For the Birds: Restoring the Forests of Hispaniola

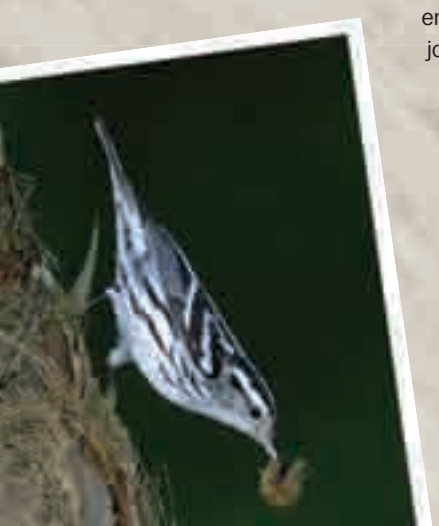
As the days grow cooler and we note the departure of songbirds for warmer regions to the south, most of us don't give much thought to what is in store for these birds once they've left our backyards and traveled thousands of miles to their wintering grounds.

For many species, their destination – the place that instinct has imprinted into their being as the unchangeable location for them to winter -- may very well be a decimated scab of land where a lush tropical forest once stood.

The island of Hispaniola, which comprises the Dominican Republic and Haiti, supports a rich population of bird life, including 31 endemic bird species (those species found nowhere else in the world). It is also the winter home of hundreds of species, including the American redstart, the prairie warbler, the ovenbird, and the black-and-white warbler – all birds that you may have seen in your own yard. Because of its incredible biodiversity, Hispaniola has been given the highest ranking of biological importance in a worldwide assessment of bird protection priorities. And protection can't come soon enough. The destruction and conversion of forested lands for timber, agriculture and cattle grazing in this part of the world is staggering, with some recent estimates placing forest loss in the Dominican Republic at more than 90 percent in the last 20 years. This process is driven by increasing numbers of people and increasing levels of consumption by those people. The forest areas that remain are fragmented and under continuing heavy pressure, falling under slash-and-burn practices as land is cleared for crops or pasture. Still other areas are abandoned, shaved clean and left with just a layer of scrub in areas once teeming with life.

In Haiti, with even more people than the Dominican Republic, the forests are essentially gone.

The effects of human-caused forest loss on birds, and the ability of birds to adapt to these habitats, had until recently never been studied in the Caribbean region. For the past five years, Dr. Steven Latta, National Aviary Assistant Director of Conservation and Field Research, has been conducting research in Hispaniola to determine whether birds returning to winter in the area are not only finding a way to survive the season, but also maintaining a healthy enough condition to make the return journey north for breeding.



"Over-wintering Neotropical migratory birds, along with permanent resident species who share these habitats, are facing dramatic change in a variety of ecological systems in North America, Latin America and the Caribbean," says Dr. Latta. "These habitats are vital to the survival of many migrant and resident bird species, so the need for curtailing their conversion, and for their restoration, is clear and pressing."

In 2002 Dr. Latta, together with Dominican researchers Danilo Mejía and Marisabel Paulino, set out to monitor the way birds were responding to private land areas that were being allowed to regenerate. Research efforts were conducted in the "buffer zone" just outside the Sierra de Bahoruco National Park on the Dominican-Haitian border.

Over a five-year period, a variety of techniques were used to capture data on six focal species: the common yellowthroat, black-and-white warbler, American redstart, Cape May warbler, ovenbird, and black-throated blue warbler.

Point counts – a standardized way to count birds in a fixed area based on sightings and vocalizations heard – and mistnetting, in which birds were caught and color-banded so that individual birds can be easily identified without recapture, were employed three times each winter throughout the research period.

"The color bands enabled us to re-sight the birds and helped us to determine how long they were staying and surviving in an area," says Dr. Latta. "It also provided a way of measuring how good that particular habitat is for the species." The team also collected data on the types and complexity of trees, shrubs and plants that were slowly returning to cleared areas.

