

Endangered Species UPDATE

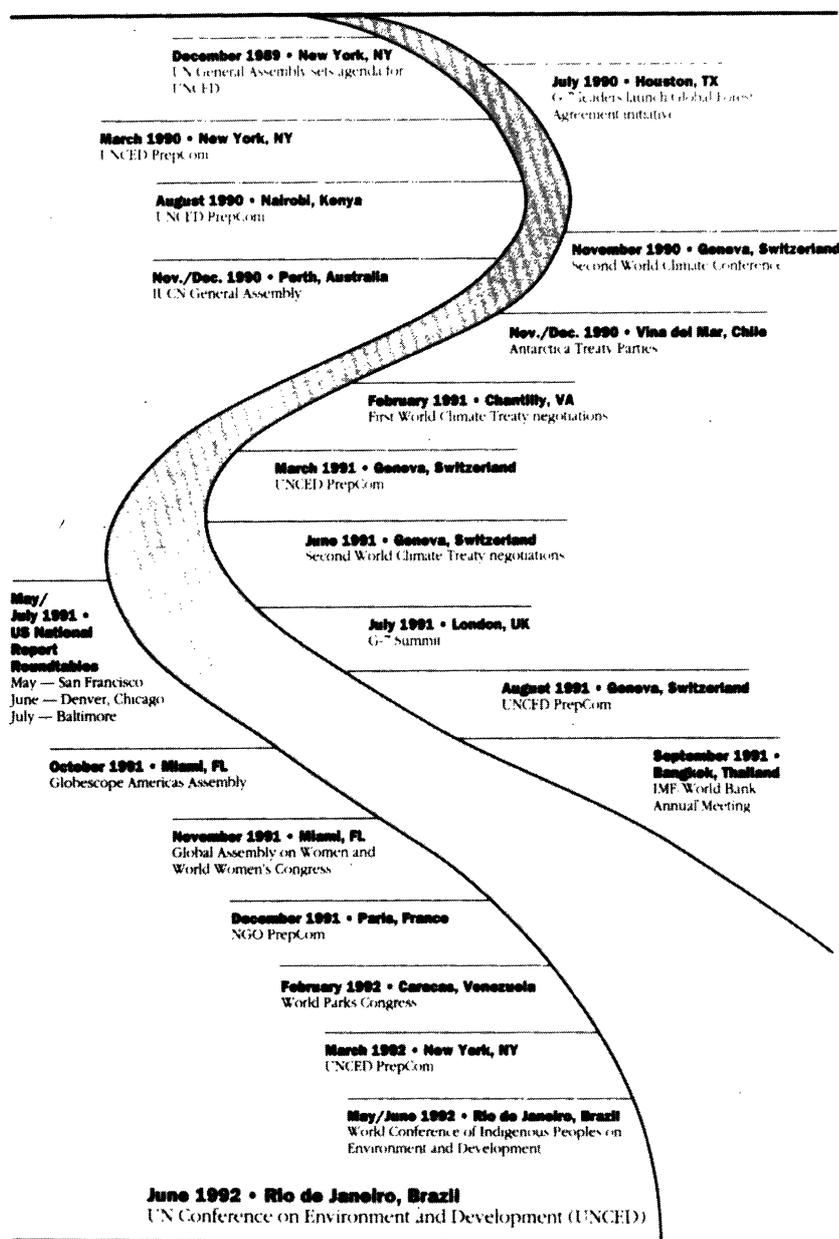
Including a Reprint of the latest USFWS
Endangered Species Technical Bulletin

October 1991 Vol. 8 No. 12

THE UNIVERSITY OF MICHIGAN
School of Natural Resources

The Road to Brazil:

United Nations Conference on Environment and Development



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UN Conference on Environment and Development: A Platform for Participation

by
Fran Spivy-Weber

The United Nations Conference on Environment and Development (UNCED) is already many things to many people. Also known as the Earth Summit, this meeting in Rio de Janeiro, Brazil, June 1992, is aspiring to nothing less than being the starting point for changes in today's beliefs, values, and approaches to how people and nature coexist. Scientist, economist, and corporate voices, added to those of politicians, environmental protectors, social activists, and government and UN agency representatives, are engaged in a debate about how to build consensus around a paradigm for the future that integrates ecology and economics to benefit people and nature. The public is expected to participate and tangible products will result.

