

Endangered Species UPDATE

*Including a Reprint of the latest USFWS
Endangered Species Technical Bulletin*

*January/February 1994
Vol. 11 Nos. 3 & 4*

**School of Natural Resources and Environment
THE UNIVERSITY OF MICHIGAN**



In this Issue

Large Carnivore
Conservation:
Back to the Future

Reintroduction of Gray
Wolves To Yellowstone
National Park and
Central Idaho

Searching for the
Endangered Eskimo
Curlew in South America

Cooperative Program
Pays Off for the
Endangered 'Alala

Large Carnivore Conservation: Back to the Future

by

A. Peyton Curlee, Tim W. Clark, Denise Casey, and Richard P. Reading

Ever since Europeans began exploring and settling North America, they made a concerted effort to purge the wilderness of large carnivores. This centuries-long extermination effort pushed grizzly bears (*Ursus arctos horribilis*), wolves (*Canis lupus rufus*), cougars (*Felis concolor*), wolverines (*Gulo gulo*), and many other carnivore species and populations to the edge of extinction (Hummell et al. 1992).

Only in the last few decades have many North Americans begun to reconsider traditional attitudes toward carnivores. Many now consider carnivores to be worthy of conservation because they fill an important ecological role, are aesthetically pleasing, or have an intrinsic right to coinhabit the Earth (Cahalane 1946, Dunlap 1988, Clark & Casey 1992). This change in attitude has led to the protection of many threatened carnivores through such legislation as the Endangered Species Act (ESA) of 1973.

But the recovery of large carnivore populations has been a slow process, partially because of long-standing cultural biases against these species, their large space requirements, and their low tolerance of human development. In short, large carnivore conservation is a difficult cultural and technical task.

Carnivore conservation is one of the most important biodiversity conservation challenges in the U.S. and around the world (see McNeely et al. 1990). In this article, we examine the attitudes and actions that led to the decline of one carnivore, the gray wolf (*C. lupus*), and discuss recent attempts to restore wolf populations. This case study illustrates the complex, multifaceted nature of the large carnivore conservation challenge. By tracking wolf management from the settlement of North America to the present, we can improve our understanding of the social, economic, and political variables involved in large carnivore

conservation, measure our progress, and judge what still lies ahead if we want large carnivores to be with us in the future.

The Case of the Gray Wolf: History, Transition, and Challenges

The history of gray wolf and human interactions in North America captures the contradictory and changing relationship between humans and nature (Young 1948, Kellert 1986). When European settlers arrived in North America, gray wolves ranged over much of the continent. By the 1930s, however, bounty hunters, livestock growers, and government agents had eradicated the wolf from most of its former range (Figure 1). More recently, many U.S. citizens became opposed to carnivore control and proposed that wolves be protected and even restored to some areas. The former, almost unanimous opinion that "the only good wolf is a dead wolf" has given way to a complex public debate about the pros and cons of wolf conservation and the maintenance of intact natural systems.

This change in attitude reflects the public's "increasing respect for nature and naturalness and respect for life" (Scheffer 1980:184). This shift has been fueled by many changes over the last century, including the following: the convergence of public acceptance of Darwin's theory of evolution with the destruction of bison (*Bison bison*), passenger pigeons (*Ectopistes migratorius*), and other species; the closing of the American frontier; the rise of nature writings, organized conservation societies, pro-

fessional societies, and modern ecology; changing patterns of urbanization and economics; and, the post-World War II affluence of the U.S. public.

Cultural Changes. To understand current views of carnivores, it is necessary to look back at least to the Middle Ages. Europeans equated wolves with death, pestilence, and the devil (Lopez 1978; Figure 2), and they brought these views and legends with them to the New World: "No wild animal of Europe has won a fame at all comparable with that of the wolf. In myth, legend and history it figures above other beasts...[and] it continues to this day to be an object of superstition...and its very name is a metaphor of dread" (Sprague 1902:358). Even today, children's stories often portray the wolf as a cunning, bloodthirsty, and untrustworthy animal.

