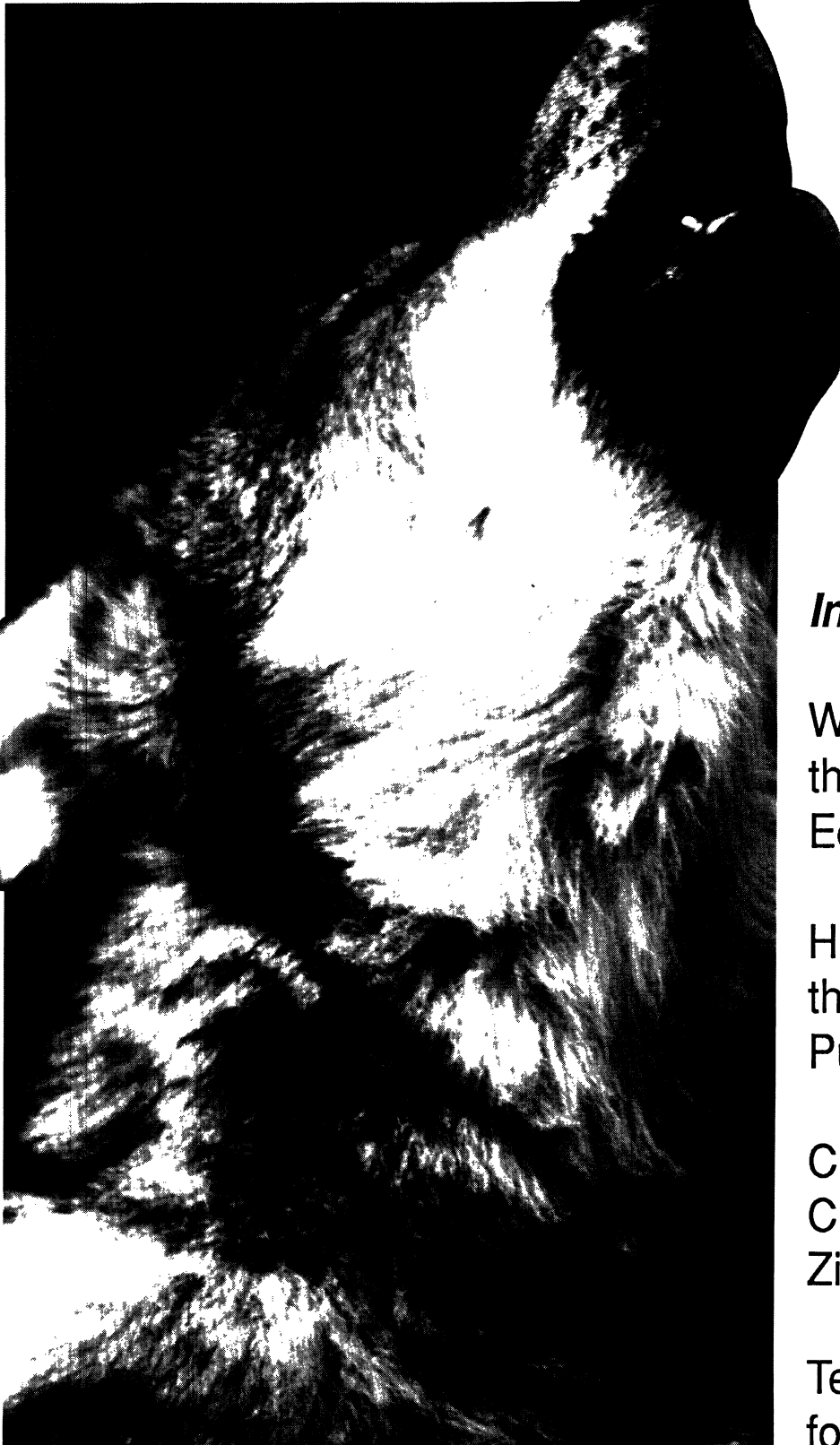


# Endangered Species UPDATE

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

September 1987 Vol.4 No.11

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



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# Wolf Recovery in the Yellowstone Ecosystem A Progress Report

by Renee Askins

The northern Rocky Mountain wolf has been missing from the Greater Yellowstone Ecosystem for over 50 years. It has been listed as an endangered species for over 10 years. Yet despite the protection provided by this "endangered" classification the northern Rocky Mountain wolf situation acts as an example of the limitations of the Endangered Species Act. Although there are sound biological reasons for the restoration of wolves to Yellowstone National Park, a tangle of political, social, and legal problems have obstructed their return.