Heads of State from around the world will gather in Rio to sign documents and declarations on everything from biodiversity and climate to ethics and education. Political leaders, particularly in industrialized countries, want to demonstrate a commitment to clean up and protect the environment. Developing country leaders are hopeful that for once they will win "something" for their people or at least not bear most of the costs.

Indigenous peoples will set up their own "United Nations village" for the event. Their presence will be a cultural statement of how the creators of their civilizations advised equality be given to the values of nature, seeking a livelihood, the family, and the spirit. They will seek recognition and an official place in this gathering of nations.

Social movement groups, seeking remedies to human poverty and injustice, will have a conference of their own in Rio to reach agreement on how environmental protection can and must meet human needs.

US industries will be there too, as a part of a growing international business

community, dominated by European and Japanese industries, eager to show how environmental protection is good for their future.

The Earth Summit is also a report card on how well nations have done in protecting the environment since they met in 1972 at the Stockholm Conference on the Human Environment. There they instituted the United Nations Environment Program and laid out a plan for dramatic expansion of national environmental agencies and creation of numerous treaties including the Convention on the International Trade in Endangered Species of Wild Flora and Fauna (CITES).

To evaluate national progress, countries were asked to prepare national reports utilizing the expertise of the public as much as possible; the Council on Environmental Quality (CEQ) is preparing the US report. Public hearings, referred to as Roundtables, were held in five locations across the country during 1991; a final document summarizing the results of the hearings will be published in November. Scientists, state and local government officials, and activists of all stripes made their views of US environmental performance clear. Many feel the resulting document will be inadequate nonetheless.

Frustration was a common tone among environmentalists participating in the CEQ Roundtables. They identified, for instance, the problem of limited jurisdiction. One participant stated, "No US government plan exists to treat environmental problems in the cyclical, interconnected fashion in which they work. Rather, the agencies directed toward environmental goals exist separately from those that make decisions over the processes that affect the environment: industry, transportation, trade, energy, urban planning, and others. Policies are not cycled among the agencies, but rather divided among them."

Events leading up to the Earth Summit are shaping the debate which will take place there. Sustainable development - linking environment and development with intergenerational responsibility - was identified by the UN-appointed World Commission on Environment and Development as the key to an environmentally sound future. They recommended the UN hold the upcoming conference on Environment and Development. Heeding these recommendations, the UN resolved, in December 1989, to "elaborate strategies and measures to halt and reverse the effect of environmental degradation in the context of strengthened national and international efforts to promote sustainable and environmentally sound development in all countries."

To meet this mandate, the countries have agreed to adopt in Rio new environmental conventions; (1) an Earth Charter merging environmental and human rights and (2) a plan of action entitled Agenda 21, which will be used by the UN, national governments, and others to identify specific actions to be taken. Developing countries have asked that recommendations be included for providing financial and technical means to accomplish each task identified. The US government has reluctantly agreed to this suggestion.

The issues being discussed are numerous and cross sectoral: climate, biodiversity, deforestation, poverty, food security, water supplies, and a host of others. Two issues - climate and biodiversity - are also being discussed in completely separate treaty negotiations, as well as in the UNCED meetings. The United Nations General Assembly set up the International Negotiating Committee (INC) to prepare a legally binding document on climate. The United Nations Environment Program is overseeing the preparation of a biodiversity convention. If these two legally binding

documents are ready, they will be signed by Heads of State at the UNCED meeting in Rio in June.

Preparing for the two-week meeting in Rio has been a two-year activity. An organizational meeting was held in New York, March 1990, and the first Preparatory Committee (PrepCom1) meeting was held in Nairobi in August 1990. Two additional meetings (PrepCom2 and PrepCom3) were held in Geneva in March and August of this year. The final meeting (PrepCom4) will be held in New York City in March 1992.

In 1990 when the countries first met, it was clear that most governments were not prepared to take action on the many issues with which they were faced. They asked for information. The UNCED Secretariat responded remarkably well by bringing together informal working parties representing various perspectives to prepare background papers on thirty-four different issues. Next, the governments asked the Secretariat to prepare recommendations on what should be done on the many issues before them. Again the Secretariat responded with detailed documents. Both the background papers and recommendations are available from the UNCED Secretariat and on the EcoNet computer network.