In 1809, a Vermont resident wrote that "[o]ne of the most common and

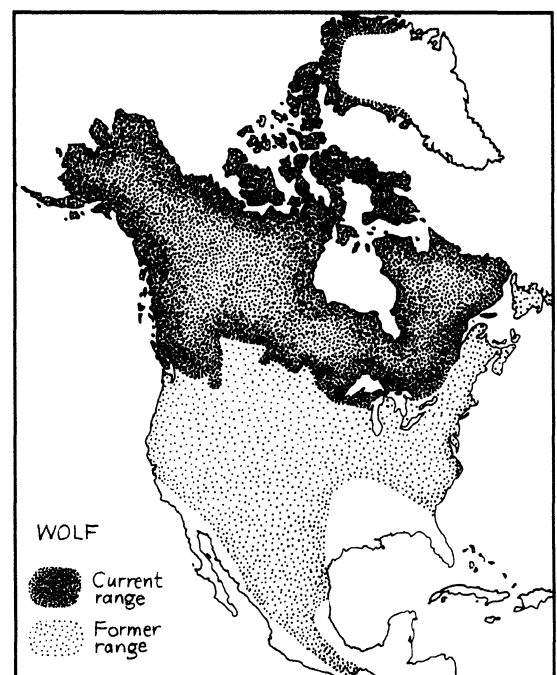


Figure 1. Map of the historic (pre-17th century) and current range of gray wolves in North America. Map prepared by Denise Casey © 1993.

noxious of all our animals is the Wolf. This animal is extremely fierce, sanguinary, and carnivorous" (Williams 1809, cited in Jolma 1992:119). A century later in Minnesota, a reporter wrote: "As you stand before [this wolf] and read of his bloody career you will shudder. When you look at those cruel fangs and think of the untold suffering they have caused, you [will] feel that he deserved death if any living thing on this earth ever did" (Thompson 1931:76). Similar sentiments can be heard today in Montana: "The way to get along with the wolf is to kill the son of a bitch....The wolf is a vicious predator" (Dawidoff 1992:38). In some respects, it seems not much has changed in 300 years.

Yet, just as this last, contemporary quote might mislead one to believe that all Montanans are antagonistic toward wolves, it also would be misleading to think that there have been no wolf advocates until recently. In the early 1900s, when carnivores had been almost universally exterminated from the eastern U.S. and efforts to rid the Plains of carnivores were already far-reaching, Ernest Thompson Seton (1901, cited in Jolma 1992:91) wrote: "My chief motive...has been to stop the extermination of harmless wild animals; not for their sakes, but for ours, firmly believing that *each* of our native wild creatures is in itself a precious heritage that we have no right to destroy or put beyond the reach of our children" (italics added).

In the 1940s, John Stanwell-Fletcher (1942:147) felt that Canadian bounties were by that time mostly "unnecessary and unjust," because "[t]he wolf is...a very valuable factor in controlling overpopulation." He also warned that "[i]f the wolf is exterminated we shall have lost one of the most virile, wise, and beautiful of all wild creatures." At present, there is an even larger group of people who feel that "[w]e made a grave error in exterminating wolves" (Askins 1991:5A).

Valuational Changes. Another way of understanding changing societal attitudes towards wolves is to look at changes in the value society has placed on wolves. For many centuries, a dead wolf was worth more than a live one

because of the value of the pelt and the bounties that could be earned: "For at least 2700 years the practice of mankind to reward wolf killers has been more or less continuous. Indeed, no other mammal over such a long period of time has been the object of so many legal acts stipulating tribute for its extirpation" (Young 1942a:492).

The first bounty law in colonial America was passed in 1630 in Massachusetts. Eventually 39 states and territories had bounty laws, many of which remained on the books until well into the twentieth century (Young 1942a).

In addition to receiving state bounties ranging from \$2 to \$10 per wolf at the beginning of this century (Hornaday 1927), bounty hunters also reaped financial rewards from wolf pelts. Three soldiers who were mustered out of the Army in Colorado Territory spent the winter of 1861 in Kansas using strychnine to take more than "3,000 wolves, coyotes and swift foxes. The entire kill netted them \$2,500" (Young 1942b:554). Another party in Kansas around this time got "302 wolves, some buffalo, and other skins" in just ten days, and with the sale of the furs, they "realized \$70 for each day spent on the hunting ground" (Mead 1986:168-169).

By lacing an elk (*Cervus elaphus canadensis*), antelope (*Antilocapra americana*), or bison carcass with strychnine, dozens of carnivores could be killed in one fell swoop. Indeed, "[a] sort of range law was adopted whereby no ranch man would knowingly pass up a dead carcass without first inserting a goodly dose of strychnine, in hopes of eventually killing a wolf or two" (Young 1942b:572). Of course, this indiscriminate use of poison also affected other wildlife. "Poisoned wolves and foxes in their dying fits often slobber upon the grass, which becoming sun dried holds its poisonous properties a long time, often causing the death months or even years after of the pony, antelope, buffalo or animals feeding upon it" (Taylor, cited in Young 1942b:554).