## Wolf Populations

Although wolves once roamed widely across the United States their range in the lower forty-eight has been reduced by nearly 99%. In the late 1800's and early 1900's, bounty systems, professional "wolfers," and widespread poisoning programs resulted in the complete extermination of viable wolf populations from the continental United States. From 1914 to 1926, Yellowstone National Park rangers and federal agents killed at least 136 wolves within Yellowstone National Park as a part of a predator campaign. Those 136 wolves comprised the last viable population of wolves within the Yellowstone ecosystem (Weaver, 1978).

Today an estimated 1200 wolves exist in northern Minnesota, and another 25 inhabit Isle Royal National Park in Michigan. There are 15 to 20 wolves in northwestern Wisconsin, and a newly established population in northern Montana boasts approximately 20 wolves. Reports indicate that there are occasional singles and pairs in central Idaho, but no reproducing packs.

The Yellowstone ecosystem is one of the few places in the lower 48 states to support wolves. In Yellowstone the

primary prey available for wolves is elk. However, wolves also feed on moose, deer, bison, bighorn sheep, beaver, rabbits, and ground squirrels. The most recent Park population estimates for these species are between 25,000 and 30,000 elk, several hundred moose, 2,433 bison, 2,044 deer, 182 bighorn sheep, and 478 antelope. Additionally, 9,000 square miles of suitable wolf habitat surround the 3,472 square miles of Yellowstone National Park.

Yellowstone not only has the potential to provide habitat for wolves, but the presence of wolves may also work toward relieving elk population pressures in the park. Some biologists are concerned that the growing northern Yellowstone elk population is damaging its range. The northern herd has increased from its controlled level of 4,305 in 1969 to over 25,000 today. Overgrazing and erosion are considered by some scientists to be potential problems. Wolves may reduce the current number

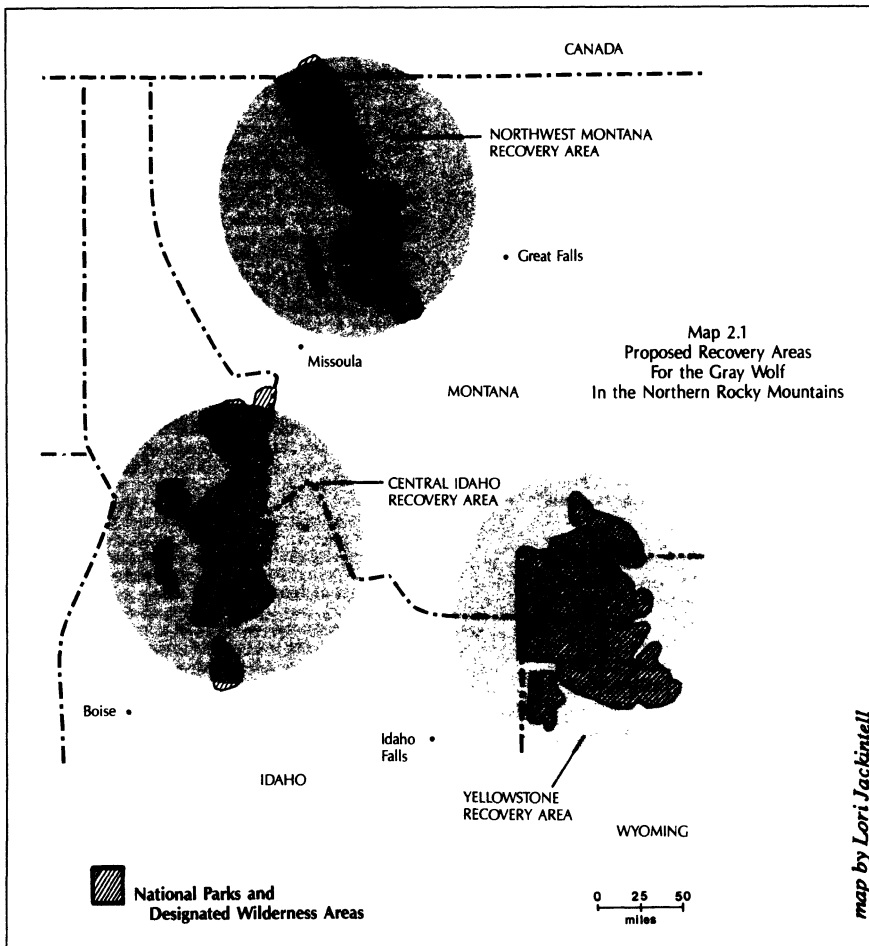
of animals as well as redistribute elk on their heavily used winter range.

