NASA JOINS WITH CONSERVATION BIOLOGISTS TO GET THE BIG PICTURE

By Robin Meadows

NASA’s views of Earth—from satellite images to photographs taken by astronauts—can give conservation biologists the big picture of how our planet and the life on it are changing, from forest fragmentation to the possible link between UV-B radiation and amphibian declines.

To explore NASA’s role in conservation, the August issue of Conservation Biology includes a 12-paper special section “NASA and the Conservation of Biodiversity,” which was co-edited by Woody Turner of NASA’s Office of Earth Science in Washington, D.C., and Eleanor Sterling of the Center for Biodiversity and Conservation at the American Museum of Natural History in New York, New York.

Many of these projects stem from a 1997 workshop co-hosted by NASA and the Smithsonian Institution entitled “Applications of NASA Technology for Biodiversity Conservation,” where NASA researchers and conservation biologists found ways of applying NASA’s tools to conservation challenges worldwide.

The projects include:

• Using radar images to distinguish patches of natural forest from areas of cocoa planted under remnant canopy trees in Brazil’s Atlantic coast rainforest. Compared to optical technology, radar has the advantage of penetrating both the cloud cover and tree canopy. Such work could help identify high-biodiversity areas for reserves and corridors. This work is by Saasan Saatchi of the Jet Propulsion Laboratory at the California Institute of Technology in Pasadena, California, and colleagues.

• Using astronauts’ low Earth orbit photographs to identify woodlands damaged by the growing elephant population in Botswana’s Chobe National Park. Nearly 400,000 photographs taken by astronauts since the late 1960s are available in a searchable database at <http://eol.jsc.nasa.gov/sseop>. This work is by Julie Robinson of NASA’s Johnson Space Center in Houston, Texas, and her colleagues.

• Using satellite images to determine if surface currents could have spread the pathogen that caused the mass sea urchin deaths in the Caribbean Sea and Gulf of Mexico in 1993-1994. This work is by Jonathan Phinney of the Center for Marine Conservation in Washington, D.C., and his colleagues.

• Using satellite-derived UV-B radiation data to show that UV-B has increased significantly at 11 Central American sites where amphibians have declined. This work is by Elizabeth Middleton of NASA’s Goddard Space Flight Center in Greenbelt, Maryland, and her colleagues. The special section also includes three other papers investigating correlations between amphibian declines and environmental factors.


NEW JOURNAL ANNOUNCEMENT

A new international website <http://www.ecologicalindicators.org> and corresponding journal, Ecological Indicators, has recently been launched. The website hosts information about key works in the field of ecological and environmental indicators, as well as information on forthcoming symposia such as the “3rd International Sym-
posium on Environmental Indicators and Indices” being held October 2-5, 2001 in Rome, Italy. Other links of interest can also be found, including EPA’s Environmental Monitoring and Assessment Program, and Environment Canada’s Ecological Monitoring and Assessment Network. The ultimate aim of Ecological Indicators is to integrate the monitoring and assessment of ecological and environmental indicators with management practices. The journal will provide a forum for the discussion of the applied scientific development and review of traditional indicator approaches as well as for theoretical, modeling and quantitative applications such as index development. The journal is intended for scientists, decision-makers and resource managers working with or using ecological and environmental indicators for the long-term goals of assessing extent, condition and trends within the environment.

**Information Highway Hi-Lites**

National Wildlife Federation (NWF) has launched a *Backyard Wildlife Habitat* planning feature through its eNature website. The Planner provides outdoor enthusiasts with a multitude of online resources to help them create sustainable, wildlife friendly landscapes. The feature allows users to assess wildlife value of their backyards, balconies, or other spaces, to upload photographs of their habitat, and to create a list of native plants and wildlife living in or using the habitat in using eNature’s regional field guide resources. Users can also have their yard certified by NWF as an official Backyard Wildlife Habitat site. To learn how to turn your backyard into an enticing wildlife refuge, go to <http://www.enature.com/backyardwildlife>.

First published by Entomological Information Services in 1996-97 in four volumes, the *Nomina Insecta Nearctica* <http://www.nearctica.com/nomina/main.htm> is an online checklist with a complete listing (minus synonyms) of the approximately 90,000 species of insects of North America north of Mexico. The checklist is arranged alphabetically, by taxonomic rank. Detailed information includes “the current generic name, the species name, the author or authors of the name, the date of publication, and finally (in parentheses), the generic name under which the species was originally described.” Beginners should start at the table of contents and follow the links.


American Memory, the Library of Congress’ “gateway to rich primary source materials relating to the history and culture of the United States,” offers *Conservation and Environmental Maps* <http://lcweb2.loc.gov/ammem/gmdhtml/cnsvhome.html>, a website on the exploration and land use in the United States. These historic and recent maps will be of great interest to ecologists, as they show “changes in the landscape, including natural and man-made features, recreational and wilderness areas, geology, topography, wetland area, vegetation, and wildlife.” The site may be searched by keyword or browsed by Subject Index, Creator Index, Geographic Location Index, or Title Index.

**Current Literature**


Baillie, S.R. 2001. The contribution of ringing to the conserva-


Horvath, R., Magura, T., Peter, G., and Bayar, K. 2000. Edge effect on weevil and spider communities at the Bukk Na-


ecosystem function in a community of stream insect detritivores. *Oikos* 93(2):221-234.


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