

## A Birding Interview with David Wilcove

An active birder and one of the world's foremost experts on endangered species, David S. Wilcove joined the Princeton University faculty in 2001 as Professor of Ecology, Evolutionary Biology, & Public Affairs after a distinguished record as Senior Ecologist for both Environmental Defense and The Wilderness Society. He is the author of *No Way Home: The Decline of the World's Great Animal Migrations* (2007) and *The Condor's Shadow: The Loss and Recovery of Wildlife in America* (1999), and has written numerous technical and popular articles about conservation of biological diversity, endangered species, ornithology, island biogeography, and conservation policy. Wilcove is an American Ornithologists' Union fellow and one of the founders of the American Bird Conservancy. In 2001 he received the Distinguished Achievement Award of the Society for Conservation Biology.

In this interview with *Birding*, Wilcove describes the major environmental problems imperiling North American birds, makes a strong plea for renewed interest in conservation, and enthuses about the birds and beauty of Bhutan.

— Noah K. Strycker



**Birding:** What do you think are the greatest environmental crises facing North America? What avian extinctions do you foresee, and how do these extinctions fit into the broader ecological picture?

**David Wilcove:** I'm concerned about three problems in particular: habitat destruction; the spread of invasive, non-native species; and global climate change. If one looks at imperiled species in North America today, the most widespread threat—in terms of affecting the largest number of species—is habitat destruction. It is a factor in the decline of approximately 85% of our imperiled species. The next-most-frequent threat is the spread of in-

vasive species, which affects roughly half of our imperiled species. Climate change is a tougher threat to diagnose at present, but I think it has the potential to harm a great many species, especially those at higher latitudes.

Although I certainly hope we do not lose any more bird species in the foreseeable future, I'm not sanguine about the prospects for several Hawaiian species, most notably the Akikiki (Kauai Creeper) and the Maui Parrotbill. Most birders don't realize it, but the United States and its possessions have lost more species of birds in the past quarter-century (7–9 species, depending on taxonomy) than any other nation on earth, due largely to extinction events in the Hawaiian archipelago and other Pacific islands.

**Birding:** How does your research on forest fragmentation, island biogeography, and the conservation of endangered species relate to birds? What is going on in Hawaii?

**DW:** It has been many years since I have conducted research on forest fragmentation. Fortunately, there are a lot of really sharp, energetic people working on that issue now. My own work of late has focused on other issues: (1) developing new ways to measure whether land preservation and other conservation activities are having a positive effect on endangered species; (2) investigating the use of economic and regulatory incentives to encourage landowners to restore habitats for endangered species; and (3) understanding the ecology of migratory species and the conservation challenges associated with protecting them—not just birds, but also migratory mammals, fish, reptiles, and insects. My graduate students are exploring a number of interesting topics, too, including the role of fire and grazing in sustaining a diverse bird community in East African savannas and the impacts of oil-palm plantations on biodiversity in Southeast Asia.

**Birding:** You're an active birder. What got you interested in birds, and what are some of your favorite birding spots?

**DW:** I've been interested in birds for almost my entire life—at least since I was three years old, according to my parents. I have no idea why. No one else in my family was particularly interested in them. In terms of favorite birding spots, in the U.S., I especially like the Chiricahua Mountains, Cape May, and northern Minnesota. Farther afield, I've really enjoyed birding in Tanzania and Ecuador. And for a combination of magnificent old-growth forests, interesting birds, and fascinating culture, it's hard to beat Bhutan. If I could go back to just one country, that would be it.

**Birding:** To help endangered species, you have argued for preserving ecosystems rather than focusing on species, using the Ivory-billed Woodpecker as an example. Can you explain?

**DW:** Actually, I'm a proponent of both species-specific conservation efforts and broader, ecosystem-based efforts. I think you need to do both to adequately conserve biodiversity.