## Development of the Recovery Plan

In June of 1973, acting under the authority of the Endangered Species Act, the Secretary of the Interior listed the northern Rocky Mountain wolf as endangered. When a species is listed as endangered, specific measures to conserve the species are taken including the designation of critical habitat and the development of a recovery plan (ESA, Section 4). Accordingly, in 1975, the Northern Rocky Mountain Wolf Recovery Team was appointed by the U.S. Fish and Wildlife Service. Comprised of government personnel, professional biologists, and livestock and conservation representatives, the team's primary function was to develop a wolf recovery plan that would assist state and federal agencies in recovering wolves. A recovery plan is intended to provide direction and coordination for recovery efforts. It should act as a set of guidelines that identifies and schedules action that lead to the recovery of a species (USFWS *Guide to Endangered Species Consultation Process*).

Working under these directives, the team completed the first northern Rocky Mountain Wolf Recovery Plan which was signed by the Director of the U.S. Fish and Wildlife Service on May 28, 1980. According to the Endangered Species Act, the status of an endangered species must be reviewed and updated every 5 years (50 CFR, Section 424.20). At this time the species' recovery plan is usually revised to reflect any changes that may affect the species recovery. Thus the revised recovery plan should have been signed by May 28, 1985. However, due to a mire of political and social complexities, the revised plan,





signed on August third of this year was delayed for nearly two years.

The recovery plan identifies three suitable areas for wolf recovery. They include the Northern Continental Divide area, the Central Idaho area, and the Greater Yellowstone area. To completely remove the northern Rocky Mountain wolf from the endangered species list, the revised plan calls for 30 breeding pairs dispersed over three recovery areas with a minimum of 10 breeding pairs maintained in each of the three recovery areas for at least 3 successive years. Since the chance of wolves recolonizing the Yellowstone region naturally (by dispersing south from Montana or Canada or east from Idaho) is minimal, the revised plan also includes a statement emphasizing that "from a wolf recovery perspective translocating wolves to the Yellowstone area is appropriate now."

### Management Issues

Conservationists have argued that not only is wolf recovery mandated by the Endangered Species Act, but also

that the presence of wolves is essential to restore the integrity of the Greater Yellowstone Ecosystem. On the other hand, the livestock, outfitting, and energy industries remain adamant in their claim that the presence of wolves would impose unnecessary restrictions and burdens on their already struggling operations. Ranchers fear that wolves would kill livestock and limit access to grazing leases; energy industries are apprehensive that the presence of an endangered species might further limit use of federal lands; and the outfitters and western state wildlife agencies, who manage the large game populations, are concerned about the wolf's long term impact on hunter harvest.

To address the concerns of the livestock industry, the recovery plan includes a zone management system that establishes boundaries where wolves belong and do not belong. The plan proposes a stratification of each recovery area into three zones. This configuration resembles a bull's eye pattern in which the inner most circle, zone one, is managed as an area where the wolf would take precedence over other land

## Endangered Species UPDATE

*A forum for information exchange on endangered species issues*

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*Kathryn Kohm*..... Editor  
*Tatiana Bernard*..... Executive Editor  
*Scott Boven*..... Layout & Design

### 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 for endangered species, theoretical approaches to species conservation, and habitat protection and preserve design. 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. Manuscripts should be 7-10 double spaced typed pages. For further information please contact Kathryn Kohm at the number listed below.