As people became increasingly aware of ecological connections and adopted more favorable views of carnivores, incentives for killing wolves gave way to stiff penalties for this animal's

Endangered Species UPDATE

A forum for information exchange on endangered species issues

January/February 1994
Vol. 11 Nos. 3 & 4

R. Lynn Gooch..... Editor
Terry Root Faculty Advisor
Ruth E. Polk..... Editorial Assistant

Instructions for Authors:

The *Endangered Species UPDATE* welcomes articles related to species protection in a wide range of areas including but not limited to: research and management activities and policy analyses for endangered species, theoretical approaches to species conservation, and habitat protection. Book reviews, editorial comments, and announcements of current events and publications are also welcome.

Readers include a broad range of professionals in both scientific and policy fields. Articles should be written in an easily understandable style for a knowledgeable audience. For further information, contact the editor.

Subscription Information:

The *Endangered Species UPDATE* is published approximately ten times per year by the School of Natural Resources and Environment at The University of Michigan. Annual rates are \$23 for regular subscriptions, and \$18 for students and senior citizens (add \$5 for postage outside the U.S.). Students please enclose advisor's signature on university letterhead. Send check or money order (payable to The University of Michigan) to:

Endangered Species UPDATE
School of Natural Resources
and Environment
The University of Michigan
Ann Arbor, MI 48109-1115
(313) 763-3243

Cover: Gray wolves (*Canis lupus*). Photo by Monty Sloan/Wolf Park.

The views expressed in the *Endangered Species UPDATE* are those of the author and may not necessarily reflect those of the U.S. Fish and Wildlife Service or The University of Michigan.

Production of this issue was made possible in part by support from the Chevron Corporation.



printed on recycled paper

death (e.g., ESA). Instead of paying for wolf control, some states, such as Minnesota, now pay compensation to ranchers for livestock lost to wolves. One environmental organization, Defenders of Wildlife, also has offered to compensate livestock growers in several western states for stock depredations by wolves, and will pay a \$5,000 reward to ranchers who let wolves den and produce pups on their property (Bath 1991).

In addition, the federal government now spends thousands of dollars a year in efforts to restore wolves to portions of their former range. A final, less studied aspect of the valuation of wolves is the economic activity that results from their existence and preservation. An economist has estimated that if wolves were restored to Yellowstone, an additional \$43 million would be generated in the regional economy through tourism (Duffield 1992). A live wolf is now much more valuable than a dead wolf.

Organizational Changes. States, federal agencies, and private individuals were all formerly in the business of wolf extermination. Now many of these groups are working to preserve this species. What was once a fairly uniform system of public and private partnerships has become a much more contentious situation in which states are often pitted against the federal government, and private groups are engaged in acrimonious media and legal battles. It should not be surprising, however, that a creature with such a history of concerted, attempted annihilation is now less than unanimously loved.

The federal government officially joined the states in predator eradication in 1915 (Young 1942b). The Bureau of Biological Survey, the precursor to the U.S. Fish and Wildlife Service (USFWS), was financed and directed to study and control predators. In response to pressure from livestock interests, Forest Service officers also trapped wolves (Young 1942b, Bailey 1940). Predator and rodent control soon came to dominate the Biological Survey's activities (Dunlap 1988), and predator control agents succeeded in completing the eradication campaign begun by fur trappers, homesteaders, and wolf bounty

hunters. By the 1930s, wolves remained only in remote portions of the U.S., such as Michigan, Wisconsin, Montana, Alaska, northern Minnesota (DiSilvestro 1991), and perhaps Idaho.

By granting the gray wolf endangered species status with passage of the ESA, the federal government made a major reversal in predator policy. This policy change pitted several federal agencies and state governments against each other. At the same time that federal agencies have been mandated to do everything in their power to restore wolves to areas with large tracts of public land, like Yellowstone National Park and environs, state legislatures of affected states (Montana, Wyoming, and Idaho) have passed resolutions opposing wolf restoration by wide majorities (Thompson 1993).

Only in the past year—two decades after wolves received federal protection—have state wildlife agencies lent tentative support to federal plans for wolf reintroduction. Support has been given only with the provisions that reintroduced wolves be considered non-essential experimental animals and that the states, rather than the USFWS, be given the power and funds to control problem wolves (Loomis 1992, Thuermer 1993).

