

Proposed Migratory Bird Watch To Encompass Research, Monitoring and Interpretation

By Ted Simons, John Peine,
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Concern over the impending free-fall in global biological diversity is based primarily on the unprecedented destruction of natural habitats currently underway worldwide. Neotropical migrant passerines (North American songbirds) are particularly vulnerable to this phenomenon due to the pell-mell destruction of their wintering grounds in the tropics, urban development of their migratory stopover habitat in coastal areas, and the fragmentation of breeding habitat in North America.

Migratory birds provide a uniquely compelling subject to showcase the global biological diversity issue. Their heroic journeys are an inspiration of will and physical ability. Their dependence on critical habitats is not well known. We feel that populations of neotropical migratory birds provide a model system for interpreting and studying biological diversity issues in national parks. Their life cycles illustrate the interconnection of global ecosystems and the need for a broad, cooperative approach in addressing threats to biological diversity.

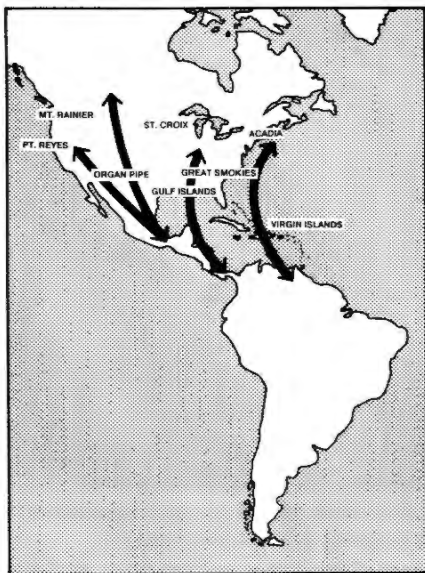
A monitoring and interpretive program is proposed as a joint initiative between the National Park Service (NPS) and the U.S. Fish and Wildlife Service (USFWS). Efforts will be concentrated in four areas: population monitoring, habitat assessment, interpretation, and international cooperation.

As the focus of a long-term monitoring effort, migratory bird populations should provide a useful umbrella for other species. They comprise a diverse group with a wide range of ecological requirements, and are sensitive to a variety of factors that can affect biodiversity. These include: changing competitive relationships, the loss, alteration or fragmentation of habitats, and a species' ability to adapt to a changing environment. Therefore their populations serve well as indicators of environmental change.

In addition to identifying changes within parks, monitoring migrant populations should provide insights into the broader problems this issue reflects. A network of national parks will provide a unique opportunity to standardize methods and experimental designs, conduct long term research, and provide for the information exchange necessary to address an issue of this scale.

Initial population monitoring protocols will be based on the USFWS Breeding Bird Survey. Data management and analysis will be the responsibility of the Migratory Bird Office. Data from parks will be compared to results from over 2000 surveys conducted each year by the USFWS nationwide. As the program matures, standardized park-specific bird census protocols will be developed and incorporated into park inventory and monitoring programs. Applied to a network of parks, representing a wide range of habitats, sizes, and boundary configurations, this work will provide important insights into the role these factors play in structuring natural communities. Many parks will be able to build on substantial historic databases on bird populations, on-going research, and local expertise. We anticipate that much of the field work in this project could be conducted with the assistance of volunteers recruited through local Audubon chapters.

An analysis of 15 years of data from the North American Breeding Bird Survey by USFWS scientists has



revealed that most neotropical migrant bird species that breed in the eastern United States and Canada have declined in abundance during the last 10 years. Most scientists attribute these losses to changes in critical habitat ranging from forest fragmentation in the breeding range, to loss of stopover habitat, to total deforestation in the winter range. Coastal development in recent decades has reduced enormously the stopover habitat for migrants. These habitat areas provide refuge and nourishment for many North American migrants during a critical phase of their annual cycle. They are the jumping off point for literally hundreds of thousands of birds that cross the Gulf of Mexico every fall, and the first landfill for individuals returning north each spring.

The habitat component of this project will assess changes in migratory bird habitats in and around selected parks, and attempt to correlate those changes with changes in bird populations. Our goal is to engage other agencies, including NASA and USGS, in a project that will demonstrate the transfer of remote sensing technology to a conservation issue of global importance. Anticipated products would include a continental scale map of critical habitats for migrants and a trend analysis of habitat change at selected parks.

Although research and monitoring efforts will provide valuable information, the interpretive component is by far the most important element in this program. Clearly the greatest contribution the National Park Service can make to the conservation of migratory birds and their habitats will be through its unparalleled opportunity to educate and motivate more than 300 million visitors a year.

A network of "Linkage Parks" will form the nucleus of the migratory bird interpretive initiative. Representative migratory birds have been selected that link NPS areas during their annual cycles. For example Blackpoll Warblers may be found in the Virgin Islands, Gulf Islands, Everglades, Great Smokies, Cape Cod, and Acadia during their annual trek from Venezuela to eastern Canada. Interpretive programs in linkage parks will focus on the ecology of these birds during their annual cycle, and their dependence on healthy ecosystems from the tropics to the arctic. Linkage parks would then

be encouraged to exchange interpretive materials from their park with others in the network. Additional interpretive elements will include the production of a traveling exhibit and slide file on migratory bird conservation issues, and the development of a "Kids Net" educational module on migratory birds in cooperation with the National Geographic Society.

The final objective of the program is to foster international cooperation by involving the participation of parks in Canada and Latin America and the establishment of complementary linkages through the U.S. Fish and Wildlife Service. Initially we hope to have a representative of a Canadian and Costa Rican park participate in an interpretive workshop on migratory bird issues to be held at Gulf Islands in April 1989.

Our goal is to begin work in a representative network of 10 U.S. parks, and one Canadian, and one Costa Rican park in 1989. We have submitted a request for start-up funding through the Washington Office. We hope to highlight a fully operational program in 1992 as part of formal ceremonies commemorating the Quincentennial of the Columbus landing. We anticipate participation by National Audubon, the World Wildlife Fund, National Geographic, and other organizations as the program evolves, and hope to establish linkages to additional parks and reserves in Canada and Latin America.

Our objective is to demonstrate how a relatively modest commitment of resources can be leveraged to elevate awareness of critical conservation issues. We have put together a packet of material on the program including the funding proposals, a comprehensive overview of the issue prepared by Dick Cunningham as an interpreter's reference, and a questionnaire soliciting interest and park-specific information. We would welcome your comments, ideas, and especially your participation. Please contact us if you are interested and would like more information.

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