



White-tailed Deer Monitoring at Arkansas Post National Memorial

Importance: *An important component of the memorial's ecosystem*

White-tailed deer (*Odocoileus virginianus*) populations in Arkansas have recovered from near extirpation to current levels of more than one million deer. Visitors view deer as an important component of the memorial's ecosystems, but large numbers of deer can impact the memorial and visitor safety. Deer can damage resources, pose a hazard to motorists, and contribute to the spread of human diseases. High densities of deer can also cause the spread of disease and starvation within localized deer populations.

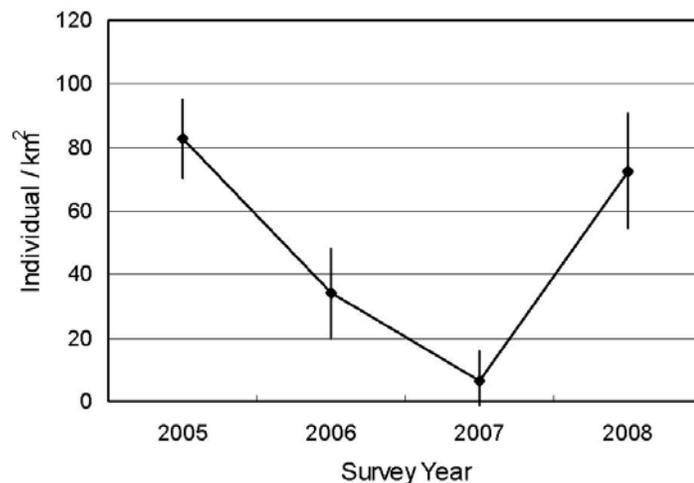


Long Term Monitoring: *Assessing trends in population size*¹

The Heartland Network, Inventory and Monitoring Program, initiated a pilot study of deer population densities in winter 2005. 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 resource managers determine what measures must be taken to maintain herd health and to minimize vegetation damage within the memorial or surrounding private properties.

Status and Trends: *Increases in population density influenced by outside factors*

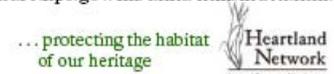
The index of deer density for 2008 increased significantly from the previous year. Hunting pressure and the removal of deer feeders outside the park may have encouraged deer to remain within the park, during the study period. Additionally, scientists made several other observations:



Average density index (\pm std. dev.) of white-tailed deer in the survey area of Arkansas Post National Memorial, Arkansas, 2005 – 2008.

1. Removal of brush along park roadways and woodland areas has increased visibility, improving the precision of population estimates.
2. With increasing deer density, managers will need to be vigilant in monitoring the impacts of deer browsing on rare and sensitive plant species.

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



¹ Cribbs, J.T. and D.G. Peitz. 2008. White-tailed Deer Monitoring at Arkansas Post National Memorial, Arkansas: 2008 Status Report. Natural Resource Technical Report NPS/HTLN/NRTR—2008/103. National Park Service, Fort Collins, Colorado.