sites in the regions under consideration. Indeed, Frison questions whether "small mammal procurement should be considered in the category of 'hunting'". Nevertheless, birds and small mammals may have been important diet items in some circumstances, although perhaps not as "archaeologically visible" as large mammals. The discussion of birds is quite brief and deals with only two (Sage Grouse and Blue Grouse); I found it interesting that there was no discussion of waterfowl hunting. Frison comments (page 178) that he has no experience with hunting Caribou, another large mammal that was an important food source for people further north. Frison briefly describes an unusual arrangement of canid faunal remains. Although this seems one implication, he does not discuss potential ceremonial aspects to this arrangement, while he does mention possible ceremonial aspects to arrangements of Elk antlers and Big Horn Sheep horns. However, throughout this book, Frison's focus is on hunting animals for food; other possible reasons for animal procurement are only touched on tangentially.

Throughout these chapters, Frison has mentioned the various weapons that were used in hunting. Chapter 8 brings this together and concentrates more explicitly on "Weaponry and Tools Used by the Hunter". The main weapons include the spear, the bow and arrow, and the atlatl. Stone tools include those used to butcher and process an animal, such as knives, hammers, and scrapers. With respect to these weapons and tools, our perceptions may be strongly coloured by what is recovered at archaeological sites, that is, mainly artifacts made of stone, although Frison does include some discussion of weapons and tools made from other materials, such as bone, antler and ivory. There is a further bias in the archaeological record because only part of the weapon system, the projectile point, is usually recovered. The other essential parts of the technology, such as wooden spear shafts, sinew lashings, bow strings, etc., which are made from more perishable materials, are rarely preserved in this region, except in unusual settings such as dry caves.

This is a truly fascinating book. It is a "must read" for professionals involved in archaeology, and plains archaeology especially. But anyone with an interest in the lifeways of people in North America prior to European settlement will find much to ponder on here. For naturalists, the main interest of the book lies in the practical observations on behaviour of some major large mammals of the continental interior. A career statement from one of the towering figures in late 20<sup>th</sup> century North American archaeology, this volume represents the distillation of a lifetime's experience garnered by fieldwork and reflection.

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## Wildlife, Conservation, and Human Welfare: A United States and Canadian Perspective

By R. Taber and N. Payne. 2003. Krieger Publishing Company, Malabar, Florida. US\$29.50 Cloth.

This book is a firework; it is full of incredible details on managed and mismanaged wildlife and natural resources. The beauty is that this convincing text comes from two acknowledged experts who are actually within the wildlife management circles, and who have worked in this discipline for over 30 years. Therefore, one can hardly find a more honest and matching description of the current state of wildlife management in North America, and elsewhere. It will hopefully put publications by B. Lomborg (*The Skeptical Environmentalist*) and others to rest, and lighten up the entrenched old-fashioned sections of the wildlife community towards new horizons. The authors state that "...the traditional resource coterie tends to resist change. It has a high level of internal coherence and devotion to a well-defined philosophy, and is led by individuals educated in an earlier age".

This fascinating book offers 14 chapters showing shockingly how far away we still are from a truly sustainable wildlife management; e.g., as requested by the Rio Convention 1992, by common knowledge and by textbooks of science-based resource management. The Chapters 5 "European Trade" and 6 "Exploration and Settlement" expose our recent globalization as a simple repeat of history. I suggest Chapter 12 "Broadening Conservation and Wildlife" as required reading for any scholar of wildlife and natural resource administration.

The authors expose nicely that the widely heralded concept of "multiple use" often simply meant nothing else than: "Fiber first, and wildlife last". They provide extensive examples of how harmful unsustainable management of resources is: in part, Alaska was sold to United States from the Russians due to their overexploitation of fur and other resources (oil and gas wasn't known by then). The Roman Empire fell due to the failure of blending economy and society, including deforestation, overgrazing, erosion and pollution of the natural environment. Once the Roman dominance ended approximately 500 AC, it led into the Dark Ages lasting from 400-1400 AC; a so-called period of intellectual stagnation. Another example referred to in this book: in 1841 the Russians abandoned their southernmost port, Fort Ross, on the coast of northern California because the local supply of marine mammals (not only sea otters but also fur seals) was already exhausted by overhunting. It was only the gold findings in California in 1848 that brought a new group of settlers into the region.

