

ALUMNI

# A True Believer

*“I’ll dream about the ivory-billed woodpecker all my life.”*

**B**UT FIRST, A WORD ABOUT the Florida scrub jay. “Before the invention of the air conditioner, Florida was a spectacular wilderness,” notes John Fitzpatrick ’74, director of the Cornell Laboratory of Ornithology (CLO). “By the mid twentieth century, the human population had boomed and had taken 90 percent or more of the original dry habitats of the Florida scrub jay. The only species of bird entirely limited to Florida is now a dramatically declining, endangered bird, probably down to well under 10,000 individuals, living in a few scattered spots that are remnants of sand-dune formations left by a sea-level rise of a couple of

slowly catching on among land managers.)

Back in 1985, Fitzpatrick received the highest research honor of the American Ornithologists’ Union for his work on the ecology, social behavior, and conservation of the Florida scrub jay, and he has stuck with the bird faithfully. Then he was curator of birds at Chicago’s Field Museum of Natural History, where he went after earning his Ph.D. from Princeton in 1978. He left Chicago in 1988 and got closer to his admired jay as executive director of Archbold Biological Station, a private ecological research foundation in Lake Placid, Florida. All this time he also led expeditions to remote precincts of South America and

described seven previously unidentified species of bird. In 1995 he became professor in ecology and evolutionary biology at Cornell and the Louis Agassiz Fuertes director of the CLO. (Fuertes was a superb painter of birds, and his father, who taught at Cor-

nell, was an admirer of Louis Agassiz, founder of Harvard’s Museum of Comparative Zoology. The inventor of the air conditioner was Willis Haviland Carrier, a Cornell alumnus.)

Each year Fitzpatrick leaves ice-bound Ithaca to spend 15 field days in the so-called “hills” of the Lake Wales Ridge area of central Florida, mapping the 60 or so territories in the main demographic



The ivorybill has—or had—a white trailing edge on its wing.

area of banded jays that he and colleagues are studying. “The Florida scrub jay is my tonic,” says Fitzpatrick, who has reason to need one from time to time. “It is charismatic and an absurdly tameable bird. When you walk into its territory, it sits on your head.”

THE IVORY-BILLED WOODPECKER does not. This awesome figure of the forests of the southeastern United States—the Lord God Bird, as it was called—is now elusive in the extreme, if not a goner entirely. At CLO, Fitzpatrick is at ground zero in the ivorybill wars, which concern *what*, exactly, cautious scientists and careful field observers have been seeing lately in the woods.

On the day before April 28, 2005, most ornithologists and bird-watchers believed the ivorybill was probably extinct, as the last confirmed sighting in the United States was in 1944. The bird was killed wholesale for a century or more by native Americans and others who wanted the male’s decorative red head, and then loggers decimated its living rooms. On April 28, in Washington, D.C., in the company of the secretaries of the Interior and Agriculture departments and two senators, Fitzpatrick announced that a Cornell-led team had confirmed the existence in 2004 and early 2005 of a single male ivory-billed woodpecker in Arkansas, along a stream called Bayou DeView in the White River National Wildlife Refuge. The journal *Science* published these findings; after all, they issued from perhaps the most prestigious bird-study center on earth. The world rejoiced, at



John Fitzpatrick, director of the Cornell Laboratory of Ornithology, alert to the possibilities at the Bayou DeView in Arkansas

million years ago.” Today’s jays have to put up not only with encroaching “sun-birds” and their trailer parks and condos, but with humans’ dislike of having their habitats burn. Jays depend on fire sweeping the landscape regularly, just as it did historically because of all the huge thunder-and-lightning storms of a Central Florida summer. (One remedy, says Fitzpatrick, is prescribed burning, which is

ILLUSTRATION BY N. JOHN SCHMITT/CORNELL LAB OF ORNITHOLOGY

least that considerable part of it that sees a wonderfulness in birds.

The evidence on which the CLO based its claim consisted primarily of seven fleeting sightings and a four-second fuzzy video. Soon other bird experts, not with the CLO, examined this evidence, and doubt or disbelief rained on the parade. "I'm at peace, and have been since we published the article, with the fact that people vary in what they require to be convinced," says Fitzpatrick, "and that's as it should be in science."

Nature writer Mel White gave a balanced account of the controversy, "The Ghost Bird," in the December 2006 *National Geographic*. The fuss soon escalated, he wrote, "beyond polite discussion into decidedly unscientific name-calling. The bird world split into Believers and Skeptics, and splintered further into True Believers, Agnostics, and Atheists, with former friends and colleagues at each others' throats." David Sibley, a noted bird-identification maven, was lead author of a second *Science* article, published 11 months after the first, asserting that the blurry video did not rule out the possibility that the bird shown was a pileated woodpecker. The Cornell team simultaneously published a rebuttal.

