



White-tailed Deer Monitoring at Arkansas Post National Memorial

Importance: *An important component of the park ecosystem*

White-tailed deer (*Odocoileus virginianus*) populations in North America have changed in size and distribution in recent years. Population size has increased in the vicinity of Arkansas Post National Memorial. Deer are often viewed as an important component of park ecosystems, but large numbers of deer can impact the park and visitor safety. Deer can damage park resources, pose a hazard to motorists, and contribute to the spread of human transmittable diseases. High densities of deer can also cause the spread of disease and starvation within localized deer populations.



Long Term Monitoring: *Assessing trends in population size*¹

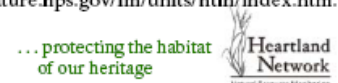
The Heartland Network, Inventory and Monitoring Program, initiated a pilot study of deer population densities in winter 2005 and continued the study in 2006. The primary objectives for monitoring white-tailed deer populations include (1) determining annual changes in white-tailed deer numbers and (2) determining long-term trends in white-tailed deer numbers. Understanding trends in deer population density will help park management determine what measures must be taken to maintain herd health and to minimize vegetation damage within the park or surrounding private properties.

Status and Trends: *Sudden decline in population size attributable to a deer disease*

Scientists saw a decline in deer population density of 59 % between the 2005 and 2006 sampling periods. During the fall of 2005, deer at the park could have succumbed to a reoccurring outbreak of hemorrhagic disease seen in the Southeastern United States, resulting in the loss of over half of the deer in the study area. Additionally, scientists made several other observations:

1. Deer at Arkansas Post National Memorial may be vulnerable to over population, and subsequent disease and starvation, in the absence of predators and hunting.
2. Implementation of a deer monitoring program at Arkansas Post National Memorial yielded important results by documenting a possible disease related decline in the population.
3. The first two years of monitoring demonstrated the importance of annual population monitoring in identifying changes in the deer population of the park.

Heartland Network Inventory and Monitoring
Program of the National Park Service. Visit
www1.nature.nps.gov/im/units/htln/index.htm.



¹ Peitz, D.G. *White-tailed Deer Monitoring at Arkansas Post National Memorial, Arkansas: 2005-2006 Status Report. Natural Resource Technical Report NPS/MWR/HTLN/NRTR—2006/001. National Park Service, Omaha, Nebraska.*