During the 218 pages of fascinating text the authors destroy the Myth of Superabundance of wildlife in North America. The United States list of "vertebrates in jeopardy" consists of over 78 birds, 14 reptiles, 12 amphibians and 71 fishes, and of additional 148 invertebrates, and 596 plant species.

The book makes a strong case that the natural environment is a vital component of the human environment. It shows nicely that the developed nations have 22% of the world's human population, but use 88% of world's resources, 73% of its energy, and generate most of its waste and pollution. Whereas 78% of the world population consumes only 12% of earth resources. Instead of calling the Third World "less developed", the authors suggest to call them "less consumptive" (and consequently the western world "more consumptive"). The authors make clear that North Americans use the land and energy resources from the rest of the world: the average U.S. citizen consumes 50 times more than average citizens in India. Despite subsistence lifestyles in rural areas, it was the people of the urban activism, concerned with non-material rather than material satisfaction, that started "Earth Day" (actually led by U.S. Senator G. Nelson). It resulted eventually into the green or environmental movement and had a global impact.

Perhaps some readers would not expect such revolutionary and "challenge the hierarchy" thinking and statements from authors that are Vietnam veterans. But these successful Wildlife Managers with an emeritus status, one of them a former Aldo Leopold student, have gone environmental for a good reason: our current economy regime harms wildlife and habitats alike. The authors do a brilliant job in summarizing their own research work as well as the current wildlife habitat dilemma of the second millennium. For instance, one reads throughout the book that market incentives fail too often to conserve or use biodiversity on a sustainable level, "...they even facilitate degradation of ecosystems and depletion of species". One of the provided examples deals with the Hudson's Bay Company which, clearly held a monopoly, and did what monopolies do best: unconstrained exploitation until they overexploited the resource; buying low and selling high but without any considerations of long-term sustainability. History taught their business attitude a lesson.

The authors provide a brilliant analysis and description for furbearers, and how it affected the global community: already by 1840 Beavers became commercially extinct, almost world-wide! By then, silk replaced fur, and prices dropped for Beaver. In contrast to other fur animals such as fox, lynx, sable and ermine, Beavers are herbivores and thus they occur in high populations and are readily harvestable. The fur trade began approximately in 1500 in Cape Breton, Canada, delivering products to France and Spain/Portugal. Quickly, North American natives then became part of a global market economy; e.g., via Holland, England and France. Fur trade meant predominantly "beaver". Before the North American fur quest started, Europe, as well as parts of Russia, were already hunted out for Beaver pelts. The introduction of steel traps in 1750 and their mass production did the rest to harm populations of

Beavers and other furbearers. As authors show, Beavers in the New York region, the location of one of the first bases of the Hudson's Bay Company, were quickly eliminated. The nearby St. Lawrence and Great Lakes regions, down south to the Gulf of Mexico even, were next, and then followed by the boreal forest zones. Both sides of the Pacific Coast came last, which got enforced by the North West Company and Russian trade companies. Once the Beaver was "done", Muskrat and Raccoon were next in line.

This book is one of the best reads as a resource for wildlife management issues and related details: In North America, since the 16<sup>th</sup> century, 94 birds and 36 mammals became extinct, and 253 birds and 316 mammals are almost extinct. As the Hawaiian example shows, "Captain Cook opened the way to the extinction of 90% of the indigenous species of birds...and introduced species (870 plants, 2000 invertebrates, 80 vertebrates)". Within only 20 years of its discovery by the western world, Steller's Sea Cow became extinct; it took approximately 100 years for the Sea Otter. Asian Lions were found for thousands of years all over Asia, Africa and southern Europe; but in recent times they were reduced decade after decade and are now only found in India. As further shown, the experiences with Galapagos tortoise, Gray and Bowhead Whales are not any different. "Among the American colonies, local extirpation was the order of the day". It's simply part of the 'American way of life'; one of the largest export products ever existed. Settling the United States automatically meant extirpation for species such as Moose, Elk, Bison, White-tailed Deer, Wild Turkey and Beaver. "Wildlife populations in the more densely settled east were declining by 1850...". And "... as railroads connected markets a lively wildlife trade continued". Frontier farmers turned into commercial producers with railroad connections increasing pressures on the wildlife resource which resulted in further declines and extinction. Nowadays, the eastern American Black Duck population has declined due to acid rain.