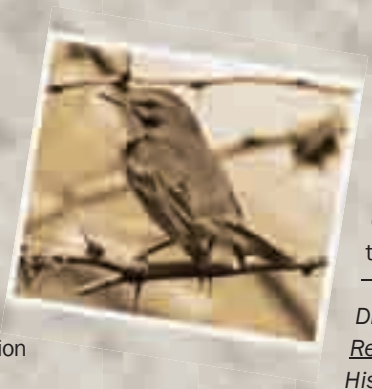
"In young sites – areas that have been left to regenerate for 10 years or less – some of the first growth to come back is exotic or introduced species," says Dr. Latta. "It's only in older sites you get more of the native trees coming back." The information collected is helping Dr. Latta to determine what trees and plants are important to sustain bird populations in the area.

We're going to have data on how old the forest needs to be to support certain species of birds. This is particularly important with some of the more threatened species - especially the permanent resident species and the endemics.

"The flip side is that by knowing what sort of habitats, and what age of forest a species needs to have in order to survive, we can look at populations of birds and predict how they will respond with further loss of forest or further regrowth of forest."

In the case of the black-throated blue warbler, higher counts and higher rates of survival were found in forests that had been left to regenerate for 10-20 years or more. Latta and his colleagues also found a difference in the number of male and female birds in certain areas, with males found in proportionally higher numbers in areas with forest growth of 10-20 years or more. This disparity has the potential to impact male and female survival

rates and ultimately the success of breeding in the spring.



When final analysis of the data is completed, Latta will share his findings with National Park managers and the wildlife service in the Dominican Republic in the hope that the data will provide a basis for sound conservation and reforestation activities.

Ironically, economic opportunity in the form of ecotourism may also contribute to better land management and protection for the area's bird life in the future. Latta was recently awarded a grant to develop a birding trail in the Dominican Republic.

"Birding trails have become increasingly popular in the United States and around the world, but haven't been applied in Latin America except for Costa Rica," says Latta. "We will be identifying 60-80 different sites where people can go for birdwatching, and we will promote these sites for ecotourism through a book and a map. The information we provide will not only give tourists an idea of what birds they can expect to see, but also will provide them with information on restaurants, hotels and shopping near the sites. This will in turn provide economic growth for the island, provide further incentive for land conservation, and help to mitigate the impacts of human activities on these landscapes."

Dr. Steven Latta is the author of the field guide Birds of the Dominican Republic and Haiti, the first complete treatment of all of the birds of Hispaniola, published by Princeton University Press.

Photos by Eladio Fernández

the Eagle Watchers

A new book that puts readers on the trail of eagles around the world offers rare insights into the experiences of biologists working to study and save these elusive raptors.

The Eagle Watchers, co-edited by Dr. Todd Katzner, National Aviary Director of Conservation and Field Research, and Ruth Tingay, Senior Research Coordinator at Natural Research Ltd. in Scotland, is a compilation of anecdotal stories told by 30 of the world's leading eagle researchers. The sometimes harrowing, sometimes humorous tales take readers of conservation and research journals to the far reaches of the globe, from studying serpent eagles in Madagascar, and spotted eagles in India, to snake eagles in Africa, and sea eagles in Russia.

"The book captures in a very personal way what it's like to do field research, the challenges faced in working in foreign lands and cultures, and the emotional connection that is almost inevitably felt with the subjects being studied," says Dr. Katzner.

One contributing author tells of trapping Steller's sea eagles to study the effect of lead poisoning in northern Japan, while another describes the experience of studying one of the world's most impressive tropical forest eagles – the Philippine eagle – and the sense of sadness and loss he felt when the forest where he studied eagles was destroyed by habitat loss from clearcut logging.

Yet another author describes the intimacy and sadness felt when the massive South American harpy eagle she was studying killed a baby deer just a few feet from her. Other stories take a lighter approach, relating some of the follies of field research and near-death experiences that, at the time, were likely to not have been so humorous. Still, other stories tell of the knowledge gained through the study of eagles and the process by which field science progresses.

Scheduled for publication in 2009, **The Eagle Watchers** is a must-read for anyone who has wondered what it's like to follow the flight path of these magnificent raptors as they hunt, breed, and in some cases, struggle to survive in habitats that are ever shrinking.