No one, I hope, would argue against the proposition that protecting large, intact examples of all of the major ecosystem types can prevent numerous species from becoming endangered or extinct. At the same time, many of our rarest species occur in small, isolated scraps of habitat that can easily be forgotten if we focus solely on large, intact ecosystems. Unless we protect those fragments, we'll lose the species. In this regard, an important paper was published in *Proceedings of the National Academy of Sciences* in 2006. A team of scientists, led by Taylor H. Ricketts, identified 794 species of birds, mammals, amphibians, turtles, crocodiles, iguanas, and conifers that have been reduced to single populations. These last surviving populations occur in a total of 595 sites around the world—including 24 sites within the U.S. and its possessions. U.S. sites are diverse and include such places as Laysan Island, Aransas National Wildlife Refuge, and the Gunnison Basin. Either we protect

these places or we lose all these species.

**Birding:** Can you describe your efforts to interface with non-governmental organizations (NGOs)? Why is this work important?

**DW:** Before joining the faculty at Princeton, I spent 16 years working for The Nature Conservancy, The Wilderness Society, and Environmental Defense. It was exciting, challenging, and rewarding work. From those years, I think—I hope!—I gained a sense of the political, economic, and so-



**David Wilcove** (left) and **black rhinoceros** (right). Photo by © Nathan Gregory.

cial factors that are critical to achieving lasting results in conservation. My training is in ecology, and I firmly believe that science is essential to making sound decisions regarding the environment. But science alone won't do the trick; effecting real change requires a multidisciplinary approach.

**Birding:** How do you believe West Nile virus will affect bird populations?

**DW:** I'm not certain how it will affect bird populations over the long term, but I'm worried. A recent paper in *Nature* reported declines in a number of common North American birds that the researchers felt could be attributed to West Nile virus. It certainly had a big impact on corvid populations in some areas, but part of the reason we know that is because crows are conspicuous birds that live around us. When they die, we're more likely to find their corpses. If West Nile virus is similarly lethal to kinglets and grassland sparrows, we may

not notice the impact until populations of those species are greatly reduced. I am especially worried about West Nile spreading to places like Hawaii or the Galapagos Islands, where the birds may have far less resistance to the disease than do mainland species.

**Birding:** How do you judge your success?

**DW:** There are standard academic metrics, like number of papers published or number of lectures given. But I think that, for a conservation biologist, two far more important measures of success are: (1) whether your research is genuinely useful to those who are actively engaged in on-the-ground conservation; and (2) whether you are helping to train a new generation of environmental problem-solvers. That's how I intend to judge my success.

**Birding:** In your past position as Senior Ecologist at Environmental Defense, what do you consider your greatest contributions? Disappointments?

**DW:** Three things come to mind. First, over the course of ten years, my colleagues and I published a series of papers that looked at some of the scientific issues pertaining to the Endangered Species Act. These included studies of the geography of endangered species (for example, identifying the hotspots of endangered species in the U.S.), the population sizes of species at time of listing, and the causes of species endangerment. That work helped to dispel some of the claims by anti-environmentalists that the Endangered Species Act was a failure. At the same time, our work highlighted key areas where the Act could, in fact, be improved. Second, we conceived and implemented several programs to encourage landowners to restore habitats for endangered species, and the response from the landowners was over-

whelmingly positive. Finally, back in 1995–1996, when it looked as though the Congress was poised to gut the Endangered Species Act, we were able to rally a coalition of scientists to meet with leaders of the House and Senate to block the assault. Of course, that only means you live to fight the battle again the next year, but sometimes that's the best you can do.

My major disappointment during my time in Washington was the steady growth of the anti-environmental faction in Congress. Given the overt hostility toward conservation that characterizes so many elected leaders today, it is difficult to sustain existing laws like the Endangered Species Act or the National Forest Management Act, much less move ahead to address new issues. I am hopeful that the pendulum may be swinging back—I see signs of renewed interest in the environment—but we've lost a lot of time.

**Birding:** What do you think are some best-case scenarios for bird conservation in the next 25 years, and how might we achieve those?

**DW:** We're in a fortunate position in the U.S. in that most of our native birds—even many of our declining species—still have reasonably large populations. If we make a serious effort to protect important habitats, if we allocate sufficient funds to land acquisition and endangered species protection (something we are not doing currently), and if we can muster the will to address global climate change, then we have a chance to preserve healthy populations of birds for generations to come. But if we continue to permit natural areas to be destroyed, if we starve conservation programs, and if we turn our backs to the problem of global warming, then we can expect to live in a world increasingly dominated by European Starlings and Norway rats.