For decisions to be made in Rio, however, governments must reach consensus on issue documents that they have negotiated. It was not until the meeting in August of this year that the governments began to create text that was of their own making. They used material from the Secretariat, from their own government agencies, and from nongovernmental groups. Unlike the neat, well-organized comments of the Secretariat, these texts have been described as a rummage sale of new and old ideas. March 2, 1992, in New York (PrepCom4) will be the start of five weeks of negotiations to see what the nations will "buy." This is not much time.

What has not been settled by June 1 will quite likely not be settled in Rio. Rio will be ceremonial. Heads of State will give speeches and sign treaties, charters, declarations, and agendas. The beginning of a host of plans may also be announced, such as mechanisms to fund

the agreements that are signed and a group to redesign institutions to carry out the actions of the Earth Summit.

Nongovernmental groups have never had such access to a United Nations meeting. It is easy to get accredited to participate. Speeches from youth leaders, developing country groups, and others have peppered the plenary debates. Physical space is the only limit on participation in plenaries. In the informal sessions, where governments work over issue documents, the chair can choose whether or not to allow participation of nongovernmental groups, and in most cases in Geneva, after a struggle, participation was allowed. In New York where there is much less space than in Geneva, the UNCED Secretariat and governmental and nongovernmental organizers are already working to devise a system to facilitate substantive participation. Since many governments are unaccustomed to working in the same room with instant citizen conduits of information, this participation factor has been among the most important outcomes for all who are involved.

Your ideas can be a part of this process. With an investment of as little as two hours a month, you can start now and have an impact on the United Nations Conference on Environment and Development. A step by step plan of action - by which you and your conservation group can make your views known follows:

Month 1

Preparation for the Earth Summit began in December of 1989; this preparation is worldwide and very dynamic. Devote your time this month to educating yourself as to the endeavors of others; the best way to keep up is through several newsletters that are either very inexpensive or free:

1. US Citizens Network on UNCED (\$25 for individuals; \$50 for organizations), 300 Montgomery Street, Suite 39, San Francisco, California 94133. From the Network you can get a 32-page guide to the Earth Summit, monthly newsletters, meeting information, and connection with colleagues and the many others working to see that pertinent issues benefit from UNCED.

Endangered Species UPDATE

A forum for information exchange on endangered species issues

October 1991

Vol. 8 No. 12

Alice Clarke and Joel Heinen...Editors
Terry RootFaculty Advisor
Jon JensenStaff Advisor

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 10-12 double-spaced typed pages. For further information, contact the editors at the number listed below.

Subscription Information:

The Endangered Species UPDATE is published approximately ten times per year by the School of Natural Resources 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 US). Students please enclose advisor's signature on university letterhead; senior citizens enclose proof of age. Send check or money order (payable to The University of Michigan) to:

Endangered Species UPDATE
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Cover:

From the UN Conference on Environment and Development Briefing Packet, prepared by the Environmental Grantmakers Association with support from the Ford Foundation.

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

Production of this issue was made possible in part by support from Chevron Corporation and the National Fish and Wildlife Foundation.

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2. Network '92, (free) Center for Our Common Future, Palais Wilson 52 Rue des Paquis, 1201 Geneva, Switzerland, 41-22-738-5946 (fax). This is valuable particularly for those planning to go to Rio, because the Center for Our Common Future is in charge of organizing arrangements for nongovernmental groups in attendance at the summit.

3. E & D File 1992, (free), UN Nongovernmental Liaison Service, Room DC2-1103, United Nations, New York 10017. If you are unfamiliar or confused about the United Nations, become a friend of NGLS. They can explain all the eccentricities of the United Nations. Ask for their back issues of E & D File 1992.

4. Earth Summit Update, (free), Environment and Energy Study Institute, 122 C Street NW, Suite 700, Washington, D.C. 20001. Congress can influence US government UNCED positions, and they will make many important funding decisions to implement the decisions of UNCED. EESI is keeping tabs on Congress, and Congress reads the Earth Summit Update to keep up with UNCED.

5. EcoNet, (\$35 will cover start up and your first two hours off peak), 18 DeBoom Street, San Francisco, CA 94107. EcoNet is an international, computer-based communication system that is covering UNCED regularly. The UNCED Secretariat, the US UNCED Coordinating Committee, and nongovernmental groups galore are using EcoNet to communicate and plan strategies.