A vocal lobby in the West opposes wolf reintroduction because it sees wolves as a threat to livestock and game hunting industries and as a danger to human life. One Idaho resident recently said, "I don't feel it is right to turn the wolves loose on children that walk to a bus as mine do" (Oakley 1986). Still others think wolf reintroduction is being used as "a surrogate issue to get commodities—grazing, oil and gas, timber, mining and agriculture—off the public lands. Ultimately it would shut down all of the little towns in the western part of the state that depend on commodities for their survival" (Casper Star Tribune 1991:1E).

At the other end of the spectrum are critics who fault the government for caving in to special interests and failing to live up to the mandate of the U.S. citizenry to protect endangered species, as contained in such legislation as the Bald Eagle Protection Act and the ESA:

"The federal government and especially the state wildlife agencies have served chiefly as procurers of game for hunters, not as protectors of wildlife. As many species face the end of evolution, government wildlife agencies are busy managing for more deer, elk, and ducks for hunters to shoot" (Pacelle 1991, cited in Jolma 1992:110). "Many of us feel [wolf restoration is] a moral imperative and a biological imperative" (Casper Star Tribune 1991:1E).

Large Carnivore Conservation: The Challenge for the Future

The stakes are high in this cultural, valuational, and organizational debate over the future of the gray wolf. As Stephen Kellert (1986:iv) wrote, "The wolf...continues to function as a symbolic fulcrum upon which some of our most confused and contentious feelings toward the natural world are focused....The wolf, in effect, offers a kind of litmus test of our willingness to change fundamentally and unequivocally our historic relationship to the natural world." This species poses the ultimate test of our ability to overcome historic enmity in favor of a future that contains diverse natural systems with all of their original faunal components.

The wolf is just one example of the overall challenge of carnivore conservation. Many carnivores are in similar situations in that their numbers are reduced and their ranges are restricted. These factors make them highly vulnerable to extinction (Shaffer 1981). A number of carnivores, such as the grizzly and Florida panther (*F. concolor coryi*), have received significant conservation attention and resources, while many others, including lynx (*F. lynx*) and wolverines, have received little research or management attention.

In addition, many elements of the wolf case are not unique to the United States. People around the world are now concerned about the potential extinction of carnivores and other elements of native biological diversity. This concern ranges from arguments that we must protect the integrity of natural systems that provide our air, water, food, clothing, and shelter, to the belief that we

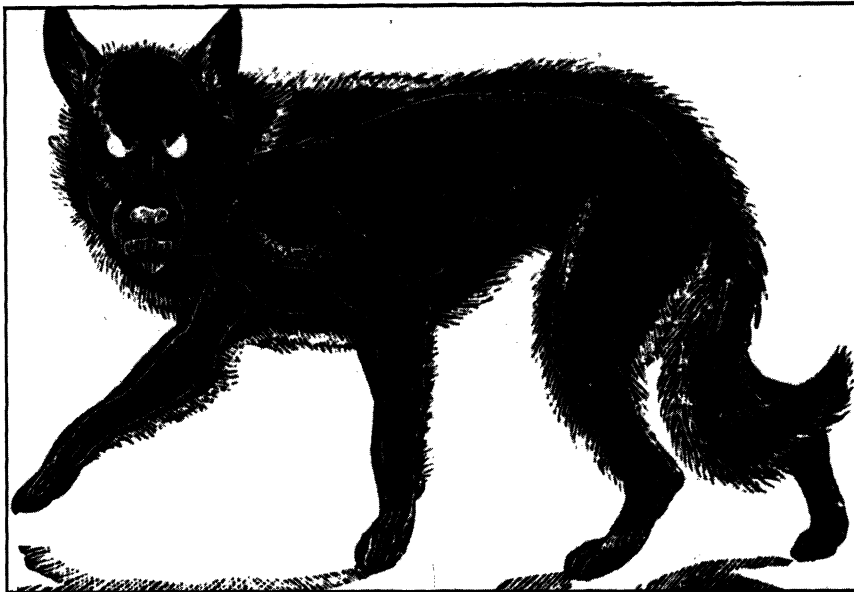


Figure 2. The beast in the wolf. By Dorothy Fitch, from *Book of Fabulous Beasts* by A.M. Smyth (London, Oxford University Press, 1939). Drawing used by permission of Oxford University Press.

must preserve these creatures for the enjoyment of future generations.

Conclusion

Although much of the public discussion about carnivores is limited to the animals' ecology and behavior, the less understood aspects of cultural attitudes, valuational systems, and organizational behavior are at the root of the conservation crisis and will determine our future success in preserving carnivores. It is likely that the trend of cultural, valuational, and organizational changes in favor of large carnivores will continue. This does not mean, however, that large carnivore survival is inevitable. The kinds of battles fought over the last century will continue well into the future. Reintroducing wolves into the Greater Yellowstone Ecosystem is a typical example (e.g., Thuermer 1993). There will be others.

