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# Resource Protection Through Avian Population Management

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## National Wildlife Research Center Scientists Address Problems of Overabundant Bird Populations

Wildlife Services' (WS) National Wildlife Research Center (NWRC) is the only Federal research organization devoted exclusively to resolving conflicts between people and wildlife through the development of effective, selective, and acceptable methods, tools, and techniques.

Researchers at NWRC's field station in Gainesville, FL, conduct research to resolve problems caused by vultures, crows, and other species of overabundant birds. This research facility is a uniquely designed 26-acre site with large outdoor flight pens and aviaries which allow bird research to be conducted throughout the year under natural environmental conditions.

As land-use patterns change and urban populations surge into previously uninhabited areas, wildlife conflicts inevitably increase. Of growing concern are problems associated with vultures and crows, species that have shown the capacity to readily adapt to residential settings. Additionally, populations of non-native species, such as feral pigeons and monk parakeets, continue to grow with increasing detrimental impacts to human health and safety.

**Major Research Accomplishments:**

- WS initiated a satellite telemetry study to collect information on flight patterns and altitudes of vultures. The information was used to develop management strategies for reducing hazards to aircraft at military air bases.
- WS provided key research findings for the development and registration of chemical reproductive inhibitors to reduce populations of nonnative feral pigeons and monk parakeets.
- WS demonstrated the utility of artificial crow effigies as components of integrated management strategies for dispersal of nuisance winter urban crow roosts.

## Applying Science and Expertise to Wildlife Challenges

**Vulture Management at Military Airbases**—NWRC scientists are documenting vulture movements and resource use at military installations in order to reduce hazards to aircraft. At a site in South Carolina, 16 vultures have been trapped and equipped with satellite transmitters that provide hourly updates on the birds' location, altitude, and speed. Dozens of other vultures have been trapped and equipped with wing tags for visual identification. Key roost sites will be identified for dispersal, and the birds' activities subsequent to dispersal will be monitored to determine effectiveness of the action. At an Air Force site in south Florida, vulture roosts and feeding sites have been identified and a vulture management plan has been developed to increase air traffic safety.

**Management Methods for Urban Crow Roosts**—NWRC scientists are collaborating with WS operational staff and University researchers to develop strategies for managing large crow roosts in urban areas throughout the United States. One such roost of approximately 30,000 crows in the Lancaster, PA, area is the focus of current investigations. NWRC scientists are documenting responses of crows to artificial effigies as a means of roost dispersal. They also are evaluating the effectiveness of community-based efforts to rid areas of nuisance winter crow roosts through coordinated applications of nonlethal methods.

**Reproductive Control of Nonnative Avian Species**— Monk parakeet populations are growing exponentially in certain areas of the United States. The species, which is native to South America, builds large stick nests that are often located in electric utility facilities. As a result, frequent short circuits and costly power outages occur.

To help retard the growth of parakeet populations, NWRC scientists are collaborating with utility companies to develop a contraceptive bait. The active ingredient is

a cholesterol-inhibiting compound called diazacon. To date, nesting studies with captive parakeets and a field trial in south Florida have confirmed the potential utility of diazacon for parakeet reproductive control. Additional field studies are planned.

Through collaborations with private industry, NWRC scientists are developing chemicals to inhibit reproduction in feral pigeons and monk parakeets. Information developed by NWRC scientists through feeding trials and captive nesting studies with pigeons has been submitted to the U.S. Environmental Protection Agency in support of a Federal registration for a bait containing nicarbazin as the active ingredient.

**Groups Affected By These Problems:**

- Airports
- Airlines
- Air travelers
- Homeowners
- Business owners
- City managers
- Military installations
- Electric utility companies
- Broadcast and communication tower owners and operators

**Major Cooperators:**

- Wildlife Services Operations in Florida, South Carolina, Pennsylvania, Virginia
- Florida Power and Light Company
- Innolytics, LLC
- Pennsylvania State University

## Selected Publications:

Pruett-Jones, S. J. R. Newman, C.M. Newman, M.L. Avery, and J.R. Lindsay. 2007. Population viability analysis of monk parakeets in the United States and examination of alternative management strategies. Human-Wildlife Conflicts 1:35-44.

Avery, M. L., J. R. Lindsay, J. R. Newman, S. Pruett-Jones, and E. A. Tillman. 2006. Reducing monk parakeet impacts to electric utility facilities in south Florida. Pages 125-136 in C. J. Feare and D. P. Cowan (eds). Advances in Vertebrate Pest Management, volume 4.

Avery, M. L., and E. A. Tillman. 2005. Alien birds in North America-challenges for wildlife managers. Proceedings of the Wildlife Damage Management Conference 11:82-89.