This book brings interesting native issues to the forefront as well: refuges along native tribe borders always had enough deer and wildlife because they represented an "unused grey-zone". But their wildlife abundances crashed immediately once tribe borders changed. The quest by European's for furbearers brought human diseases into the land previously dominated by natives, an area over 5000 miles in diameter, and one of the worst cases of disease spread ever known in human history. Subsequently, that reduced native hunting pressure on wildlife; e.g., Bison populations sextupled! Nowadays, natives in Canada and elsewhere face two options: merge with dominant industrial culture, or adapt their traditional culture to new conditions.

The authors show that federal public lands are under direct control of the president of the United States via U.S. federal agencies [e.g. U.S. Fish and Wildlife Service (USFWS) and U.S. Bureau of Land Management (USBLM)]. However, only 3% of the United States is

actually protected (whereas Costa Rica has over 12%). Further, "most private land in U.S., more over the half total, is managed on economic principles within short time frames and with no discernable concern for human welfare in other than monetary terms, or for ecological sustainability."

Very enlightening are also the presented views and constraints about the wildlife and management profession itself: "A manager in industry who does not please the stockholders can be replaced. A manager in a public agency who does not please the traditional agency clientele can be punished in several ways, among them transfer, reduction in budget, no promotion, or salary increase." But eventually, this person is still irreplaceable, blocking progress and contributing to the Cult of Incompetence which is nowadays widely seen in governmental agencies ("dead wood"). As shown in this book, such a situation does not only create frustration but supports environmental devastation on large scales.

Need an example? The authors provide plenty: "Biologists closest to the natural behavior of endangered species have encountered the natural behavior of government agencies and its negative consequences for species recovery. In a broader view, it seems that practically all human entities involved in an endangered species recovery program will benefit most, materially, as long as the species does not become extinct but never recovers to a viable population level". The direct effect from this entrenched but incredibly harmful management and governmental culture of wasteful nothingness is that 65 forms of mammals are in jeopardy (according to the USFWS list from 2002; 251 forms are in jeopardy in other countries); many more life forms are under consideration but this is way beyond capability of the agencies. Despite the governmental management and mandate, much wildlife is not adequately considered nor managed.

The authors emphasize "...the ancient continuing tendency towards Tribalism" and "testosterone" in the wildlife discipline: especially young men follow agencies and clubs, including their agendas such as provided by professors, coop units, USFWS and CWS. The authors quote: "... government programs at every level are the responsibility of a multitude of separate regulatory agencies, each with a primary interest in self-preservation and continued customary service to its traditional clientele, and steadily supplied with new recruits from specialized professional curricula at universities." And "...the cadres managing the various renewable natural resources had inevitably been becoming more and more inner-directed, i.e., out of touch with these new cultural changes. Each managerial group was recruited from students attracted to the appropriate professional curriculum, the student was indoctrinated with the traditional philosophy of that particular resource by instructors who had a similar education and had often served in the industry or agency dealing with that resource. Each renewable resource then had its adher-

ents: students, instructors, researchers, agencies, industries, and particular user-groups, supporting and served by sympathetic elected legislators. Such a cadre focused on a particular resource and became more and more internally coherent over time, producing accepted terms and philosophies of management, with members meeting one another periodically to re-enforce the mutual vision of how their resource should best be managed. Eventually, as the whole society developed new perspectives, these traditional professional resource groups began to lose public trust and esteem. Perceived as a threat to draw each resource cadre together in a defensive posture.”

Despite all these great and important contributions, I find the book does not address really well the actual mechanisms of how wildlife links with humans; e.g., why only 7% of North American adults hunt. For over 100 000 years humans made 99% of their living through hunting, and at least 1/3 of their diet consisted of meat. Taber and Payne show cases where hunting contributed to extinction of large mammals, such as with the North American native tribes of the Cahokians and Hohokam; humans as r-strategists. For the American sportsman, the loss of prairie grouse (Sharptail, Greater Prairie Chicken, Lesser Prairie Chicken) got simply compensated by the introduction of alien species such as Ring-necked Pheasant and Gray Partridge. The authors state that many national leaders were former soldiers, and this can affect wildlife due to the hereditary soldier-rule and aristocrat views which got directly imposed onto the environment then, and onto its legal administration. This forms a huge and lasting culture, as can be seen to this very day in the German Prussian, French, Russian, Royal English and even African hunting codes shaping the current set-up of wildlife, habitats and resulting attitudes of the globe. The authors make a strong case that the Legal Hunting rights for the common citizens in England were gradually reduced to nothing.