Pileateds are striking birds, too, said to have been the model for the cartoon character Woody Woodpecker, slightly smaller than the crow-sized ivorybill, common, widespread, with a call like a wild laugh. The two species are distinguishable by differences in the black-and-white patterns on their wings, the

pileated having a black trailing edge on its wing, the ivorybill a white one.

Perhaps the best of the seven sightings reported was by the CLO's Melanie Driscoll, who told White that through her ten-power binoculars she "managed to get about three complete wingbeats where I could distinguish up- and downstroke. On each stroke I could see white to the trailing edge, both on the underside of the wing and the upperside of the wing...I am 100 percent certain I saw an ivorybill." Sibley has been quoted as saying of these reported sightings of ivorybills that the expertise and honesty of the witnesses are not in question; everyone makes mistakes.

The CLO then "pulled out the stops," says Fitzpatrick, in an effort to relocate their bird. It dispatched 15 well-equipped field biologists full time and more than 100 skilled volunteers in various periods and spots for six months in late 2005 and 2006 to the Arkansas Big Woods, an expanse of forest and wetlands 100 miles long and up to 15 miles wide centered on the White River—a refuge that Fitzpatrick, who has been there about a dozen times, regards as "breathtakingly beautiful, with some 1,200-year-old cypress trees towering overhead."

"My conviction is that the bird did exist in 2004-05—at least one, as we published," says Fitzpatrick. "It may still be around. But we can tell you for sure that last year we could not find it in the same region in which we had regularly been seeing it earlier. It was probably a dis-



The charismatic Florida scrub jay

persing, unpaired male. We put in a huge piece of work, although with all of that energy and person-power, we managed to cover only about a quarter of the forest. These are big places. A bird of this kind can move. It's daunting."

The CLO is back looking in Arkansas this year, albeit with a reduced budget. They're doing some things differently. Researchers are installing 60 automated cameras that they can focus either on bark-peeled areas that look freshly mined for food or on possible ivorybill roost or nest cavities, so that the humans can leave an area and yet have a camera recording who's using the place. They set their cameras to capture a picture every four seconds, or when they sense motion.

This year the CLO has also established a four-person mobile team that is visiting and cooperating with other search parties—in Mississippi, Louisiana, South Carolina, Texas, the Florida Panhandle—that came into being after Cornell's initial findings in Arkansas. The search season began in early December and will run through April; for a weekly log of the mobile team's activities, see [www.birds.cornell.edu/ivory/current0607/MSTtravellog/document\\_view](http://www.birds.cornell.edu/ivory/current0607/MSTtravellog/document_view).

Auburn University biology professor Geoffrey Hill, an expert on bird coloration, is leading a team in the Florida Panhandle. They have done some vacuuming of ivorybill-like nest cavities to see whether they contain tissue that bears ivorybill DNA, which has been sequenced by Harvard's Scott Edwards, professor of organismic and evolutionary biology and curator of ornithology in the Museum of Comparative Zoology, who used some of the very many specimens of ivorybills the museum gathered in an earlier era.

TIM GALLAGHER

DIANE L. TESSAGLIA-HYMES

**If you Google "birds,"** the first hit will be the Cornell Laboratory of Ornithology ([www.birds.cornell.edu](http://www.birds.cornell.edu)), headquartered in the Imogene Powers Johnson Center for Birds and Biodiversity (below), in Sapsucker Woods, not far from the main Cornell campus. "We are a unique institution among American universities," says John Fitzpatrick. "Each of us here at the Lab, and there are now close to 200 of us, wears two hats. We have globally recognized scientists who are doing well-organized and well-funded research, advising graduate students, teaching courses, and doing all the things that professors do. But we also embrace a public-education mission, capitalizing on the fact that birds are the most charming hook that we have for understanding how nature works and getting people interested in conserving nature. We are active in mobilizing citizen scientists through the Internet to realize that some of the fun they're having watching nature can with only a little extra energy be turned into long-term scientific knowledge." (See, in particular, [www.ebird.org](http://www.ebird.org).) Fitzpatrick regards the invention of the Internet "as the most important single advance in human culture since the wheel."



“The reports I am getting from Florida come from individuals whom I know, and know to be expert observers,” says Fitzpatrick. “The words I’m hearing from them are: ‘Unmistakable,’ ‘Absolutely for sure,’ ‘Nobody who saw what I saw would think it was anything else,’ and ‘I was not a believer until I saw this thing.’ But nobody’s nailed a photograph. All of us await the incontrovertible evening-newsreel-footage of a pair of ivorybills at the nest. This is either a case of spectacular mass hallucination, or the bird is just remarkably wary.”