Month 2

Use this time to involve other people. Arrange a meeting, discussion, lecture, or gathering on "Your Issue and the United Nations Conference on Environment and Development." Experts on the issues you consider important may reside in your own community. Call on them. But if experts are not available, remember, the important outcome of such a meeting is the ideas and recommendations that people generate: your statement that environmental issues are of importance to you. You may think that you need to read extensively before get-

ting started on group action, but time is of the essence. The newsletters and EcoNet will provide the basics and you can read more once a target date for discussion is set (see Month 3). The following organizations may have suggestions of people to contact as speakers or discussion leaders:

1. US Citizens Network on UNCED (see address above).

2. United Nations Association of the USA, 1010 Vermont Avenue NW, Suite 904, Washington, D.C. 20005, 202-347-5004.

3. US UNCED Coordination Center, Department of State, 722 Jackson Place NW, Washington, D.C. 20503, 202-395-3744 (fax). Created by the State Department to coordinate US government preparation for the Conference, a member of this committee can speak and/or recommend other people from government agencies who are knowledgeable. Almost all governmental agencies are charged with working on UNCED in some way.

4. Congress. Your Members of Congress and Congressional staff are players in this process. House of Representatives, Washington, D.C. 20515; US Senate, Washington, D.C. 20510

Month 3

This is the time to do some reading, if you haven't done so already; I admit, this will take more than two hours. I recommend the following:

1. *Our Common Future*, the report prepared for the United Nations by the World Commission on Environment and Development to evaluate the state of the environment. After two years of public hearings on five continents, they concluded protection of the environment must include development issues that affect not only people today but generations to come. Its conclusions formed the basis for organizing the UN Conference on Environment and Development.

2. Conference documents are available on EcoNet. For more information, contact the US Citizens Network (address above).

3. US National Report, CEQ, 722 Jackson Place NW, Washington, D.C. 20503.

4. Issue documents are available from many individual organizations.

Month 4

Hold your meeting(s) and focus on where the recommendations of your meeting(s) will be directed. This is a critical element of your planning process—how to get your views expressed at the Earth Summit. UNCED points of access are as follows:

1. US Government: Members of Congress (address above); US UNCED Coordinating Committee (address above); The President (White House, Washington, D.C. 20500); and federal, state and local agencies with which you work or interact.

2. Associations and organizations that represent your interests: Audubon, for example, has several people working full time and part time preparing for UNCED. I can carry ideas you prepare into meetings and discussion and I will happily do so. Contact Fran Spivy-Weber, National Audubon Society, 666 Pennsylvania Ave. SE., Washington, D.C., 20003, 202-547-9022 (fax), fspivyweber(e-mail), and 202-547-9009 ext3220 (phone).

3. The press. Meetings and bureaucratic recommendations are rarely a top priority for print, radio, or television reporters. Give some special thought to how you can make your ideas more interesting to the public, who, let's face it, must be convinced in the long run. People—the mayor, a celebrity, a nontraditional spokesperson—can carry your message; an interesting setting can illustrate the message; or simply informed people talking to editorial boards can do the trick.

4. Preparatory Committee Four (PrepCom4), which will meet in New York City March 2 - April 3 1992. An organization accredited to PrepCom4 can speak during plenary sessions and will be among the groups allowed to participate in the official government activities in Rio in June. Representatives of organizations can be accredited by applying to Yolanda Kakabadse, UNCED, 160 Route de Florissant, P.O. Box 80, CH-1231 Conches, Switzerland, 41-22-789-3536 (fax). PrepCom4

Continued on UPDATE page 4

is the last opportunity for groups to get accredited to UNCED.

6. Nongovernmental groups from throughout the world will be gathering in New York to lobby and observe governments in the INC climate treaty negotiations February 17-28, 1992. During the next five weeks, March 2 - April 3, some of these groups and many, many more will come to New York to work on Earth Summit PrepCom4 issues. A calendar of activities and information on inexpensive housing will be available by early January. To be kept informed, join the US Citizens Network on UNCED.

