

The History of Ivory-billed Woodpeckers
in Mississippi

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The Ivory-billed Woodpecker (Campephilus principalis) is the largest of North American Woodpeckers, having a wing-span of nearly three feet. As such, it is also one of the largest woodpeckers in the world, being exceeded in size only by its close relative, the Imperial Woodpecker (C. imperialis) of Mexico.

Male and female Ivory-billed Woodpeckers are similar in size and both are easily identified by the large amount of white which shows on their folded wings. Both have a prominent pointed crest, that of the male being black in front and red behind, that of the female being solid black. The crest of the female is longer, more pointed, and typically curves slightly forward.

In Mississippi we have another large woodpecker, the Pileated Woodpecker (Dryocopus pileatus) which has very frequently been misidentified as the Ivory-bill. The Pileated Woodpecker appears nearly as large as the Ivory-bill, but when perched, the folded wings of the Pileated do not show the large amount of white. Male Pileated Woodpeckers have a completely red crest and a red "moustache." Female Pileated Woodpeckers have a partially red crest. The crest of the Pileated Woodpecker, while distinct, is not so elongate and pointed as that of the Ivory-bill.

No doubt it is their similar appearance that has led to both birds being locally called "Indian Hens" or "Lord God Birds." -- the latter name probably being an exhortation given on first seeing such a large woodpecker -- "Lord God what a woodpecker!"

A very common error leading to misidentifications is the assumption that the Ivory-bill can be distinguished from the Pileated by its white bill. Bill color is not a good distinguishing characteristic, since that of the Ivory-bill is often more "horn-colored" than white, and that of the Pileated can appear very light under some viewing conditions.

By far the best visual identification cue is the white on the wings of the Ivory-bill. However, the calls of the Ivory-billed and Pileated woodpeckers are nothing at all alike, and these can easily be used for identification since both birds are frequently vocal.

The Ivory-bill typically gives single or double "toots" that sound much like a child's toy horn. In contrast the Pileated Woodpecker gives long "kuk-kuk-kuk" calls that sound like something out of a "jungle movie."

Ivory-billed Woodpeckers and Pileated Woodpeckers are not closely related and it is probably because of differences in their behavior and food habits that have led to the demise of the Ivory-bill and the continued success of the Pileated. The Ivory-bill seems to have specialized in feeding on the larvae of very large wood-boring beetles that invade large trees shortly after they die. Thus the Ivory-bill is intimately linked to mature forests in which there is a steady supply of dying mature trees. The Pileated Woodpecker typically feeds on ants and termites -- an abundant food resource that occurs in younger as well as older forests.

We have very little knowledge of the biology or history of Ivory-billed Woodpeckers in Mississippi, but we do know that Mississippi was essentially in the heart of the range of the species, and it is possible that the Ivory-billed Woodpecker was once a regularly observed resident of the state. Mississippi records come from swamp forest associated with the Sunflower, Yazoo, Tombigbee, Mississippi, and Pascagoula rivers (Hasbrouck 1891, Tanner 1942, Burleigh 1944). Dennis (1988:108) mentions Ivory-billed Woodpecker records from the Pearl River, but I have found no other published accounts or specimens from the area. The six known specimens were all collected in March or April of 1893:

- (1) a female, in the American Museum of Natural History, New York City (AMNH # 363841) -- collected near Mississippi City [Harrison County], 29 March 1893 by "C.K.W." [This was Charles K. Worthen; the specimen came from the collection of J. Dwight, Jr., his # 12198]
- (2) a male, in the collection of the Academy of Natural Sciences, Philadelphia, Pennsylvania (ANSP # 175955) -- collected in Bolivar County, March 1893 for F.H. Lattin [I have obtained additional information about this specimen, which I will relate below];

- (3) a male, in the collection of the Royal Ontario Museum, Toronto, Ontario (ROM # 45869) -- labelled only as collected in Mississippi on 23 March 1893. The specimen had been in the collection of Ontario ornithologist J.H. Fleming (his # 349);
- (4) a male, in the collection of the Los Angeles County Museum (L.A. Co. Mus. # 4883) -- labelled only as collected in Mississippi on 27 March 1893 (the name of H.W. Davis is on the label with this specimen);
- (5) a female, in the collection of the Los Angeles County Museum (L.A. Co. Mus. # 6104) -- collected in Bolivar County, in March 1893 (this specimen bears a label stating "from Charles H. Davis, Daggett # 5193"; this bird was apparently collected at the same time and place as the Philadelphia Academy specimen as I will relate below); and
- (6) a male, in the Peabody Museum of Natural History at Yale University -- collected near Mississippi City, Harrison County, on 12 April 1893.

