

## Ivory-billed Woodpecker Searches with Citizen Scientists: Lessons Learned at Congaree National Park

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The ivory-billed woodpecker (*Campephilus principalis*) is the largest woodpecker in North America, and, according to Tanner (1942), the second largest in the world. The ivory-bill originally lived in the extensive bottomland forests of the coastal plain within the southeastern United States and in Cuba. As early as 1891, naturalists noticed population declines and range restrictions (Hasbrouck 1891; Tanner 1942). The ivory-bill was thought to be extinct, with the last confirmed sighting in the United States in 1944. However, in April 2005 it was announced that the woodpecker had been rediscovered in the Cache River National Wildlife Refuge in Arkansas (USFWS 2005). As a result, reassessments of the historic range of the ivory-bill have begun throughout the Southeast. Historic records prior to 1940, coupled with potential sighting reports from recent years have brought resources and expertise together in an effort to evaluate the possible presence of ivory-billed woodpeckers in South Carolina. Congaree National Park became a focal point for these search activities, supported through a multi-agency working group.

In order to investigate the potential existence of ivory-billed woodpeckers in South Carolina, the South Carolina Ivory-billed Woodpecker Working Group was formed in August 2005. This joint partnership between federal and state agencies, non-governmental organizations, and private entities has helped compile and share historic and more recent data related to the ivory-billed woodpecker. The specific objectives of the working group are to (1) share resources for the investigation and evaluation of possible existence of ivory-billed woodpeckers in South Carolina; (2) provide a framework and strategy for conservation of ivory-billed woodpecker habitat in South Carolina; (3) provide a working organization for coordination with the U.S. Fish and Wildlife Service's ivory-billed woodpecker recovery team; and (4) provide a consistent platform to address public information and outreach. In January 2006, funding was provided to the U.S. Fish and Wildlife Service to conduct surveys for ivory-billed woodpeckers within South Carolina. Beginning in February 2006, a large-scale field survey protocol for ivory-billed woodpeckers was implemented at Congaree National Park. This adaptive survey design and the data generated through this effort tie directly to recovery objectives for the ivory-billed woodpecker, which include determining the status and number of birds, describing local ecology and behavior, and quantifying percentages of dead and dying trees.

The Old-Growth Bottomland Forest Research and Education Center at Congaree National Park hosted and coordinated all field activities associated with this effort until the end of April 2006. The National Park Service research coordinator and GIS technician provided logistical and technical support throughout the entire survey process, and played a lead role in training volunteers regarding identification and equipment use. The Southeastern Inventory and Monitoring Network provided essential data management support, including developing an observational database. This research effort provided an opportunity for vol-

unteers to experience Congaree National Park in a unique way and participate in data collection directly tied to recovery efforts for the ivory-billed woodpecker. Forty-six citizen scientists contributed more than 2,000 volunteer hours as they surveyed approximately 7,210 acres within Congaree National Park. They field-tested search protocols now in use throughout the region. Volunteers completed systematic searches noting the presence of migratory birds and documenting the abundance of seven woodpecker species, including the pileated woodpecker (*Dryocopus pileatus*). Areas of high-quality habitat and areas with dead and dying trees were also recorded. Volunteers searching for the ivory-bill concentrated on listening for the species' "kent" calls and distinctive double knocks. These citizen scientists documented more than 98 species of resident and migratory birds, and despite not filming an ivory-bill, volunteers investigated hundreds of large cavities, foraging evidence, double-knocks, and other vocalizations that give researchers hope of confirming the existence of the ivory-billed woodpecker in South Carolina. This project was funded through the U.S. Fish and Wildlife Service and supports a regional survey effort in the historic range of the ivory-billed woodpecker.

### References

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