7. The '92 Global Forum is where nongovernmental group events of all sorts will take place in Rio: the headquarters for the various events is Hotel Gloria, Predio Anexo, Sala 366, Rua do Russell, 632, 22212 Rio de Janeiro, Brazil, 5521-205-4114 (fax). Over 20 conference centers nearby and an outdoor area in Flamengo Park are available for displays, meetings, etc. The deadline for making reservations for going to Rio, as well as for space and equipment, is December 31, 1991. No exceptions. All hotels and airlines will be checking with the Global Forum headquarters before issuing rooms and confirming airline seats.

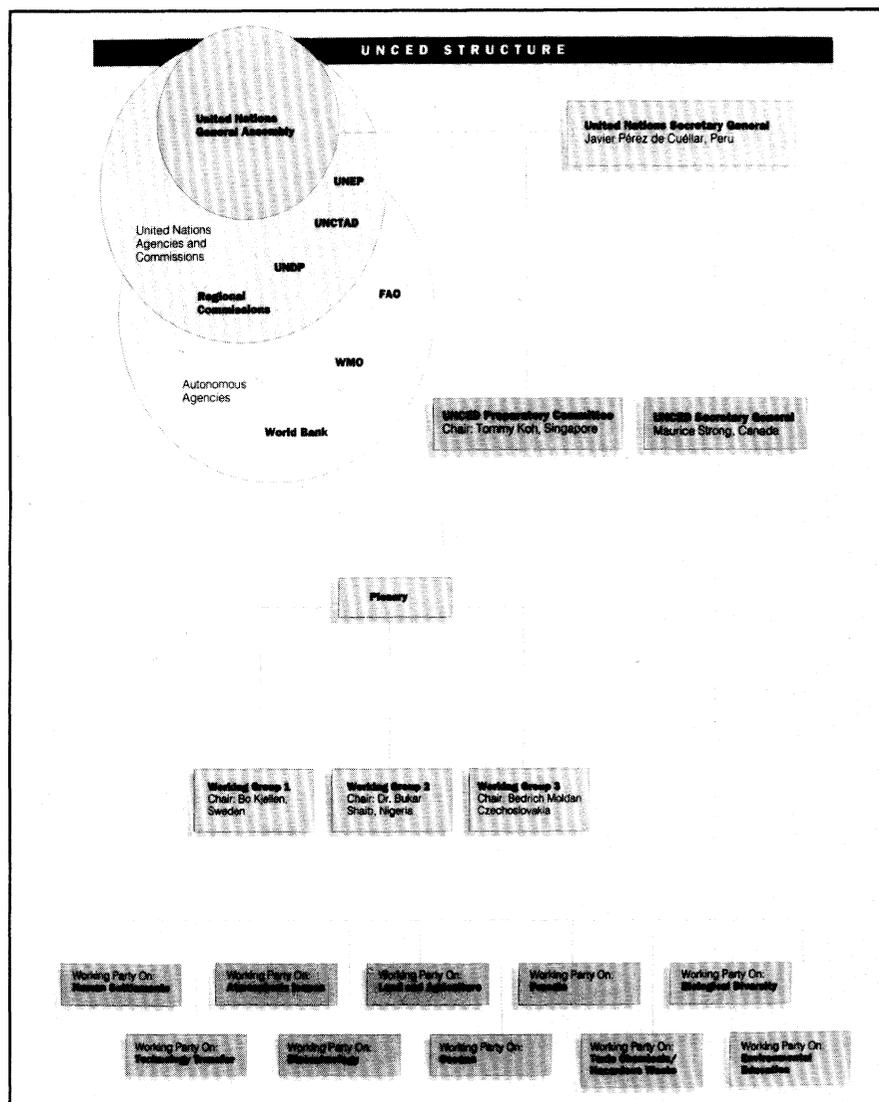
8. NGO/Social Movements Gathering, Rio de Janeiro - organized by the International Task Force for UNCED 1992 to build a foundation for a worldwide movement: For more information contact Barbara Bramble, National Wildlife Federation, 1400-16th Street NW, Washington, D.C. 20036, 202-797-5486 (fax).

Month 5

If you have decided to invest your time in UNCED, you are already spending much more than a couple of hours a month. Keep doing what you are doing, and the more of you there are, the higher the odds for success.