The challenge for people concerned with the survival of carnivores is to find new, more successful conservation approaches that explicitly recognize the multifaceted nature of the challenge. In general, conservationists need to do the following: find ways to decrease polarization and foster greater cooperation among all parties; integrate the best knowledge about the social, political, economic, and ecological aspects of the problem into feasible tactics; and, match

their efforts to the large geographical, ecological, and temporal scales appropriate to large carnivores, ecosystems, and landscapes. Our actions in the next decades may well determine the future of these magnificent animals.

Acknowledgments

We thank the Geraldine R. Dodge Foundation for supporting this and similar carnivore conservation studies of the Northern Rockies Conservation Cooperative.

Literature Cited

- Askins, R. 1991. Why wolves should return. Jackson Hole News, Jackson, WY. 30 Jan. 1991:5A.
- Bailey, V. 1940. The home life of the big wolves. *Natural History* 49:120-122.
- Bath, A.J. 1991. Public attitudes about wolf restoration in Yellowstone National Park. In: *The Greater Yellowstone Ecosystem: Redefining America's Wilderness Heritage*, pp. 367-376. R.B. Keiter and M.S. Boyce (eds.). Yale University, New Haven, CT.
- Cahalane, V.H. 1946. Shall we save the larger carnivores? *The Living Wilderness* 17:17-22.
- Casper Star Tribune. 1991. Wolf return plan draws hoorays and howls. 7 Jan. 1991:1-2E.
- Clark, T.W. and D.E. Casey. 1992. *Tales of the Grizzly*. Homestead Press, Moose, WY.
- Dawidoff, N. 1992. One for the wolves. *Audubon* 94(4):38-45.
- DiSilvestro, R.L. 1991. *The Endangered Kingdom: The Struggle to Save America's Wildlife*. John Wiley and Sons, New York, NY.
- Duffield, J.W. 1992. An economic analysis of wolf recovery in Yellowstone: Park visitor attitudes and values. In: *Wolves for Yellowstone?*

- A report to the U.S. Congress, Vol. IV, pp. 2.31-2.88. J.D. Varley and W.G. Brewster (eds.). National Park Service, Yellowstone National Park, WY.
- Dunlap, T.R. 1988. *Saving America's Wildlife*. Princeton University Press, Princeton, NJ.
- Hornaday, W.T. 1927 (Orig. 1904). *Hornaday's American Natural History*. Charles Scribner's Sons, New York, NY.
- Hummell, M., S. Pettigrew, and J. Murray. 1992. *Wild Hunters: Predators in Peril*. Roberts Rinehart, New York, NY.
- Jolma, D.J. 1992. *Hunting Quotations: Two Hundred Years of Writings on the Philosophy, Culture and Experience*. McFarland and Co., Jefferson, NC.
- Kellert, S.R. 1986. Foreword. In: *Wolf: A Modern Look*, pp. iii-v. NorthWord, Ashland, WI.
- Loomis, B. 1992. Wolf EIS wins backing from Wyoming game managers. *Jackson Hole Guide*, Jackson, WY. 22 July 1992:16A.
- Lopez, B.H. 1978. *Of Wolves and Men*. Charles Scribner's Sons, New York, NY.
- McNeely, J.A., K.R. Miller, W.V. Rein, R.A. Mittermeier, and T.B. Werner. 1990. *Conserving the World's Biological Diversity*. World Conservation Union, Gland, Switzerland.
- Mead, J.R. 1986. S. Jones (ed.). *Hunting and Trading on the Great Plains, 1859-1875*. University of Oklahoma Press, Norman, OK.
- Oakley, G. 1986. Historical overview. In: *Wolf: A Modern Look*, pp. 1-7. NorthWord, Ashland, WI.
- Scheffer, V.B. 1980. *Adventures of a Zoologist*. Charles Scribner's Sons, New York, NY.
- Shaffer, M.L. 1981. Minimum population sizes for species conservation. *BioScience* 31:131-134.
- Sprague, L.T. 1902. The wolf in myth, legend, and history. *Outing* 39:358-360.
- Stanwell-Fletcher, J.F. 1942. Three years in the wolves' wilderness. *Natural History* 49:136-147.
- Thompson, A.M. 1931. Old three legs. *Field and Stream* 35(12):30-31, 75-76.
- Thompson, J.G. 1993. Human dimensions of wolf reintroduction. *Society and Natural Resources* 6:165-179.
- Thuermer, Jr., A.M. 1993. Game and Fish backs wolves with conditions: State wants trust fund and control of numbers. *Jackson Hole News*, Jackson, WY. 3 Nov. 1993:A1, A18.
- Young, S.P. 1942a. The war on the wolf, I. *American Forests*, Nov.:492-495, 526.
- Young, S.P. 1942b. The war on the wolf, II. *American Forests*, Dec.:552-555, 572-574.
- Young, S.P. 1948. *The Wolf in North American History*. Caxton Printers, Caldwell, ID.