The text sections for National and Protected Parks are a great and very informative read: “When wildlife in the colonies became threatened, generally by human population increase and pressure on wildlife habitat (as it had in western Europe in medieval times), colonial administrators set aside some of the best remaining habitats as wildlife sanctuaries (just as their ancestors had done in medieval times). Most of these were established in 1930, til break up of colonial powers in the 1950s. Cultural concepts of wildlife conservation came to Canada and the U.S. principally from England...”. This approach was often encouraged by the upper class society; e.g., reflected in many wildlife funding schemes. In America, the first National Park came into existence in 1872 in Yellowstone (where hunting was still allowed for the subsequent 22 years), and in Canada in 1887 with the Rocky Mountains park (now Banff), whereas the first real reserve was founded as early as 1832 with the Arkansas hot springs. In 1881, the first U.S. forest reserves got established, followed

1906 by the Forest Reserves Act. This is the lasting effect when hiring leaders with vision (in this case G. Pinchot 1901).

However, the authors report that despite National Parks, many endangered species are found in habitats fully shared by humans and far from protected natural areas. “No reserve, no matter how large, is large enough to sustain a viable population of its more space-demanding species”. The buffer zones are supposed to improve this situation but this is an area where humans encroach, too. Authors hint to the controversial point of view of a consumptive use of National Parks in the Third World.

I really like the great descriptions and summaries of legal events that put wildlife management in a policy context: By 1969 the U.S. just had experienced three decades of unparalleled prosperity when the U.S. National Environmental Policy Act (NEPA) was initiated with the U.S. National Council on Environmental Quality (NCEQ) overseeing this process. The intent of NEPA is to force agencies predicting effects as far as possible in a quantitative fashion to avoid incidental damage to environmental values that their managerial decisions might cause. NEPA requires major things to be considered in regards to the environment. “These policy statements invoke the need to fulfill, assure, attain, preserve, achieve, and enhance social and environmental values in conservation and renewable resources...”. In theory, this provides for a great template balancing the economy with social and environmental issues. However, “The intent of NEPA also was blunted by agency reluctance and inability to adapt to new directives and to competition between agencies for NEPA-generated funds and tasks”. Secondly, land management agencies often had no clue about the actual land content as they only managed for timber, grass, flood control, military ranges, etc. Quantifying biodiversity must always be a priority for biodiversity conservation. Lastly, if a controversy occurs, each side tries to demand the burden of proof from the other side. Obvious legal and administrative problems exist with the actual “jeopardy opinion”, which results in the acceptance of the actual burden of proof.

Here another statement based on the huge experience by the authors with a high academic status that does not help to increase public trust in governmental actions when it comes to the environment and human welfare: “In a culture of public employees, every player must be aware, for welfare of self and dependants, that he/she is vulnerable. The higher people advance in the agency, the more they have to lose. On their own behalf, then, as well as their belief in the virtue of their organization, they will tend to place the welfare of their organization above any different good”.

The book certainly presents in detail another global milestone in legislation introduced in 1971: The U.S. *Endangered Species Act* (ESA). But progress on recovery of endangered species is slow due to too many

bureaucratic hurdles, and due to a slow listing process and inadequate funding of the act. The authors make it very clear that for listing species in ESA, any economical considerations have to be ignored: it should be purely driven by decline and extinction concerns. But instead, and often due to financial constraints, right now 600 Category I species await listing, 3000 Category II species still await research and sound assessment “But environmentally ignorant politicians often, usually, reduce environmental budgets”, and “The responsible services respond by emphasizing work on charismatic; i.e., glamour species ...” to obtain easier funds from the politically powerful urbanite. “Furthermore, by imposing a more rigorous standard of review, decisions of often technical scientific issues are shifted from an agency with substantial biological expertise, to judges who have none”.