Conclusions

What can you and your organization gain by investing time in the UNCED? As a professional who has an opportunity to see the internal workings



UNCED Organizational Structure

by the Environmental Grantmakers Association

of such conferences, the preparation, the negotiation, and the outcomes, I can ensure you of the following:

1. At a minimum, by participating in the preparation for the UNCED and/or by attending PrepCom4 and/or the Earth Summit, you will meet others interested in biological conservation.
2. You will have an opportunity to inform people from all over the world, some of whom rarely look closely at science or environmental policies but have the power to influence them, about the importance of endangered species and biological diversity.
3. You can join with others to determine how to implement Agenda 21; by describing how science can best - and most cost effectively - be a part of local land-use planning, jobs-creation, and ongoing monitoring of the health of the planet.
4. You can transmit these ideas back into your own community, into

traditional education, public education, community leadership education, and industry research and development. You can help your community prepare for change, a talent which will be in ever-increasing demand in the future.

The success of the United Nations Conference on Environment and Development depends equally on the seriousness with which governments, industries, and citizen leaders take the issues of environment and development. You can influence the leaders - local, national, and international - by being a leader yourself. If you do not do it, who will? Welcome aboard.

Fran Spivy-Weber is the Director of the Audubon International Program (National Audubon Society, 666 Pennsylvania Ave. SE., Washington DC. 20003) and Chair of the US Citizens Network Administrative Committee.

Book Review

Better Trout Habitat: A Guide to Stream Restoration and Management

by Christopher J. Hunter

Stream management begins with the management of land use. Stream habitat degradation does not "begin and end at fence lines" but instead crosses legal, political, and physical boundaries; boundaries that include a diversity of private and public ownerships. Changes in land use along our streams, creeks, and rivers have dramatically altered the quality of trout habitat; habitat that contains the greatest biological diversity of fish, wildlife, and vegetation in the arid west.

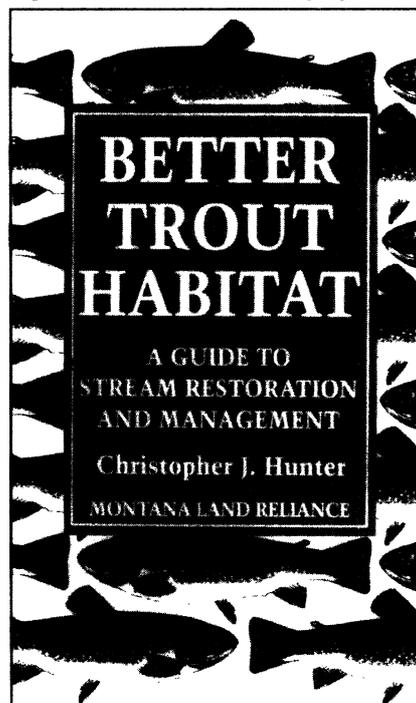
"Better Trout Habitat: A Guide to Stream Restoration and Management" presents an assessment of the science and art of trout stream restoration. This book addresses a topic that has become increasingly important and popular, a direct response to the readily observable changes in land use patterns present in areas blessed with trout streams and a less obvious change in trout fishing in America, "it ain't what is used to be." The purpose of this book is to present state-of-the-art technical information on trout-stream restoration in a readable and informative way for both the lay and professional reader.

The preparation of this guide was sponsored in part by the Montana Land Reliance, a private, statewide land trust in Montana that works with private landowners in the Greater Yellowstone Ecosystem. The conservation philosophy of the Reliance is reflected in the focus taken by Christopher Hunter - the protection and enhancement of private lands which contain public benefits. Private landowners make key decisions affecting land and water quality. The conversion of farms and ranches into recreational and residential tracts and destructive agricultural practices are examples of private land uses that directly impact public benefits such as stream quality and trout habitat.

The book is divided into two sections. The first six chapters provide background information on the biological characteristics of trout stream eco-

systems, stream inventory/evaluation procedures, and an overview of structural stream modifications. Chapter Two outlines the relationships between stream characteristics and the environmental needs of trout, as well as a summary of factors that influence growth and survival of trout populations.

Hunter identifies a planning methodology in Chapters Four and Five that stresses the importance of scientific data collection, analysis, and documentation during the restoration process. The point is made and emphasized that stream restorations involve long-term solutions in which good watershed and riparian habitat management is practiced. Chapter Five contains an excellent presentation on the process of identifying "limiting factors;" in the case of trout habitat, examples of these include water quality, spawning habitat, summer and winter-rearing habitat, cover, stream flows, and food. This section outlines the steps necessary in planning and implementing a successful restoration project.