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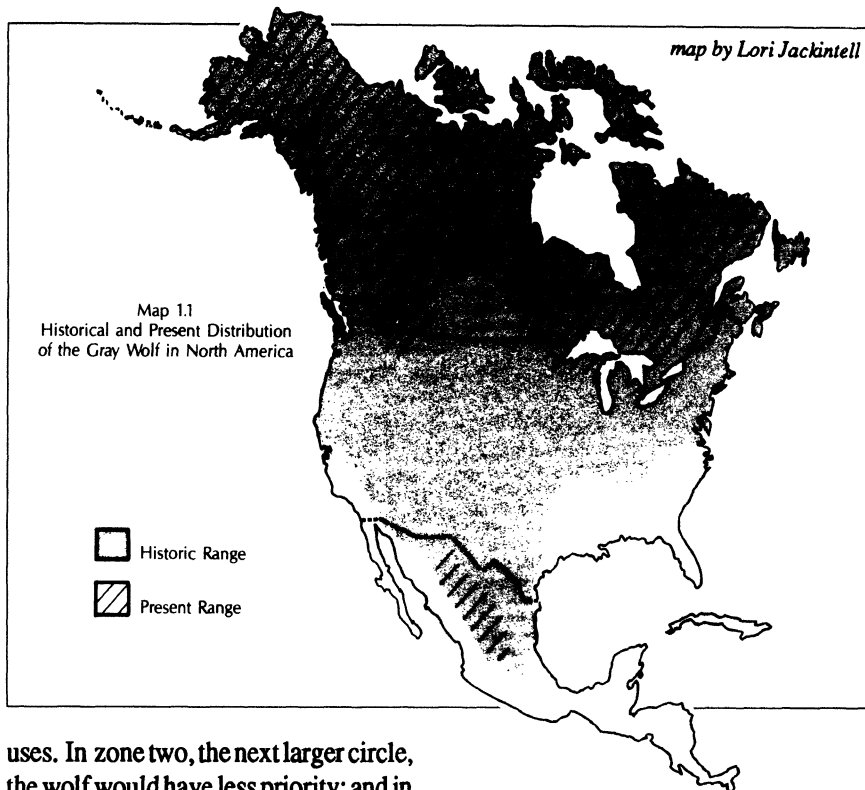
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### Cover:

The Gray Wolf  
Photo by David Mech USFWS

Maps taken from *Wolf Recovery in the Northern Rocky Mountains* - a publication of the Audubon Society



uses. In zone two, the next larger circle, the wolf would have less priority; and in zone three, all the outlying area, wolf presence would be discouraged. A control plan defining how federal personnel would identify and control problem wolves is described in detail in the recovery plan.

A similar program has been very successful in Minnesota where some 1200 wolves roam among 9,800 farms. In Minnesota, where wolves and livestock presently coexist, the incidence of wolves killing livestock is much lower than commonly believed. For instance, an extensive study conducted by Steve Fritts and Dave Mech of the U.S. Fish and Wildlife Service showed that of 10,000 cattle that are readily available to wolves an average of 4.5 cattle are killed by wolves per year. In the case of sheep, 11.8 are killed out of every 10,000. Both of these figures indicate that less than one half of 1% of livestock available to wolves are actually killed by them (Fritts, 1982). However because wolves do kill livestock, the plan outlines a sophisticated wolf control program that advocates immediate response to complaints of livestock losses. To further mitigate any burden on individual livestock operators, the western conservation community has secured seed money for a fund to compensate livestock owners for losses due to wolves.

The fear that restrictions accompa-

nying wolf recovery would limit many of the existing uses of the Yellowstone ecosystem also merits a closer look. Managing wolves essentially translates into managing their prey species. Since big game guidelines are already in place, only a few changes are expected to accommodate the presence of wolves. And since wolves pose no threat to humans, there would be no need to close areas for safety purposes as is frequently the case with the grizzly bear. Any restrictions on logging or access would occur only in the early spring during denning season when the high country is largely inaccessible due to snow.