Habitat issues get well-covered, and authors promote co-management of the land. They show that it is a huge short-coming for wildlife that the United States has an ESA but not a Habitat or Ecosystem Act. As history showed already in United Kingdom, forest cover loss and human pressure resulted in severe declines of Aurochs, Forest Bison, Brown Bear, Wolf and Red Deer. In North America, Atlantic forests had been kept open by natives through the use of fire in November (as supported by the well-known fact that the first European seafarers detected land long before seeing it by smell). This type of land management favored the Heath Hen, Elk and Bison; but it all changed in an evolutionary eye blink with the advent of farmers. In the U.S., and due to the extent of the land, trespassing was hard to control and a charge for use was impossible. Thus, everybody could use the available game.

From 1982 onwards, the ESA requested that for each endangered species a Habitat Conservation Plan (HCP) had to be added in order to address critical habitat. This shifted now the burden of proof to the agency, which consequently resulted in only a few completed HCPs, so far.

This publication gives a nice overview of North American wildlife management history. Before ESA, most attention was given to game species only, since agencies were in charge dealing with game management. It is only since 1910 that every U.S. state actually has had a wildlife agency. The federal agency did not come into place before 1940 (USFWS: 1947 for Canadian Wildlife Service CWS). Five periods of Wildlife Management are presented: 1600-1849 era of abundance, 1850-1899 period of overexploitation, 1900-1929 period of protection, 1930-1965 game management and 1966 to present environmental management.

The International Wildlife Conservation Chapter I find an outstanding read also. The global goal still appears to turn everything into sustainable use; failures of TRAFFIC and CITES conventions in administering this movement are shown. Three goals of international conservation are: (i) preservation of species,

(ii) integration of economic development and nature conservation, and (iii) effective cooperation of rural local people in wildlife conservation. Following this principle, authors present USAID as a development agency that has been heavily involved in hydro power projects world-wide. The roles of IUCN, Red Data Book, Survival Service Commission, WCMC, WWF and IWC get discussed in detail, too. A strong plea is made that U.S. should not withdraw from UNESCO (an agency that started with help from the English zoologist Julian Huxley, and which therefore included nature conservation within its scope).

This book shows that whatever happens in U.S. will eventually happen in Canada as well. It also shows that Canada is way behind when it comes to Wildlife Management, and that it is certainly not world-leading; e.g., the Canadian Environmental Protection Act got implemented as late as 1993. However, with Canada following U.S. almost blindly, at least consistency is assured across the North American continent; e.g., when compared to the diverse, if not even chaotic, policies in the European Union. The authors are not based in Canada, and some issues presented in the book for Canada sometimes appear a little too simplistic. Throughout the book, Canada gets portrayed as being similar to U.S., whereas U.S. has a much stronger NGO pressure than Canada has ever seen and experienced, making huge differences between the two countries. Despite the claim by the authors, Canada is definitely not further advanced in GIS and Satellite Imagery than U.S. (just have a look at the GAP programs for instance). From what I know, the Canadian Ecoregion approach to landscapes and management mentioned is actually very weak, to say the least.

This is an environmental history book *par excellence* but, unfortunately, without any relevant graphs, figures and maps. I am not a big fan of the reference organization either: references are not linked to the text and statements, and are hard to connect back from the text. Many chapters also have the same references cited several times. In some occasions, the text is a re-explanation of already published papers. The human welfare part could be stronger elaborated on, Adaptive Management principles by Carl Walters are hardly mentioned, nor any modern digital data issues for wildlife and habitats. For people with a European Union background, some of the related text sections might appear imprecise and blurred. At a few text sections, I am really at odds with the authors; for instance, they suggest that children had to be protected from wild predators, and that farming would have had negative effects on human life length and quality. Smaller errors can be forgiven (Domestication of African Elephants, Sperm Whale as the only large whale in tropical waters; U.K. being fully representative for Europe).

As a wildlife practitioner myself, I am extremely grateful that these two very experienced authors with highest academic ranking devote the book to “... students and field biologists acting under often trying

circumstances to strengthen the factual base for sustained positive relations between human and other forms of life." We need more of this, indeed. One might hope from this great book that Wildlife Managers will read, learn, and become environmentally considerate, eventually. But unfortunately, so far, the current facts and global political climate are just show-

ing pure denial of facts presented in this book, suggesting another period of "intellectual stagnation". As a reviewer, I recommend all managers buy this book and implement its lessons learnt today.