Structural approaches to stream restoration are not emphasized by Hunter; detailed specifications and technical design standards are not found

in this publication. Information on generic structure types is touched upon briefly to give the reader an overview of what is now being used. A more useful and informative presentation on structural approaches is contained within the case history examples that follow in the second section of the book.

The second section of Better Trout Habitat covers case histories of fourteen rivers from throughout the United States which illustrate how trout stream restoration theory has been put into practice. A broad range of geographic areas and land uses are covered including streams that are affected by agriculture, forestry, and urban development.

Case history descriptions provide the reader with the perspective needed to see how all the "pieces" fit. The strength of this book is in the detailed analyses of each example; one can begin to see how the systematic methodology advocated by the author can be put into place. For those interested in developing and implementing stream restoration projects, this section provides sources of information - individuals, references, and locations - that can aid in future endeavors.

Solutions are advocated that incorporate a knowledge and understanding of the physical, chemical, and biological attributes of stream ecosystems. Successful trout stream restorations deal directly with watershed management of surrounding land uses, management that considers both private land-use practices and in-stream structural-habitat work. "Better Trout Habitat" presents a philosophy and methodology that can be built upon in future stream restoration and management projects: a philosophy that includes the awareness of the value of protecting all streams.

Reviewed by Chuck Schrader, Assistant Professor, School of Architecture and Design, Kansas State University, Manhattan, KS 66502 and PhD Candidate, Landscape Architecture, School of Natural Resources, University of Michigan, Ann Arbor, MI 48109-1115. USA.

Exorcising ambiguity from the Endangered Species Act: critical habitat as an example

by Dennis D. Murphy and Barry R. Noon

The Endangered Species Act of 1973 has challenged scientists perhaps more than any other legislation. In response, the scope of wildlife biology has been redefined and expanded, adaptive management has evolved into a population recovery technique, population viability analysis and other problem solving methods are being developed, and the very definition of a biological species is being reexamined.

Yet, despite this and other significant scientific input, the Endangered Species Act remains couched in language that is, well, unscientific. Key terminology bearing on listing of candidates, enforcement of prohibitions, and recovery of species is best described as vague or abstract. The terms endanger, threaten, conserve, jeopardize, modify, recover, and a welter of others are so inadequately defined as to compromise the ability of the Act to function. In the face of imminent Congressional reauthorization, all definitions in and interpretations of the Act will receive increased scrutiny.

Few concepts in the Endangered Species Act will be as enveloped in the swirl of controversy as will that of "critical habitat." In April 1991 the U.S. Fish and Wildlife Service designated nearly 12 million acres in the Pacific Northwest as critical habitat for the northern spotted owl — an action that has immense implication for the economy of the region and is assured to provoke strong responses from adversaries of the Act.

We want not to weigh in here with an opinion on that specific issue, but to note that Section 50 CFR 424.12 defines critical habitat as landscape areas that provide space, resources, cover, and sites for breeding, and are "representative of the historic geographical and ecological distributions of the species." That sounds like plain old habitat to us. We suggest that habitat that is critical ought to be a subset of total habitat, a subset defined by special characteristics. Critical habi-

tat must incorporate the quantifiable concept of population viability and ought to refer to habitat that, assuming certain risks, should provide for long-term species survival. That distinction is particularly relevant for species experiencing rapid losses of habitat — a situation that may force some individuals to occupy marginally suitable habitat areas.

The sum of the critical habitats for a target species should support stable or increasing populations. The relationship between birth and death rates offers a meaningful, measurable criterion by which habitats of varying quality may be differentiated. One justification for estimating the relationship between the habitat of a species and the demography of that species is the principle that animals respond to habitat variation in an "adaptive" fashion. Habitat, including critical habitat, serves as the templet for the evolution of ecological strategies. In this light, we hypothesize that the suitability of any given habitat (from the view of an individual organism) is based on proximal cues that are ultimately tied to survival and reproductive success.