"This project has been a work of the heart, done because all of us believe in the importance of these majestic animals and the important need we share to connect humans to wildlife, to further our common conservation goals," adds Dr. Katzner. The authors who contributed their personal stories have donated their time and effort at no cost to make this work possible, and profits from the book will be donated equally between the following raptor conservation funds: **Hawk Mountain Project Soar**/Hawk Mountain Sanctuary, and the **National Birds of Prey Trust**.

Read future newsletters and visit the National Aviary web site, www.aviary.org, for news of the official publication date of The Eagle Watchers.

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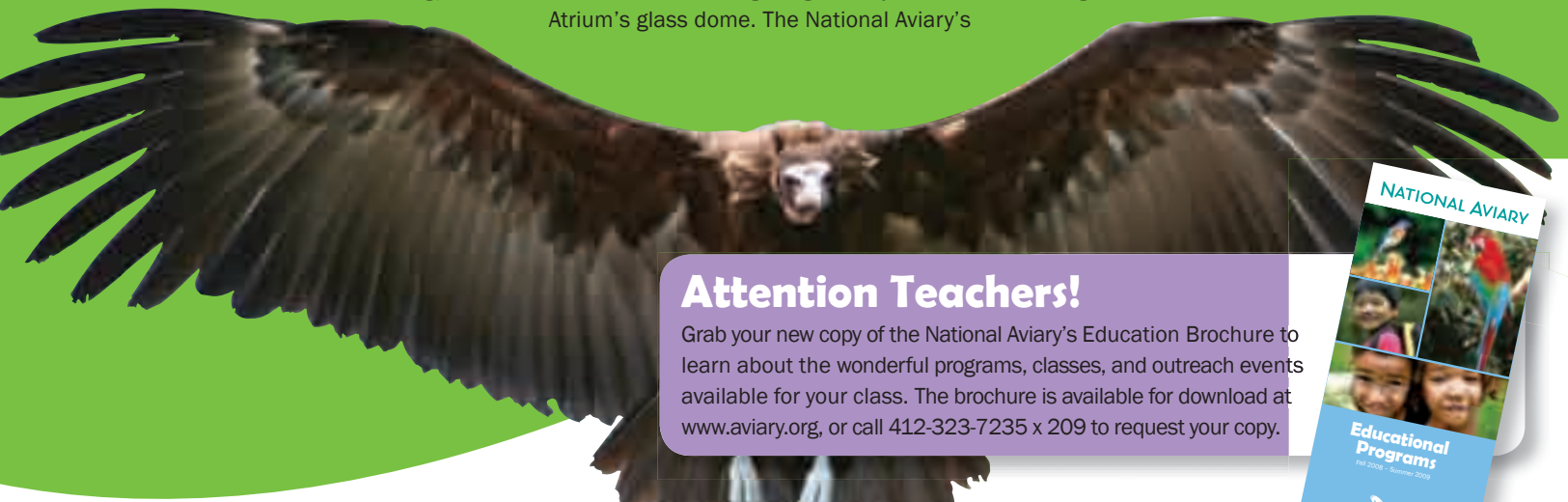
New FliteZone™ Features New Cast, Old Favorites

National Aviary staff are wrapping up training for the birds that will star in the new FliteZone™, which opens October 11.

The show theme is “Eat Like a Bird” and will present guests with fun facts about birds and their diets – all while giving audiences the thrill of birds flying freely overhead. Beatrice, the green aracari, will be back with a new twist, and crowd favorite Bandit, a magpie, will return to once again show off his beautiful green wings. Vultures Sarabi and Robin will demonstrate their remarkable wingspans, while Talon, the augur buzzard, reveals his remarkable raptor adaptations. Birds making their first appearance include Piper, a gorgeous trumpeter hornbill.

Also in training is a mini flock of young white doves that are being taught to fly in the Atrium’s glass dome. The National Aviary’s popular African penguins will strut their stuff to raise awareness of the problems faced by their wild counterparts.

You won’t want to miss the new FliteZone™ show, opening October 11 and running Wednesdays through Sundays, at 11 am and 1:30 pm. FliteZone™ takes place in the National Aviary Atrium and is included in general admission.



Attention Teachers!

Grab your new copy of the National Aviary’s Education Brochure to learn about the wonderful programs, classes, and outreach events available for your class. The brochure is available for download at www.aviary.org, or call 412-323-7235 x 209 to request your copy.