Peyton Curlee is Executive Director of the Northern Rockies Conservation Cooperative (NRCC); Tim Clark is Professor Adjunct at Yale University's School of Forestry and Environmental Studies, and President of the Board at NRCC; Denise Casey is Secretary-Treasurer of NRCC; Richard Reading is a Research Associate of NRCC. All authors can be contacted by writing NRCC, Box 2705, Jackson, WY 83001.

Report From the Field

Searching for the Endangered Eskimo Curlew in South America

by Gonzalo Castro, Daniel Blanco, Ricardo Banchs, and Pablo Canevari

The Eskimo Curlew (*Numenius borealis*) is considered one of the world's most endangered birds. However, historic records indicate that the Curlew was once extremely abundant, often seen in "immense flocks" (Gollop et al. 1986). Excessive hunting throughout the 1800s, when the Curlew was considered a delicacy, has been accepted as a proximal cause of the species' almost total extermination. During this century, only scattered sightings of few individuals (usually one or two) have been reported (Gollop et al. 1986).

Officially listed as endangered in both the U.S. and Canada, the Curlew is protected through a variety of laws at state, federal, and international levels. However, the scarcity of reliable records has created a sense of skepticism within the scientific community as to whether the Eskimo Curlew is still extant and whether recovery efforts can be implemented at all (Banks 1976).

Eskimo Curlew Survey

Historic records indicate that the Eskimo Curlew bred primarily in northern Canada and then migrated to southern South America (especially the Argentina Pampas) following an easterly route (Wetmore 1939). The Curlew returned to its breeding grounds in Canada following a more inland route through Texas and the Great Plains.

As part of an effort to locate the Eskimo Curlew and to identify potential habitats in its historic non-breeding range, the U.S. Fish and Wildlife Service (USFWS), together with Wetlands for the Americas (WA), undertook a comprehensive survey in Argentina and Uruguay during 1992-1993.

In this survey, other grassland shorebirds that share Eskimo Curlew habitats were used as surrogates to help locate important sites. Forty local ornithologists conducted extensive field surveys

through 18 regional campaigns. Potential habitat was surveyed in each campaign by car and on foot. Once suitable habitats were located, shorebird flocks were identified and thoroughly scrutinized. The campaigns involved 1,069 individual counts, 92 of which yielded grassland shorebirds.

Survey Results

Despite this massive surveying effort, there were no confirmed sightings of the Eskimo Curlew. However, previously unknown suitable habitats were located, as were large concentrations of other shorebird species, including the American Golden Plover (*Pluvialis dominica*), Buff-Breasted Sandpiper (*Tryngites subruficollis*), Upland Sandpiper (*Bartramia longicauda*), and Pectoral Sandpiper (*Calidris melanotos*). A total of 12,700 grassland shorebird sightings were recorded.

Habitat Protection

The great majority of historic Eskimo Curlew localities have been severely modified by agricultural expansion and cattle ranching. Information generated from this research initiative is being used to identify important conservation areas for grassland shorebirds and to design a conservation and stewardship plan for these species. These plans could include not only the designation of protected areas at the provincial and federal levels in Argentina, but also the voluntary participation of local landowners to protect these important habitats.

Conclusion

If the Eskimo Curlew is still extant, habitats to be protected under this scheme will undoubtedly become the

core of a system of reserves at the hemispheric level to help bring this bird back from the brink of extinction. Efforts at the local level will continue throughout 1994 in the hope of finding this most elusive transcontinental migrant.

Acknowledgments

We are very grateful to the USFWS, especially Skip Ambrose, for providing financial support for this study. A complete report has been published by Wetlands for the Americas (Blanco et al. 1994) and is available from WA's offices in the U.S. and Argentina, and at the addresses provided below.