Formalizing a "theory" of animal-habitat relationships in such an evolutionary framework serves two main purposes. First, it allows direct connections to be made between natural history observations, population studies, and evolutionary trends — thus it establishes an underlying basis and justification for models of the relationship between habitat variation and variation in demographic parameters (fitness components). Second, the theory allows predictive statements about the behavior of species. Such predictions can offer guidance to planners who may choose to manage habitats to influence birth and death rates. This implicit cause-and-effect relationship between habitat and demography is the foundation of the practice of wildlife management.

Predictive models are valuable because they lend themselves readily to

tests of their validity. For example, by manipulation of certain habitat parameters, we can examine whether the demographic attributes of a population will change correspondingly. Such models of habitat selection, couched in an ecological and evolutionary perspective and explicitly incorporating demographic information, are easily translated into a statistical framework for purposes of hypothesis testing. Research and monitoring programs then may serve as ongoing "experiments" to allow differentiation among management options.

Quite unfortunately, there is no shortage of opportunities to study the adaptive responses of species to habitat change. Many wildlife populations are experiencing dramatic losses and fragmentation of their breeding, foraging, wintering, and migration areas. Ultimately, these habitat changes will be expressed as changes in the values and variances of birth and death rates — the vital rates that determine whether a population persists or declines. It is imperative to focus our conservation efforts on those habitats that provide for population stability and growth.

Defining salient concepts and terminology like critical habitat in terms of biologically measurable parameters is a necessary first step, but alone will not solve the problem of ambiguity in the language of the Act. More exacting definitions will require explicit, testable hypotheses followed by the necessary experiments. Toward this end, we look for biologists to play a more substantial role in the future in interpreting and implementing the Endangered Species Act.

Dennis Murphy directs the Center for Conservation Biology at Stanford University (Department of Biological Sciences, Stanford, CA 94305) and Barry Noon directs the USDA Forest Service Redwood Sciences Laboratory (1700 Bayview Drive, Arcata, CA 95221).

Bulletin Board

To Our Readers: Reauthorization of the Act

The Endangered Species Act established in 1973 will soon come up for congressional reauthorization. Many of you have called our office to inquire what role the *Endangered Species UPDATE* will play during this period. We hope to play a very important role - providing a focal point for lively and perhaps sometimes controversial discussion and debate which will be vital to the maintenance and strengthening of the Act.

We start the process in this issue; the *Opinion*, written by Dennis Murphy and Barry Noon, focuses on the importance of specific terminology. The next issue of the *UPDATE* will feature an article by Michael Bean (Attorney, Environmental Defense Fund, and member of the Endangered Species Coalition Steering Committee) on key issues to be faced in the reauthorization process. We will provide space in the *UPDATE* for articles, opinions, and for tracking the legislative process during this period; we will also provide references for those readers who want to review the history of the current legislation.

We are a small outfit; our sole purpose is to provide information on endangered species by producing the *Endangered Species UPDATE* and reprinting the US Fish and Wildlife Service's Technical Bulletin. The management, editing, and production of the *UPDATE* take place in the space of 20 hours of graduate student work per week. We cannot take our cause directly to Washington, as several callers have suggested, but we can serve well by initiating and stimulating discourse from our home base of Ann Arbor, Michigan. We cannot, however, do it alone - we need your help including your ideas, your questions, and your contributions. We call on environmental leaders from government, industry, the non-profit sector, and from academia to provide their perspective. We call on those of you who have spent your time actually monitoring the plants and animals, working for their recovery, too often watching their demise, to present your views.

We eagerly await your suggestions and input.


Editor, ESU

Correction

It has been brought to my attention that in my recent opinion (Burke 1991, *ESU* 8(7): 6), I was in error when I stated that a simple preventative and treatment is available for tortoise upper respiratory disease syndrome (URDS). Although a disease that is similar to URDS, and may in fact be URDS, has been successfully treated in a semi-captive tortoise population, understanding of the pathogen(s), disease, and treatment are far from complete. In particular, Koch's postulates for the formal identification of a pathogen have not been fulfilled. Readers interested in more complete information should see Jacobson et al. 1991. *Journal of Wildlife Diseases*. 27:296-316.

Russell Burke, Department of Biology and Museum of Zoology, University of Michigan, Ann Arbor, MI 48109-1048.

Conservation Biology Position

The Greater Ecosystem Alliance, Bellingham, WA seeks a conservation biologist with passion for wilderness and experience in grassroots advocacy. MS required. Call (206)671-9950 for further information.

Endangered Species UPDATE

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