

FROM THE FORESTS, TO THE MOUNTAINS, TO THE OCEANS....

Would you like to spend two weeks in Panama studying the changes in the composition and abundance of certain species of tropical birds? How about three weeks in the Sierra Nevada Mountains of California, studying more than forty subalpine species of birds?

EARTHWATCH, a non-profit organization headquartered in Belmont, Mass., is a clearinghouse matching volunteers with scientists and research scholars who require additional funds and volunteers to conduct their research, such as the projects in Panama and California. This year EARTHWATCH is aiding 350 scholars with projects in 19 states and 44 countries. Anyone between the ages of 16 and 75 can participate. Volunteers are required to pay their own transportation to and from the site, and a set share of the expedition's cost, both of which are tax-deductible.

This year three expeditions are of special interest to birders, with several others of local significance.

In California, Dr. David DeSante of the Point Reyes Bird Observatory and volunteers will conduct a census of breeding birds of the Inyo National Forest and observe their behavior to find out how stable these communities are and whether human activity poses a threat to the more than 40 species of subalpine birds that inhabit the area. Participants will net, band and observe birds, hike, swim and enjoy the magnificent scenery. Each of four teams will spend three weeks in the field, beginning June 10, July 1, July 22, and August 12. Each participant's share of the costs is \$775.

Meanwhile, in Hawaii, Dr. Charles van Riper of the University of Hawaii and volunteers will be investigating the causes of the reduction of native Hawaiian bird populations. Two hundred years ago there were 70 species of birds native to the Hawaiian Islands. Today 24 species are believed extinct and 27 others have been placed on the endangered list. Working in the lush tree fern forests of Hilo, the team will net and band birds, take blood samples to determine whether diseases introduced from the mainland are depleting the populations, and release the birds. A two-week study will begin on May 26, with each participant's share of the costs \$650.

The brilliantly colored birds of the Panamanian forests are the focus of a study conducted by Dr. James R. Karr of the University of Illinois. Working 5 miles north of Gamboa in the Panama Canal Zone, participants will be netting, identifying and banding tropical birds and sampling the plants that they use as food to determine how these resources affect the abundance and distribution of the species. The expedition offers a rare opportunity for birdwatchers to observe many beautiful but secretive tropical birds. Teams will be in the field for two weeks, beginning July 6. Costs are \$725 each, plus transportation.

In all of these programs, volunteers will receive instruction in the necessary field techniques.

Of local non-ornithological interest, EARTHWATCH is offering three projects

on Cape Cod this summer. Dr. Stephen Leatherman, Director of the National Park Service's Cooperative Research Unit, is studying the past and present coastal environment of Nauset Spit. The great barrier beaches of the eastern United States are vanishing, victims of the worldwide rise in sea level, occasional storms, and increasing numbers of off-road vehicles. Leatherman hopes to accumulate baseline data which will help the National Park Service formulate land management plans for Nauset Spit and other barrier islands. Teams will begin two-week study periods on July 15 and August 5, with each participant's share of costs \$700.

Near the elbow of Cape Cod, between Chatham and Orleans, is Pleasant Bay, 3700 acres of tidal creeks, salt marsh, beaches and islands. Some developments are being proposed for the area which might have an adverse impact on its value as a marine nursery. More information is needed to help citizens determine if the proposed developments might destroy the shellfish potential of the bay, or if revenues from commercial fishing might offset losses due to possible prohibitions on land development. George Buckley, of Harvard, is leading the project, which this summer hopes to determine the density, distribution and interaction of organisms like oyster drill, shrimp, certain mollusks and algae. Volunteer teams will work two weeks, beginning July 9, July 27 and August 14. Costs are \$600.

The question of shoreline development is also being studied at Provincetown, where Drs. Barbara S. Mayo and Graham S. Giese will conclude a three-year study of the harbor. A dramatic decline in shellfish and other marine resources led to this intensive study which will help determine a harbor management policy for Provincetown. A two-week field study will begin on June 10, with each participant's share \$700.

For further information on any of these projects, write: EARTHWATCH, 10 Juniper Road, Box 127VR, Belmont, MA. 02178.

#### TAKE A SECOND LOOK

Bird Observer would like to remind everyone of its continuing series of "Take a Second Look" field trips. These trips are intended to give participants the opportunity to study and analyze birds' behavior and their relationships with other birds and the rest of their environment. Participation is limited; anyone interested in one of these trips is encouraged to contact the leader several weeks in advance for exact details

June 3	"Survey of Nesting Birds in Lynn Woods"	Lynn Woods	Rick Heil (531-7790)
June 24	"Nesting Ground Birds and Raptors in a Suburban Habitat"	Weston	Leif Robinson (864-7360)
July 29	"Wading and Shorebirds in a Local Salt Marsh"	Belle Isle Marsh	Soheil Zende (628-8990)