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## NEW TITLES

†Available for review \* Assigned

### Zoology

**Amphibian Declines: The Conservation Status of United States Species.** Edited by Michael Lannoo. 2005. University of California Press, 2120 Berkeley Way, Berkeley, CA 94704-1012. Distributed by NHBS2-3 Wills Road, Totnes, Devon TQ9 5XN, UK £62.00 Cloth

**The Amphibians and Reptiles in Bulgaria.** By V. Beshkov and K. Nanev. 2006. Pensoft Publishers, Geo Milev Street 13a 1111 Sofia, Bulgaria. 120 pages, Eur. 34.00

\* **Antipredator Defenses in Birds and Mammals.** By T. Caro. 2005. The University of Chicago Press 1427 East 60<sup>th</sup> Street, Chicago, Illinois 60637 USA. 592 pages, U.S. \$38

**Retracing the Aurochs: History, Morphology and Ecology of an Extinct Wild Ox.** By C. Van Vuure. 2005. Pensoft Publishers, Geo Milev Street 13a 1111 Sofia, Bulgaria. 424 pages, Eur. 54.90

**The Return of the Beaver.** By G. Sjoberg and J. Ball. 2006. Pensoft Publishers, Geo Milev Street 13a 1111 Sofia, Bulgaria. 300 pages, Eur. 67.90

**A Systematic List of Extant Ground Beetles of the World (Coleoptera "Geadephaga": Trachypachidae and Carabidae, Incl. Paussinae, Cicindelinae, Rhysodinae).** Second Edition. By W. Lorenz. 2005. Pensoft Publishers, Geo Milev Street 13a 1111 Sofia, Bulgaria. 530 pages, Eur. 135.00

**To See Every Bird on Earth: a Father, a Son and a Lifelong Obsession.** By Dan Koepfel. 2005. Hudson Street Press, published by Penguin Group. 304 pages, U.S.\$24.95 Cloth.

\* **Rare Bird: Pursuing the Mystery of the Marbled Murrelet.** By Maria Mudd Ruth. 2005. Rodale Press, 33 East Minor Street, Emmaus, Pennsylvania 18098-0099. 298 pages, U.S. \$23.95 Cloth.

**Birds of South Asia. The Ripley Guide.** 2 volumes. By Pamela C. Rasmussen and John C. Anderton. 2005. Lynx Edicions, Montseny, 8, E-08193 Bellaterra, Barcelona, Spain. £55.00 Cloth

**Cercopid Spittle Bugs of the New World (Hemiptera, Auchenorrhyncha, Cercopidae).** By C. Carvalho and M. Webb. November, 2005. Pensoft Publishers, Geo Milev Street 13a 1111 Sofia, Bulgaria. 280 pages, Eur. 58.59.

**Curassows and Related Birds.** By Jean Delacour and Dean Amadon. (Original 1973. Revised by D. Brooks). 2005. Lynx Edicions, Montseny, 8, E-08193 Bellaterra, Barcelona, Spain. 476 pages, U.S. \$75.

**Ephemeroptera of South America. Aquatic Biodiversity of Latin America.** (Abla Series) Number 2. By E. Dominguez, C. Molineri, M. Pescador, M. Hubbard, C. Nieto. 2006. Pensoft Publishers, Geo Milev Street 13a 1111 Sofia, Bulgaria. 490 pages, Eur. 95.00.

**Fishes of the River Cai, Vietnam, Khanh Hoa Province.** By D. Serov. 2005. Pensoft Publishers, Geo Milev Street 13a 1111 Sofia, Bulgaria. 164 pages, Eur. 33.00

**Coastal Fishes of Southern Africa.** By Phil Heemstra and Elaine Heemstra. 2005. National Inquiry Services Centre. Distributed by NHBS2-3 Wills Road, Totnes, Devon TQ9 5XN, UK 488 pages. £25.00 approximately U.S.\$46

**The Frogs of New Guinea and the Solomon Islands.** By J. Menzies. 2006. Pensoft Publishers, Geo Milev Street 13a 1111 Sofia, Bulgaria. 210 pages. Eur 45.00

**Evolution of the Insects.** By David Grimaldi and Michael S. Engel. 2005. Cambridge University Press, The Edinburgh Building, Shaftesbury Road, Cambridge, CB2 2RU UK. Distributed by NHBS2-3 Wills Road, Totnes, Devon TQ9 5XN, UK £45.00 Cloth

**Fascinating Insects. Some Aspects of Insect Life.** By P. Jolivet and K.Verma. October, 2005. Pensoft Publishers, Geo Milev Street 13a 1111 Sofia, Bulgaria. 320 pages. Eur. 34.95

**Great British Marine Animals.** By Paul Naylor. 2005. Sound Diving Publications, Distributed by NHBS 2-3 Wills Road, Totnes, Devon TQ9 5XN, UK. 272 pages. £15.00 paper.