AUDUBON WROTE (see “More News to Come...” July-August 2005, page 88), “Its notes are clear, loud, and yet rather plaintive. They are heard at a considerable distance, perhaps half a mile....These are heard so frequently as to induce me to say that the bird spends few minutes of the day without uttering them, and this circumstance leads to its destruction....”

In the early nineteenth century, the ivorybill was easily found. Now, as Mel White put it, the faithful have to believe that the Lord God Bird, “in its twenty-first-century incarnation, has been transformed into a creature as shy as Bambi, as silent as a Trappist monk, as anxious to avoid photographers as a Mafia stool pigeon in a witness-protection program—altogether invisible to the human senses as a stealth fighter is to radar.”

“It’s always been biologically credible to me that through selection a remnant ivorybill population could have different behavior from the original one,” says Fitzpatrick. “Because the bird was persecuted so dramatically, it’s believable that the only individuals who survived had a habit of getting the hell away when they sensed humans were nearby. Bird-watching in Italy is a dramatically different experience from anywhere else in Europe because Italians hunt little birds. Walking through the woods, you can hear birds but not see them.”

Selection may account for ivorybill wariness, but what about its noisiness? “It’s a little harder for me to swallow the notion that ivorybills have changed their vocal habits. If there are ivorybills flying around, why aren’t we hearing more of them? We’re documenting in excruciat-

ing detail a lot of hours in the forest without ivorybills making noise.”

WHAT HAPPENS NEXT YEAR if this year’s search results are ambiguous? “We’d probably focus back down to a couple of the hottest possibilities, Arkansas and north Florida,” says Fitzpatrick. “Certainly, we’re going to be engaged in a systematic search for this bird for some time.

“From my standpoint,” he continues, “the search is worth it because of the iconic importance of this bird and what it represents about the enormity of the

change that we brought about in its environment. Shouldn’t we try to be managing these places as if that bird were still in the treetops? My view, scientifically and philosophically, is that that’s what the Endangered Species Act is about. It focuses our attention with these beacon species on ecosystem-level changes that we’ve made. We Americans look at ourselves in the mirror and say, ‘What did we do? And what can we un-do?’”

Meanwhile, Fitzpatrick’s annual trip to the land of the Florida scrub jay remains on his agenda. May one sit on his head.

~CHRISTOPHER REED

## The Music of Birds...and Whales

IN 2000, David Rothenberg ’84 arrived at the National Aviary in Pittsburgh at dawn, unpacked his instruments—clarinets and saxophones, a Norwegian overtone flute, and some Bulgarian double whistles—and settled in to “jam with the birds.” It was the first of many sessions there, and others abroad—from Estonia to Australia, where he played in a sanctuary with “one of the shyest yet grandest singers in the world, the Albert’s lyrebird.” This agile creature with the daring plumage dances among low-hanging vines while caroling original compositions that incorporate fragments of the songs of kookaburras, green catbirds, Lewin’s honeyeaters, and other birds in its habitat.

“Bird music has been around for millions of years—longer than human music,” says Rothenberg, a musician, a philosopher, and a professor of both at the New Jersey Institute of Technology. “I wanted to explore why bird song has so many similarities to human music: melody, rhythm, repetition, invention, and the ability to fill us with joy.”

*Why Birds Sing*, his newest book, recounts these experiences and offers a wide-ranging discussion of scientific, musical, and poetic views on this mysterious phenomenon. (It comes with a CD of his selected sessions; excerpts can be heard at [www.harvardmagazine.com](http://www.harvardmagazine.com) or [www.whybirdssinging.com](http://www.whybirdssinging.com).) He has concluded that the



David Rothenberg

different disciplines offer profound insights, but none alone can answer why—or, more interesting, what—birds sing. “My point is that the function of birdsong for many of these species is certainly to defend territory and attract mates, as evolutionary biology argues, but that doesn’t fully explain why they sing such a wide range of complex sounds,” he says. “How come one bird can do 30 minutes of a constantly changing pattern and another bird does just fine with ‘poo wheet’?”

“Darwin recognized this: he said each species has its own ‘aesthetic sense,’” Rothenberg continues. “This is why starlings today like to imitate the noise of refrigerators and mockingbirds make use of car alarms. Mimicry is often discussed by biologists, but mockingbirds don’t copy songs; they compose their complex, patterned song out of the other songs they hear, with specific musical rules. The nightingale, oft praised in the poetry of Keats, Clare, and Shelley, actually sounds like a DJ in a club scratching records, *chicka chicka chicka brzzzzp*. Scientists tend to avoid subjective descriptions. This is