

Nuisance Animals

on the Oak Ridge Reservation

Most wildlife on the Department of Energy's (DOE's) Oak Ridge Reservation (ORR) are beneficial members of natural communities. Some, however, can cause considerable difficulties for people or ecosystems.

Human Interaction Problems

Some people consider *whitetail deer* the most dangerous animals in East Tennessee. They can dash unexpectedly into roads causing vehicle collisions that may result in serious human injuries and property damage. The deer hazard on the ORR grew steadily after the first recorded deer-vehicle collision in 1969. By the mid-1980s, collisions had reached almost 300 a year, and hunts were initiated to help control the deer population. These hunts have successfully reduced the number of deer-vehicle collisions on ORR roads to a yearly average of 100.

Native *Canada geese* had been eliminated from the area until stocking programs by state and federal natural resource agencies reintroduced them in the early 1970s. They are now a problem because they are numerous (about 1,100 on the ORR), do not migrate, and congregate near and around facilities. Their droppings are a nuisance on grass and sidewalks and can lower water quality in lakes and ponds. Some Canada geese have been moved from facility sites to remote parts of the reservation, such as the Solway Bend area.

Native *beavers* have increased substantially on the ORR in the last 15 years. About 25 family groups now use the interior streams and creeks or the Clinch River shoreline bordering the ORR. Most beaver activities are beneficial because they create habitat for aquatic plants and animals (e.g., waterfowl, shorebirds, certain amphibians, bulrushes, cattails) that are not common on the ORR. Beaver must occasionally be removed when their activities flood facilities and interfere with roads, outfall pipes, or transmission lines.



Whitetail deer are common on the Oak Ridge Reservation, and many deer-vehicle crashes occur each year. Drivers should slow down on ORR roads, watch for deer and other wildlife, and be aware that deer are most active in the early evening and early morning and during the fall mating season. (ORNL photo)



Nesting geese are often aggressive toward humans. (Photo © R. K. McConathy)



Known for its engineering skills in building dams, the beaver can sometimes damage an area when its pond floods too far. (Photo at left © R. K. McConathy; center photo by Tom Smylie, U.S. Fish & Wildlife Service; right © R. K. McConathy)

Several mounds of nonnative *imported fire ants* have been found and treated on the ORR. Fire ants have been spreading northward in recent years and will likely become common in the area. These ants can inflict painful bites and stings to people and domestic animals. They can also eliminate native species, with detrimental ecological effects. Many other invertebrates are also nuisances on the ORR, and some species spread disease. Ticks carry Rocky Mountain spotted fever and Lyme disease, while mosquitos can spread West Nile virus. Some people are allergic to insect stings, particularly those of yellow jackets and other wasps. The bites of brown recluse spiders can result in slow healing sores or in rare cases even death.

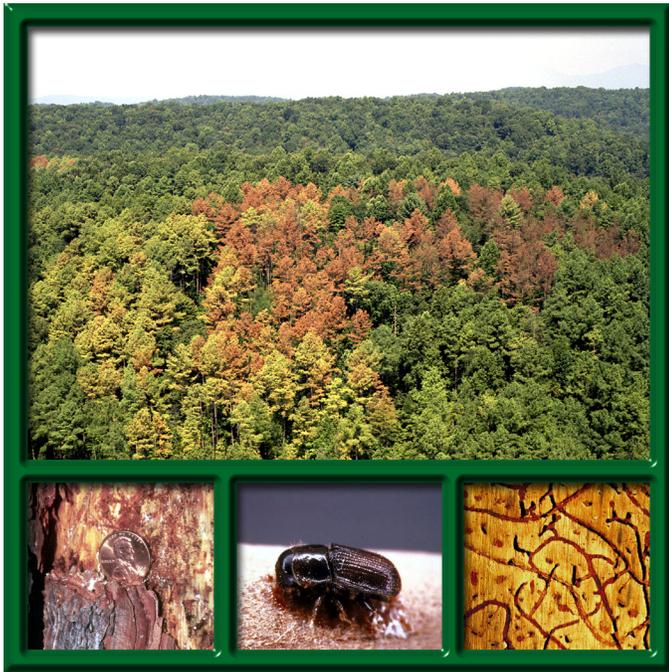


The aggressive imported fire ant is small, measuring 3–6 mm long. (Large photo © Scott Bauer, USDA ARS, www.invasive.org; inset photo © USDA APHIS PPQ Imported Fire Ant Station Archives, www.invasive.org.)

Ecosystem Problems

The *southern pine bark beetle* is a native insect that attacks and kills southern pine trees by laying its eggs in the living tissue just beneath the hard corky outer bark. The largest outbreak of pine bark beetles in 25 years occurred on the ORR in 1999–2001. Many dead pine trees have since been removed

to lower hazards from falling trees and branches, improve aesthetics, and reduce fuel for wild fires.



A recent outbreak of the southern pine bark beetle has resulted in the death of thousands of southern pines on the Oak Ridge Reservation. Small in size, the beetles measure about 3 mm long. Tracks are left in the inner bark as they lay eggs. (Top, ORNL photo; bottom left © R. K. McConathy; center © Texas Agricultural Extension Service Archives, Texas A&M University, www.forestryimages.org; bottom right © Ronald F. Billings, Texas Forest Service, www.forestryimages.org.)

plant growth. They also consume large quantities of aquatic vegetation that is needed for cover or food by native species. Some nonnative fish eat the young or eggs of native species and, thus, interfere with their reproduction.

For more detailed information on wildlife on the ORR, contact Pat Parr, the ORNL Area Manager, at 865-576-8123, parrpd@ornl.gov; or check the Research Park web site at www.esd.ornl.gov/facilities/nerp.

Brown-headed cowbirds and *house finches* are native to the United States but invasive in this area. Cowbirds lay their eggs in nests of other species and, due to their large size, outcompete hatchlings of native species. Nonnative birds on the ORR include European starlings, English or house sparrows, pigeons, and mute swans. These species compete with more desirable, native birds for food and nesting or roosting sites.

The *nonnative fish* on the ORR with the greatest negative impacts are grass carp and common carp and alewife. Other nuisance fish include goldfish, fathead minnow, brook stickleback, striped bass, redbreast sunfish, and yellow perch. These species compete with native species for limited resources, such as breeding sites and food, and can reduce overall stream biodiversity. Some species root extensively in the substrate, increasing turbidity and producing silt that covers eggs of other species and reduces



The common carp was introduced as a food species in North America in the 19th century. Now considered a nuisance fish, it reduces water clarity by disturbing the substrate in its foraging. (Photo by Duane Raver, U.S. Fish & Wildlife Service)