**An Atlas of the Reptiles of North Eurasia.** By N. Ananjeva, N. Orlov, R. Khalikov, I. Darevsky, I. Ryabov and A. Barabanov. 2006. Pensoft Publishers, Geo Milev Street 13a 1111 Sofia, Bulgaria. 250 pages. Eur. 75.00

### Botany

**Illustrations of Alien Plants of the British Isles.** By E. Clement, D. Smith and I. Thirlwell. 2005. Botanical Society of the British Isles, Botany Department, The Natural History Museum, Cromwell Road, London, SW7 5BD. 466 pages. £18.75 Paper, approximately U.S. \$35

\* **Plant Conservation – A Natural History Approach.** Edited by G. Krupnick and W. Kress. 2005. The University of Chicago Press 1427 East 60<sup>th</sup> Street, Chicago, Illinois 60637 USA. 344 pages. U.S.\$30

**Prairie Phoenix: The Red Lily in Saskatchewan.** Edited by Bonnie J. Lawrence and Anna L. Leighton. 2005. Nature Saskatchewan, Room 206, 1860 Lorne Street, Regina, Saskatchewan S4P 2L7. 139 pages. \$24.95 Cloth.

\* **Giant Trees of Western North America and the World.** By A. Carder. 2005. Harbour Publishing, Box 219 Madeira Park, British Columbia V0N 2H0. 152 pages. \$26.95 Paper.

\* **Tropical Rainforests – past Present and Future.** By E. Bermingham. Edited by C. Dick and C. Moritz. 2005. The University of Chicago Press, 1427 East 60<sup>th</sup> Street, Chicago, Illinois 60637 USA. 672 pages. U.S. \$45 Paper

### Environment

**Crooked Lake Biophysical Survey 2000.** By C. and Deirdre Griffiths. 2005. Alberta Environmental Network, 1-6328A 104 Street NW, Edmonton, Alberta T6H 2K9. 330 pages. \$90 (Postage and handling, add \$10)

\* **Ecology & Evolution in the Tropics: A Herpetological Perspective.** Edited by Maureen A. Donnelly, Brian I. Crother, Craig Guyer, Marvalee H. Wake, and Mary E. White. 2005. The University of Chicago Press, 1427 East 60<sup>th</sup> Street, Chicago, Illinois 60637 USA. 675 pages. U.S. \$45.

**Scientists Debate Gaia.** Edited by S. Schneider, J. Miller, E. Crist, and P. Boston. 2005. MIT Press, Five Cambridge Center, 4<sup>th</sup> Floor, Cambridge, Massachusetts 02142-1493. 400 pages, US \$ 50

**An Ocean Odyssey.** By Stephen Wong and Takako Uno. 2005. Distributed by NHBS2-3 Wills Road, Totnes, Devon TQ9 5XN, UK. 240 pages, £30.00 Cloth

**One Planet, Many People: Atlas of Our Changing Environment.** UNEP. Distributed by NHBS2-3 Wills Road, Totnes, Devon TQ9 5XN, UK. 320 pages, Hardcover £81.95 or download at <http://www.na.unep.net/OnePlanetManyPeople/AtlasDownload.php>

**Tiger Bone and Rhino Horn – The Destruction of Wildlife for Traditional Chinese Medicine.** By Richard Ellis. 2005. Distributed by NHBS2-3 Wills Road, Totnes, Devon TQ9 5XN, UK £16.95 paper

\* **Sods, Soil, and Spades: Acadians at Grand Pre and their Dykeland Legacy.** By J. Sherman Bleakney. 2004. McGill-Queen's University Press, Montreal, Quebec. 221 pages, Can \$106.99