Literature Cited

- Banks, R.C. 1976. Extinction. *Science* 191:1217, 1292.
- Blanco, D., R. Banchs, and P. Canevari. 1994. Critical Sites for the Eskimo Curlew (*Numenius borealis*) and Other Nearctic Grassland Shorebirds in Argentina and Uruguay. Wetlands for the Americas publication no. 13. Manomet, USA, and Buenos Aires, Argentina.
- Gollop, J.B., T.W. Barry, and E.H. Iversen. 1986. Eskimo Curlew. A Vanishing Species? Special publication no. 17. Saskatchewan Natural History Society, Box 1121, Regina, Saskatchewan, Canada.
- Wetmore, A. 1939. Recent observations of the Eskimo Curlew in Argentina. *Auk* 56:475-476.

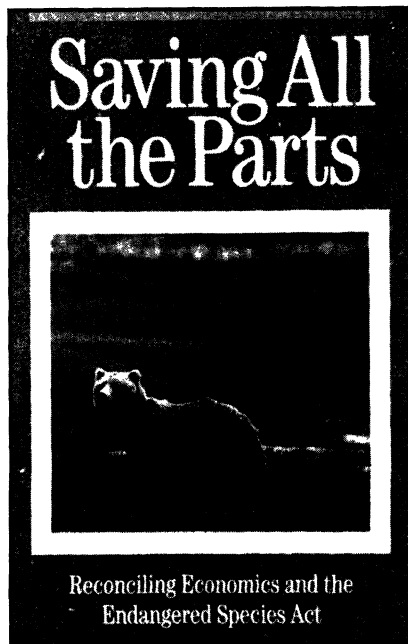
Dr. Gonzalo Castro, Executive Director of Wetlands for the Americas (WA) can be contacted at WA, P.O. Box 1770, Manomet, MA 02345, USA. Daniel Blanco, South American Technical Coordinator, WA, Buenos Aires office; Richard Banchs, Argentine ornithologist who acted as a consultant to WA in this project; and, Pablo Canevari, South American Director, WA, Buenos Aires office, can all be contacted at Humedales para las Americas, Monroe 2142, 1428 Capital Federal, Argentina. WA is an international, non-profit organization dedicated to conserving wetland ecosystems throughout the western hemisphere. WA has offices in Canada, USA, Mexico, Peru, and Argentina.

Book Review

Saving All the Parts: Reconciling Economics and the Endangered Species Act

By Rocky Barker. 1993. Island Press.
Washington, D.C. \$15.95. 260 pp.

Reviewed by Brodie Farquhar



Saving All the Parts: Reconciling Economics and the Endangered Species Act is a gracefully written mosaic of the Pacific Northwest's ongoing battle between natural resource-based economies and the protection of a battered, yet still beautiful, ecosystem. This book provides a much-needed overview of how biodiversity protection may evolve in the United States and around the world.

Saving All the Parts is an extension of a six-month project for the *Idaho Falls Post Register* that resulted in a seven-part series published in December 1990. The project, led by journalist Rocky Barker, focused on how the people of the Pacific Northwest, particularly in eastern Idaho, have been affected by the Endangered Species Act.

Barker was the lead reporter for the *Post's* award-winning coverage of the 1988 Yellowstone fires and its nationally-recognized coverage of nuclear waste problems at the Idaho National Engineering Laboratory. Barker holds a bachelor's degree in environmental studies from Northland College in Ashland,

Wisconsin and is also a fellow of the Knight School of Specialized Journalism at the University of Maryland. He is a regular contributor to *High Country News* and has been widely published in national newspapers and magazines.

Saving All the Parts covers numerous topics. Barker's journalistic ability to bring complicated topics and controversies to life with telling anecdotes, interviews, and statistics is apparent in his discussion of the following: the Endangered Species Act, grizzlies, water projects, the decline of salmon, spotted owls, political skullduggery, valuable success stories like the peregrine falcon or bald eagle, the uproar over reintroducing the gray wolf to the Yellowstone ecosystem, and the impact of Wall Street hostile takeovers on timber cuts.

There is incredible breadth in this book, enough to inspire many readers to learn more about the Northwest. But don't look for depth. For example, just as I was becoming immersed in the chapter on grizzly bears, I suddenly found myself in the water chapter learning about endangered mollusks.

That is how it is with *Saving All the Parts*: wonderful stories, earthy characters, clear lines of conflict, good maps, and then on to the next flashpoint. Yet do not let the lack of depth deter you from considering this book—the bibliography alone is worth the purchase. With some long-term reading you will be able to convert the breadth of *Saving All the Parts* into some in-depth understanding of the issues and controversies surrounding the Pacific Northwest.

