



## Park Specific Research Needs

### Congaree National Park



The following "Park Specific Research Needs" have been compiled by Natural Resource Management Staff to guide future research studies. Any questions pertaining to the permitting to this document may be directed to the Resource Management Staff.

Research data provide valuable information to assist with the management of park resources. Congaree National Park was established to "preserve and protect for the inspiration and enjoyment of present and future generations an outstanding example of near-virgin hardwood forest." It is the policy of the National Park Service to encourage research that addresses established park needs and improves the public understanding of the issues involved in park management.

Current research needs and subject areas have been identified below, although the park is also open to original research proposals that require a park environment.

- Baseline inventories and long-term monitoring for:
  - Vegetation
  - Mammals
  - Aquatic invertebrates
  - Terrestrial invertebrates (spiders, butterflies, etc.)
  - Non-vascular plants
  - Fungi
  - Reptiles and amphibians
  - Birds
  - Fish
- Water quality and quantity monitoring (surface and ground) impacts of point and non-point pollution contaminant sources and pathways
- Fluvial geomorphology of the Congaree River
- GIS management applications
- Champion tree monitoring
- Distribution mapping and management strategies for non-native exotic species
- Distribution mapping and management strategies for rare, threatened and endangered species
- Red-cockaded woodpecker habitat assessment and re-introduction
- Preparation of an Integrated Pest Management Plan
- Forest dynamics, succession, recovery patterns and forest recruitment research
- Preparation of a Vegetation Management Plan
- Nutrient cycles and processes on floodplain ecosystem
- Aircraft overflight noise and impacts on soundscapes
- Adjacent land use and land cover
- Indicator species
- Effects of adjacent aquaculture operations on park resources
- Fish ecology

- Fire ecology
- Wildlife diseases
- Soils
- Air quality and effects on vegetation communities
- Develop a natural heritage database
- Develop an oil spill/hazardous materials plan
- Disturbed land restoration
- Feral hog impacts and control strategies
- Insect ecology in bottomland hardwood forests
- Wood-boring beetles (survey and natural history work)
- Wood-boring beetle population dynamics in relation to recently dead and dying (<3yrs) large (> 12in.dbh) trees
- Woodpecker species population estimates, natural history information, genetic diversity and metabolic needs
- Ethnographic oral and life histories
- Archaeological investigations
- Museum collections management

### **Additional Resources**

Congaree National Park hosts the Old-Growth Bottomland Forest Research and Education Center; dedicated to understanding the systems and functions of floodplain environments and monitoring environmental change. The Research and Education Center includes indoor and outdoor classrooms, a natural history research collection, laboratory space, administrative offices, and living quarters for visiting scientists. Bunk space for up to twelve people, a kitchen, living room, restrooms, workshop/computer lab, and storage facilities help to accommodate research activities on-going at the park. Overnight guests have been accommodated for a single night and for several months at a time, depending on the nature of their research. Other field equipment is available for researchers use, including GPS units, field radios, measuring equipment, collecting nets and foul weather gear. For further information regarding the Old-Growth Bottomland Forest Research and Education Center, please contact the Research Coordinator at (803)695-0214 or the Park Superintendent (803)776-4396.