### **The Political Tangle**

The Northern Rocky Mountain Wolf Recovery Plan was signed on August 3, 1987. Shortly thereafter National Park Service Director William Penn Mott, in an interview with the Casper Star Tribune (August 20, 1987), stated his support for the initiation of an Environmental Impact Statement (EIS) as well as his intention to proceed toward a reintroduction proposal.

Simultaneously, the Wyoming political delegation continued to voice their opposition to any action on Yellowstone wolf reintroduction. In a speech in Gillette, Wyoming on August 19th, rep-

resentative Cheney (R-WY) stated, "We've gotten to the point, like many environmental groups, that we will use any means to achieve our objectives." Cheney further stated that the Wyoming delegation had met with Mott and other officials just before the plan was signed and made it "totally clear" that it would fight wolf reintroduction and the preparation of an EIS. When confronted with the contradiction that the delegation supported the EIS process on some issues (such as the controversy over the closure of Fishing Bridge in Yellowstone National Park to protect grizzly bears) while obstructing its use in others, Cheney replied, "The delegation will use the EIS process when it serves its purposes and will oppose it when it does not."

Although Mott has said that he will keep his promise to consult with the delegation, he has made no promises to abide by their wishes. However, in spite of his staunch support of Yellowstone wolf recovery, a directive from the Reagan Administration has apparently forced a marked change in Mott's plans. In a letter to the Casper Star Tribune on Thursday, August 20th, Director Mott, reversing his earlier statements, wrote, "the whole question of wolf reintroduction is on hold ... if the delegation remains adamantly opposed to reintroduction we will also put on hold any action including an EIS."

### **The Need For An EIS**

Much of the confusion surrounding the Yellowstone effort is caused by false expectations and misinterpretation of the recovery plan. A recovery plan should offer the recovery team's best biological opinion on how involved agencies should proceed with recovery of an endangered or threatened species. However, rather than acting as a biological blueprint, the plan has become a combat zone for special interest debates. Many emotional statements have been made that have fueled this controversy. Senator Alan Simpson (R-WY) commented to the Wyoming Stockgrowers Association "Wolves eat things - human and alive, they say they don't, but why would there be the whole history of the

(Continued on UPDATE page 4)

North Woods' if they didn't take a tasty human being occasionally..." (Casper Star Tribune, June 23, 1986). Ron Marlenee (R-MT) in a letter to the editor of the Billings Gazette (May 18, 1986), "I think Montana needs wolves like we need another drought ... Wolves can only decimate hunting by slaughtering game animals, wolves can be and surely will be used as an excuse to deny hunters access to public lands."

The public has responded to such volatile statements with alarm. It has come to expect the recovery plan to function in a manner that is far beyond its scope, demanding that the recovery plan respond to questions such as: Where will the management zones be placed? What impact will the presence of wolves have on hunter harvest or outfitting operations? Will wolves pose an economic threat to livestock operators? Will restrictions associated with managing wolves affect current energy / timber development strategies? and Will wolves affect other endangered species such as the grizzly bear? Although these are all critical questions, it is not the function of the recovery plan to answer them. The National Environmental Protection Act (NEPA) provides a procedure by which proposed federal actions are examined and evaluated that is more suitably structured to consider these social and economic questions associated with a project such as wolf recovery.

NEPA requires that every proposed federal aid project be examined objectively to determine the effects it will

have upon the environment. It also requires that these findings be considered in the decision to implement the project. NEPA is intended to affect not only whether an action will be taken, but also to prompt decision makers to weigh practical alternatives and the environmental impacts caused by each. NEPA also insures that information is available to public officials and citizens, and that they have an opportunity for input before decisions are made and actions are taken (40 CFR, 1500-1508).

The initiation of the EIS process to evaluate the impacts that reintroduction of wolves to Yellowstone would have on other species, the environment, and surrounding communities is the next important step in wolf recovery. Formal hearings and meetings are needed to insure that the concerns of affected individuals are heard. The EIS is one tool capable of elevating discussion from its current state of disparagement to a responsible examination of the issues and concerns involved with Yellowstone wolf reintroduction.