Published sight records of Ivory-bills in Mississippi in chronological order include birds seen:

- (1) in Clay County (apparently in Tibbee bottoms south of West Point) in 1885 by G.V. Young (Hasbrouck 1891);
- (2) in Monroe County, in 1885 by G.V. Young (Hasbrouck 1891);
- (3) near Bay St. Louis in January 1885 by M. Thompson (1889);
- (4) in the Sunflower River delta about 1888 (Coahoma 1888);
- (5) in the Yazoo River delta, 1890 by B. Young (Hasbrouck 1891); and
- (6) in the Pascagoula swamp, Jackson County, in December 1921 by J.D. Corrington (1922).

In addition to these records, I recently discovered a letter that had been sent by the late M.G. Vaiden of Rosedale, Mississippi, in 1963, to Dr. James Bond of the Academy of Natural Sciences in Philadelphia, Pennsylvania. The letter was in reference to the Ivory-billed Woodpecker specimen from Bolivar County that is in the Philadelphia Academy. In the letter Vaiden sheds more light on that specimen and the one from

Bolivar County that is in the Los Angeles County Museum. Although there are no data other than date and county with the specimens, Mr. Vaiden believed the specimens to be ones collected by Mr. Charles Scott of Rosedale -- Scott was known to have collected two specimens on that date.

Vaiden indicated that the birds were:

"secured from a great wooded area, virgin timber, of cottonwood, cypress, red gum, American elm, hackberry, ash-leaf maple, etc."

He notes further that:

"This same area is today [1963] being chopped down by machinery for a sawmill and this will be the fourth cutting for the big woodland. The area consists of about 2,000 acres outside the levee but within one block of my house."

Vaiden also knew of other Ivory-billed Woodpeckers in the area. Quoting further from his letter:

"Up to the second World War there was another great estate composed of 12,341 acres of virgin timber located nine miles south of Rosedale, Mississippi, Bolivar County, and known as the Allan Grey Estate. It was reduced to zero during the War for the small PT boats used so effectively against the Japs in the south Pacific."

"The only people I ever told of the Ivory-billed Woodpecker being in these great wood were George Lowery, Tom Burleigh, and Sam Ray. When the timber was sold to the government for federal use I thought these six pairs of Ivory-billed Woodpeckers would move to a small cypress brake of some eighty acres but they did not and so I lost an opportunity to take a bird for my collection. Where they disappeared to I have no idea."

Vaiden also noted that he had been born at Vaiden, Carroll County, Mississippi, and that in 1908 there was:

"a pair of Ivory-billed Woodpeckers in the great river swamp of the watershed of Big Black River on or running through a part of the home plantation."

The habitat of the Ivory-billed Woodpecker has historically been considered to be the mature bottomland hardwood swamps of the southeast. In Mississippi these are known to have included the bottomland forests of the Mississippi delta, those of coastal

rivers such as the Pascagoula, some areas along the Tombigbee. No doubt the Ivory-bill occurred in other river swamp forests of Mississippi also, but history provides no records for us.

James Tanner's classic monograph on the Ivory-billed Woodpeckers that survived in the Singer Tract of northeast Louisiana until the early 1940s demonstrates that the birds there were resident in the first bottoms of the river -- forests that were dominated by sweetgum, oaks, and elms much more so than the wetter swamps that are dominated by cypress and tupelo. Vaiden's comments about the tree species in the forest where Ivory-bills were found suggest similar, though perhaps wetter forests. Both Vaiden's and Tanner's view of the species -- among the best that we have -- are however biased in that there were no pines in the areas where they studied the birds.

Thus they were of the opinion that these are birds of hardwood forests. I have gone back through the early literature, unpublished field notes, and habitat comments on specimen labels and as a result of these studies believe that the Ivory-bill was also a bird of the pines. Thus its original distribution may have been much broader in Mississippi than the river swamps mentioned, and smaller river forests adjacent to extensive pine forests may provide potential habitat for the birds.

What happened to the Ivory-billed Woodpecker in Mississippi? As elsewhere, it was hunted by Indians and Europeans for its bill and for food. Early travellers on the Mississippi River used to buy "watch fobs" made from the heads of Ivory-billed Woodpeckers as souvenirs of their visit. In the late 1800s the Ivory-bill was rare and taxidermists could easily sell whatever specimens they could obtain. Some shot dozens of specimens. Almost always both the male and female were collected together at the nest. But the final -- and fatal blows were undoubtedly the loss of its mature forest habitats.

Some virgin forest survived the turn of the century in Mississippi, but World War I brought a pork barrel project intended to give the South its "fair share" of the war industry. A bill was passed in Congress providing for the construction of 1000 ships of southern pine. Placards were placed on trees and elsewhere in southern Mississippi noting that it was the patriotic thing to do to cut the virgin timber.

Flood control projects on the Mississippi allowed drainage of the Mississippi delta -- and cutting of the bottomland forests needed by Ivory-billed Woodpeckers. As noted by Vaiden, World War II brought further "patriotic cutting."