The discussions in *Saving All the Parts* reveal a number of discouraging environmental trends. However, by the end of the book there is room for cautious optimism. If a proactive management principle is adopted, there is still

hope for the protection of the Pacific Northwest's ecosystem. By practicing proactive management, ecosystem threats can be anticipated and policies adjusted while there is still room for flexibility.

Barker notes that some of the nation's best thinking about ecosystem and bioregional planning is going on in the Northwest. He sounds hopeful that this part of the country will emerge as a model for bioregional, ecosystem management on a grand scale, with people as an integral part of natural ecosystems. In Barker's opinion, nothing else will work. He writes, "The Pacific Northwest will not be protected by outside forces....It must be the people in the region, who through good stewardship keep the region whole and sustainable. That means integrating the protection of natural ecosystems, both land and water, into all social, economic, and political decision-making." *Saving All the Parts* shows us the consequences of NOT integrating the protection of natural ecosystems into decision-making, and gives us a glimmer of hope that we might learn how to do just the opposite.

I thoroughly enjoyed *Saving All the Parts*, both as a journalist and as a graduate student in natural resources. The book combines the best elements of in-depth reporting with a firm grounding in the academic literature. Journalists and conservation biologists alike will enjoy this book. To be able to appeal to two such different audiences, Rocky Barker must be doing something right.

Brodie Farquhar, a Scripps Fellow for Environmental Reporting, is wrapping up a Master of Science degree at the University of Michigan's School of Natural Resources and Environment. Mr. Farquhar has covered environmental issues in Colorado and Arizona.

Bulletin Board

Job Announcement

The Center for Plant Conservation (CPC) is seeking qualified candidates for the position of Manager of Conservation Programs. The position is based at the Center's National Office, headquartered at the Missouri Botanical Garden in St. Louis. The CPC is a national organization that coordinates the plant conservation activities of 25 participating gardens and numerous cooperators throughout the United States.

The Manager of Conservation Programs is responsible for managing CPC's conservation program in its national network of Participating Institutions, supervising the National Collection of Endangered Plants, and managing the Priority Regions and Integrated Conservation Programs. Other responsibilities include developing action plans, supervising support staff, and seeking and managing grants.

The successful candidate will have the following: a Master's degree in botany, horticulture, or a related field (Ph.D. preferred); three to five year's experience in botanic gardens, plant conservation management, and/or research; a knowledge of the plant conservation community; experience working with governmental agencies and non-governmental organizations; excellent commu-

nication and writing skills; computer literacy; and, a willingness to travel.

Applications will be accepted until the position is filled. However, interested individuals with the specified position qualifications should apply immediately and submit a resume and three references to: Manager, Conservation Programs, #108-L20.K, Center for Plant Conservation, Human Resources Management, Missouri Botanical Garden, P.O. Box 299, St. Louis, MO 63166. CPC is an equal opportunity/affirmative action employer.

Marine Mammal E-Mail List

A marine mammal research and conservation discussion e-mail list, established using the listserv at the University of Victoria, is available to facilitate discussion regarding research and conservation of marine mammals. The list also posts conference and meeting announcements, volunteer opportunities, new techniques or equipment, new publications, etc.

There is no cost for subscribing, and messages sent to the list (MARMAM) will be forwarded to all members. To subscribe, send a message to the listserv (listserv@uvvm.uvic.ca or listserv@uvic.bitnet), with a message in the text saying: "subscribe MARMAM

your name." The subject line in the message should be left blank. Questions regarding the list can be sent to David Duffus (ddvffvs@uvvm.uvic.ca) or Robin Baird (rbaird@sfu.ca).

Exotic Pest Report

Fading Forests: North American Trees and the Threat of Exotic Pests documents the extensive impact that exotic organisms have had on North American forests by using examples of affected tree species, such as American chestnut, American elm, conifers, and dogwoods. This publication presents the economic and ecological consequences exotic organisms have on North American forests and suggests mechanisms for preventing pests from entering the United States. The report also relates the current challenges and problems of importing pest-free wood materials, particularly from Siberia, New Zealand, and Chile.

Copies of this report can be purchased for \$7.50 plus \$1.45 shipping and handling from NRDC Publications, 40 West 20th Street, New York, NY 10011. Please make checks payable to NRDC in U.S. dollars only.

Some items from the Bulletin Board were provided by Jane Villa-Lobos, Smithsonian Institution.

Endangered Species UPDATE

Non-Profit
Organization
U.S. POSTAGE
PAID
Ann Arbor, MI
Permit No. 144

School of Natural Resources and Environment
The University of Michigan
Ann Arbor, MI 48109-1115