If a project as compelling as the return of wolves to the nation's foremost national park can be impeded by lobbies and political forces, is the Endangered Species Act accomplishing its goal? Recovery of the wolf to portions of its original range may be a litmus test of the power of the act to transcend political manipulation. Public support for this project is critical. The return of wolves to Yellowstone may set major precedents for future endangered species and National Park Service policy.

*References:*

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# Book Review

## Wolf Recovery in the Northern Rocky Mountains

by Whitney Tilt, Ruth Norris, and Amos S. Eno

Successful recovery of the gray wolf in the northern Rocky Mountain region depends on overcoming biological, as well as social challenges, according to the National Audubon Society's new publication, *Wolf Recovery in the Northern Rocky Mountains*.

This informative booklet details the recovery plan for establishing three separate populations of wolves in the states of Idaho, Montana, and Wyoming. The plan's prime objective is to increase the population of gray wolves so it may no longer need special protection as an endangered or threatened species.

Historically, wolves have occupied most of North America. The enormous publicity wolves received in the late nineteenth century, and the large bounties paid for their eventual destruction have fueled fears, hatred, and reprisals. By the 1930's, the wolf for all intents and purposes was gone from the West. When the Endangered Species Act was passed in 1973, the Northern Rocky Mountain wolf was listed as an endangered species.

During recent years, several meetings have been held examining the prospect of recovering the wolf in the Northern Rocky Mountains. Meetings with stockmen, timber interests and conservationists in Idaho, Montana and Wyoming and briefings with Congressional staff members on Capitol Hill have demonstrated the need for a convenient and easily accessible source of au-

thoritative information on the wolf and issues surrounding wolf recovery. It is in the hope of providing this nexus that *Wolf Recovery in the Northern Rocky Mountains* was published, according to Whitney Tilt, the principle author.

In brief, the booklet contains biological and historical information gathered from scientific papers and interviews with wolf authorities throughout North America. The first chapter reviews the natural history of the wolf, including its

taxonomy, ecology, wolf / ungulate interactions, and relationships with other predators. The second chapter reviews recovery of the gray wolf as outlined in the existing recovery plan, written by the U.S. Fish and Wildlife Service. It reviews the gray wolf's status as a threatened and endangered species,

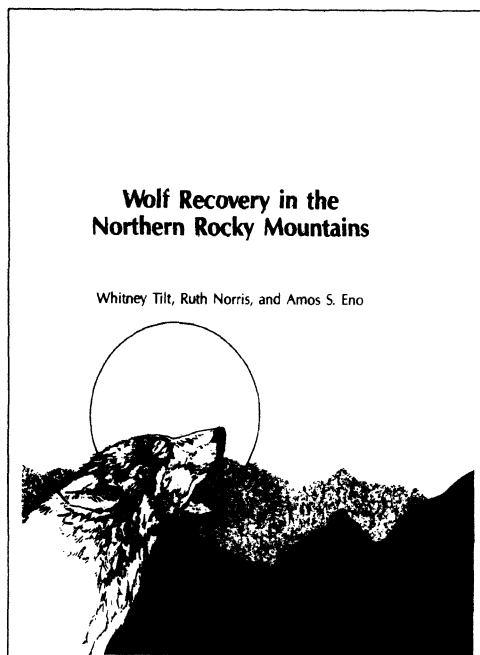
methods of managing established wolf populations, the experimental population designation for the Yellowstone population, and allowances for lethal control of depredating wolves. In addition, the chapter examines the conditions under which the wolf would be delisted as an endangered and threatened species.

The next chapter of *Wolf Recovery* presents a possible scenario for wolf recovery in the three areas currently designated for wolf recovery in the northern Rocky Mountains. Maps indicate the general recovery areas in question, and the text outlines steps that would be taken before wolves would be

placed in Yellowstone or in any other area. Chapter 4 examines the effects of wolves on livestock and other land users. *Wolf Recovery in the Northern Rocky Mountains* attempts to take the original scientific information and outline it clearly for the reader. Experiences gained from wolf/livestock interactions in Minnesota and western Canada are presented. The fifth chapter outlines the experience of gray wolf recovery in Minnesota where some 1200 wolves exist in the 30,000 square mile area forming the lower 48 United States' only self-sustaining wolf population. How the wolf is managed in Minnesota, descriptions of recent legal challenges to management of Minnesota's wolves, and a review of public attitudes towards the eastern timber wolf are outlined.