Very little mature forest survived the 1940s, but since then some forests have begun to recover. Age structure of the forests has changed, however, as a result of forest management practices, with abundance of young trees steadily increasing and abundance of older trees steadily declining.

There have been no documented sightings of Ivory-billed Woodpeckers anywhere in the United States since 1942 [birds in the Singer Tract in Louisiana]. However, there have been occasional reports of Ivory-billed Woodpeckers in several areas of the Southeast, including Mississippi.

In 1978, Ron Sauey of the International Crane Foundation in Baraboo, Wisconsin, floated Black Creek in southeastern Mississippi with Charlie Luthin. On the second day of their visit they heard what they believed might have been an Ivory-billed Woodpecker. Sauey's letter to me of 2 February 1978 describes their experience:

"On our second day of boating on the creek (floating without motor to be as quiet as possible) we found an amazing congregation of mixed species -- Brewer's, Rusty, Redwings, Orange-crowns, Yellow-rumps, etc., etc., etc., and dozens of woodpeckers. We were probably moored at that area for about an hour when a couple of Pileateds flew in ... and started up a ruckus. Shortly after, we heard a very loud series of tappings from further down the river and then a number of distinct musical calls, given repeatedly on the same pitch and reminding us both of a nuthatch, only louder and not as nasal. The calls stopped, and then were repeated again, only closer this time to us. The call sounded even less like a nuthatch the second time, being fuller and more resonant, and we both looked at each other in disbelief -- was it an Ivory-bill? As luck would have it, we never saw the creature making the call."

On 2 March 1982, I received a call from Judy Toups of Gulfport. The previous week, a birding friend of hers, Mary Morris of Biloxi, reported seeing two Ivory-billed Woodpeckers on her property on the west side of the Pascagoula River, south of the Wade-Vancleave Road, and east of the Old River Road north of Vancleave. Morris first heard a "honking" noise and thought that geese were flying over. When she looked up to determine the source of the honking, she saw it was coming from two large woodpeckers on a pine near her. At first she thought they were Pileated Woodpeckers, but then she realized that the back edge of their wings was white. She also noticed that each bird had a crest and the crest of each pointed toward the other bird. When the birds finally flew, she saw that the whole trailing edge of

the wing was white. Judy Toups went to the site with Ms. Morris on the following day, but did not see or hear the birds. She played a copy of the Cornell recording, but got no response. On 4 March, my wife, Bette, and I went to the site with Judy Toups. Bette and I visited the site again on 5 March. We found no evidence of Ivory-bills. The area was cutover pine forest near the Pascagoula Hardwood Tract, and there were a lot of human activities in the area (boats and cottages).

In 1986, the U.S. Fish and Wildlife Service agreed to fund one "last" major effort to locate Ivory-billed Woodpeckers in the United States before they are "officially" declared extinct. I have been in charge of that search and have spent several days searching extensive forest areas in Mississippi. My approach has been to use aerial photographs and topographic maps to select the most extensive mature forests and to systematically search those areas on foot or by boat. In making searches I have used copies of the taped vocalizations made in the Singer Tract to try to elicit vocal responses and to attract birds to within range for photography. The procedure followed has been to walk or boat for 15 minutes, then to stop and play the recording for 45 seconds and to listen then for 3 minutes.

In March 1987, accompanied by Malcolm Hodges, in a mature hardwood swamp forest along the lower Yazoo River, a bird responded to our tape. Malcolm heard the response first and it was nearly two minutes before I could hear it. The bird was obviously coming in from a great distance. It approached to within about 150 meters of us, calling repeatedly for 28 minutes. At that point, not being able to see the bird and knowing the necessity of obtaining a photograph, we rushed toward it. But the bird was gone. Return visits to the area have failed to reveal further evidence of the bird, but more efforts are planned. We are not claiming certain identification of an Ivory-billed Woodpecker, but the response was to our ears identical to the tape we had played. We feel that the Ivory-bill could remain as a member of our avifauna and will be continuing efforts to document its presence. We hope that Mississippi birders will pay special attention to any reports of possible Ivory-billed Woodpeckers and will make efforts to "check them out."

In addition, it is possible that other specimens and historical records of Ivory-billed Woodpeckers in Mississippi exist. I would be most interested in hearing from anyone with knowledge of the past history or present status of these magnificent woodpeckers.

For the Ivory-billed Woodpecker and other species that require large expanses of mature forest, we must do our best to protect those forests that remain. We as Mississippians can be extremely proud of having set aside a major portion of the Pascagoula bottomland hardwood forest as a protected area -- certainly this is one of the areas in which Ivory-billed Woodpeckers could yet survive. The Delta National Forest provides other potential habitat. So do areas along Tombigbee, Big Black, the lower Yazoo and Pearl rivers. The odds are long, but the Ivory-billed Woodpecker is exceedingly wary and inhabits a most inhospitable environment. Let's not count it out yet!

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