

Current issues in freshwater conservation: introduction to a symposium

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The scientific and conservation communities have much to offer each other because of their shared concern for the health of freshwater ecosystems. Many conservation and resource management organizations have a strong focus on the protection of freshwater systems. They operate from a variety of perspectives, often using innovative approaches to change public policy and build public support. Scientists are unaware of many of these approaches. Likewise, aquatic ecologists possess knowledge and access to relevant scientific information that is critical to conservation and management efforts; yet all too often this information is not effectively transmitted.

The papers that follow in this issue are based upon a special symposium, "Current issues in freshwater conservation", held at the 40th annual meeting of the North American Benthological Society (NABS) in Louisville, Kentucky, on 26 May 1992. The major goal of the symposium was to promote cooperation and communication between the scientific community and freshwater conservation programs of non-governmental organizations. The symposium provided a forum for presentations by key representatives of seven major conservation organizations and one professional society involved in freshwater conservation issues. In addition to making formal presentations, symposium contributors met several times with members of the NABS Conservation Committee to develop guidelines to foster interorganizational linkages.

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Involvement by NABS in conservation activities is a relatively recent phenomenon. A pivotal event in focusing our Society's attention on current freshwater conservation issues was Arthur Benke's 1989 presidential address, "A perspective on America's vanishing streams", at the annual NABS meeting in Guelph, Ontario (Benke 1990). Benke pointed out the low number of high quality, free-flowing rivers remaining in the contiguous forty-eight states of the US, as well as disturbing trends in river exploitation, particularly those associated with hydropower.

Benke's challenge for NABS to become involved in conservation activities was taken up by the succeeding President, Leonard Ferrington, who appointed a Conservation and Environmental Affairs Committee. This committee, chaired by Charles Rabeni, queried NABS members on 'if' and 'how' NABS should become more active in addressing current environmental issues in freshwater aquatic systems. In response to the question, "Should NABS seek ways to become more involved in contemporary issues involving conservation of aquatic resources?", over 93% of 543 respondents answered in the affirmative (Ferrington 1990). The most positive responses were to additional questions that related to "facilitating opportunities for NABS members to become involved in conservation and environmental issues".

Organization of this symposium is one means by which the Conservation and Environmental Issues Committee has responded to the expressed interests of the NABS membership. The following papers present a variety of approaches, perspectives, and suggestions on dealing with the conservation of freshwater systems. Groups represented include conservation organizations in the United States, partnerships be-

tween non-governmental and governmental organizations, an international organization that has evolved from local grass-roots movements, and an environmentally active scientific society.

To begin, we (Pringle et al. 1993—see this issue) discuss challenges and opportunities for the effective application of ecological information to environmental problems in freshwater systems. We summarize suggestions and recommendations (generated by discussions between NABS members and authors of the papers that follow) on how NABS can effectively cooperate with conservation and resource-management organizations.

Kevin Coyle, President of American Rivers Incorporated, makes the point that new strategies are being formulated to move river conservation to the forefront of the USA's environmental agenda. He stresses that information generated by aquatic scientists is becoming crucial to the environmental advocacy community as it develops a more sophisticated approach to the conservation of streams as ecosystems and the use of individual aquatic species as indicators of overall ecosystem health.

Bob Doppelt, Executive Director of the Oregon Rivers Council (now the Pacific Rivers Council), briefly summarizes the history of the river conservation effort which began essentially as a 'dam busting' movement aimed at protecting recreational boating. He discusses current efforts of the Pacific Rivers Council which target important national policy needs. These include (1) federal policies to catalyze and support state and local action to protect riparian areas and to coordinate management policies on river systems flowing through private lands and (2) ecosystem-based policies for protection and restoration of river catchments on federal lands nationwide.

Michael Anderson, Director of the Wilderness Society's Pacific Salmon Study, discusses the involvement of the Wilderness Society (1) in an environmental coalition that has succeeded in expanding protected areas of the Florida Everglades and (2) in the evaluation of the impact of land-use on salmon habitat in the Pacific Northwest. Brian Richter, National Hydrologist for the Nature Conservancy, follows with a discussion of the general approach of the Nature Conservancy, and the priority that the Conservancy has placed on scientific research that ad-

dresses the influence of hydrology on biological communities. Theresa Woody, Southeast Associate Field Representative of the Sierra Club, discusses the Florida Kissimmee River Restoration Project—an example of effective interaction between scientists and conservationists using their combined skills to change public policy and benefit the environment.

Don Duff, Aquatic Ecologist and National Partnership Coordinator for Trout Unlimited and the US Department of Agriculture Forest Service, discusses the unique partnership between the Forest Service of the United States Department of Agriculture and Trout Unlimited to enhance the conservation and management of coldwater fisheries. Then Ric Careless (Director of Tatshenshini Wild) and Lisa Barnese (Limnologist, U.S. Army Corps of Engineers) describe the evolution of Tatshenshini Wild from a grass-roots effort to an international network linking together the leading environmental groups on the continent to protect the Tatshenshini River, located in British Columbia on the Alaskan border.

In the final paper, Paul Brouha (Executive Director of the American Fisheries Society) discusses the emerging advocacy role of AFS which has been actively involved in key conservation and environmental issues since its founding in 1870. As a scientific society, AFS has played an exemplary role by placing scientific information in a context of environmental ethics to advocate change.

The following contributions are presented as catalysts for future agreements and arrangements of mutual interest between the scientific and conservation communities that will help protect freshwater resources.

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