Finally, chapter 6 contains an essay, "Why Recover the Wolf?" expressing a viewpoint on challenges that will face wildlife managers and land managers if we are to be successful in putting the wolf back into the Northern Rocky Mountains or allowing for its recovery.

The aim of *Wolf Recovery in the Northern Rocky Mountains* is to help dispel false information about gray wolves and encourage an open dialogue about the issue that is based on fact rather than emotion. *Wolf Recovery* is vital reading for anyone interested in the gray wolf and efforts to recover it in the contiguous United States.



*Wolf Recovery* is published by the National Audubon Society in cooperation with the National Fish & Wildlife Foundation. The 32-page booklet is available at a cost of \$4 per copy (including postage). To obtain copies, contact: The National Audubon Society, 801 Pennsylvania Ave. S.E., Washington D.C. 20003 (202-547-9009).

## The 6th Biennial CITES Conference

Representatives of member nations of the Convention on International Trade in Endangered Species (CITES) met for the sixth biennial Conference of the Parties this July in Ottawa, Canada. Since 1973, when it was first signed by 87 countries, the goal of CITES has been to protect the viability and survival of species from threats caused by international trade of those species, or products made from them.

The treaty is implemented through the issuance of import and export permits providing three levels of control of international trade. Control is exercised by assigning species to one of three lists corresponding to the level of severity of threat to species' survival. All commercial trade is prohibited for species listed in Appendix I. Restricted international trade is allowed for species in Appendix II. This list, under which most of the species controlled by the treaty fall, includes species whose continued survival would be threatened by unrestricted trade. Listings on Appendices I and II require concurrence of two-thirds of the member nations. Species may be listed in Appendix III by any country in which it occurs, and in which its survival is in question. The rigorous criteria demanded for listing in Appendix I and II do not apply to Appendix III listings.

Criteria for listing Appendices I and II species focus on biological measures of probability of continued species viability and survival. As with most international regulatory doctrines, the challenges of translating these guiding criteria into implementation and enforcement are great. Problems with implementation of CITES regulations are confounded by a lack of biological information. The most restrictive stipulation of the treaty demands that any species listed on Appendix II be traded only upon determination that such trade does not constitute a threat to its continued survival. Accurate determination of

species viability requires more than a simple estimate of population numbers. To predict the continued survival of a species requires knowledge of its population, sex ratio, age structure, fecundity rates, mortality rates, breeding system, and genetic constraints. Additionally, information about habitat quality and political and economic influences are needed. These data are rarely available, and listing decisions must be based on less complete estimates of population status.

From this situation has evolved dichotomous strategies for implementation of the treaty. One focuses on the protective nature of the treaty and favors the listing of higher taxa to ensure that no species requiring protection is exploited due to inadequate data. Protection status for higher taxa also reduces the probability of misidentification and eases the burden placed on wildlife regulatory agencies who must distinguish between many related species. The alternative strategy has been to protect only those species for which trade has been demonstrated to constitute a threat to survival. The functional combination of these strategies has resulted in the reluctance of the Convention to eliminate or limit trade in the absence of hard evidence to document species decline.

The Ottawa meeting addressed several specific consequences resulting from these different points of view. In particular, the importance of closely monitoring the status of Appendix II species was reiterated. This was done in response to fears that exploitation through trade, allowed by CITES, may threaten the continued persistence of some species. Additionally, the Secretariat will continue to seek funds to support species projects for species targeted as top priorities.

The parties adopted six resolutions regarding ivory trade: Compliance with the quota system established at the fifth

biennial meeting was recommended. This system requires that states offer rewards for information on illegal hunting and trafficking in ivory; that an African elephant working group be established; and that a survey of trade in raw and worked ivory be undertaken in Africa. The second resolution recommends that parties exert pressure on countries allowing illegal ivory trade. The Third resolution recommends a system of licensing of commercial importers and exporters of ivory, and that international commercial ivory exchange be limited to those so licensed. Resolution four demands marking of raw ivory with indelible ink (thus expanding a resolution from the third biennial meeting). The fifth resolution suggests that countries producing worked ivory adopt internal controls to inhibit illegal practices. And the final resolution urges governments, NGO's, and trade groups to contribute to the Secretariat for ivory control coordination activities.

Also adopted was a resolution urging members to prohibit all sale and trade of rhinoceros parts and their derivatives. Governments were further urged to destroy stocks of rhinoceros horns and to encourage the development of substitutes.

On a broad scale, resolutions governing registered breeding operations and the processors of such products were adopted. New resolutions require that commercial captive breeding operations (for Appendix I species) can be accepted on the Secretariat's register only after approval by a two-thirds majority vote of the parties, and that a system of marking for products of those operations be adopted.

Implications of some of these resolutions and issues to be addressed at the 1989 meeting of the Conference of the Parties will be discussed in future issues of the UPDATE.



# Bulletin Board

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## World Checklist on Threatened Mammals

The *World Checklist on Threatened Mammals*, compiled by Tim Inskipp and Jonathan Barzdo, provides a summary of basic information on all species listed by CITES or appearing in IUCN Red Data Books. It includes English vernacular names, a list of countries in which each species occurs, and references to sources of more detailed information. It is available from Dept. BZ, Interpretative Services Branch, Nature Conservancy Council, Northminster House, Peterborough, PE1 1UA, U.K. (6.50 pounds).

## Booklet on Tropical Forest Protection

World Wildlife Fund International has published a 26-page full color booklet which explains the importance of protecting the world's tropical forests. Protection of tropical ecosystems is the subject of WWF International's 25th Anniversary Conservation Awareness Campaign. The booklet explains the riches of the forest, the causes of destruction, and suggests ways to save them. Small orders of copies are available free from WWF International or any WWF National Organization. For

bulk orders, however, postage and packaging costs may be charged. For more information, contact WWF International, Campaigns and Publications, 1196 Gland, Switzerland).

## Conference on Deforestation

The Museu Goeldi in Belem Brazil, is sponsoring an international conference (January 24-29, 1988) entitled "*Alternatives to Deforestation: Steps Toward Sustainable Utilization of Amazonian Forests*". The conference, which will examine promising alternatives to deforestation in Amazonia, will be held in conjunction with the 39th Brazilian Botanical Congress (January 24-31, 1988). For more information write: Anthony Anderson, Museu Goeldi, Caixa Postal 399, 66.000 - Belem - PA - Brazil.

## Reference Book Covering Endangered Plants

*Plants in Danger — What Do We Know?* by Stephen D. Davis, Stephen J.M. Droop, Patrick Gregerson, Louis Henson, Christine J. Leon, Jane Lamlein Villa-Lobos, Hugh Synge and Jana Zantovska is a 460-page comprehensive reference book covering threatened plants around the world. The purpose of the book is to provide a concise guide to

the vegetation of a country or geographical region. Introductory chapters describe the evolution of Red Data Books and threatened plant lists along with charts comparing the floras of oceanic islands and graphics depicting the size of floras throughout the world. The book is available for \$21.00 through UNIPUB, 4611-F Assembly Drive, Lanham Maryland 20706.

## Report on Cacti and Other Succulents

*Conservation and Commerce of Cacti and Other Succulents* is a new TRAFFIC (U.S.A.) report which provides an in-depth treatment of the cactus and succulent trade from the conservation perspective. The chapters, written by eight specialists, discuss the history of this trade, analyze the politics of international plant conservation, and investigate the U.S., Japanese, and Mexican cactus markets using recent CITES data. This 264-page report is a useful reference tool and can be purchased for \$15 from TRAFFIC (U.S.A.), 1250 24th Street, N.W., Washington D.C. 20037.

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*Resource information provided by Jane Villa-Lobos, Smithsonian Institution*

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