



## U.S. Fish & Wildlife Service

# Delmarva Peninsula Fox Squirrel

*Sciurus niger cinereus*

Twice the size of the common gray squirrel, the Delmarva Peninsula fox squirrel may grow to 30 inches—with half of that as the tail—and weigh up to 3 pounds. Historically, the fox squirrel lived in the peninsula occupied by portions of Delaware, Maryland, and Virginia and bordered by the Chesapeake Bay and the Delaware River, Delaware Bay, and Atlantic Ocean.

Habitat loss and probably over-hunting at the turn of the century contributed to the marked decline of this fox squirrel subspecies. Clearing forests for agriculture and short-rotation timber production combined to reduce its distribution to less than 10 percent of the original range by the time the Delmarva fox squirrel was listed in 1967 as endangered under the Endangered Species Act.

Decades of conservation work by recovery partners have reversed the status of the squirrel. Its populations are now increasing.

### Description, Habitat, and Behavior

The largest of all the tree squirrels, the Delmarva Peninsula fox squirrel has silver to whitish-gray slate hair and an unusually full, fluffy tail and white belly. The squirrel's coat varies in color from frosty silver-gray to almost black.

The Delmarva fox squirrel lives in mature forests of mixed hardwoods and pines with a closed canopy and open understory. Although it is a forest animal, the squirrel spends considerable time on the ground foraging for food, typically in woodlots of mixed loblolly pine and hardwoods such as oak, maple, hickory, walnut, and beech—trees that provide food including nuts and seeds. The squirrel will also take food from farm fields. Feeding on tree buds and flowers during the



*Delmarva Peninsula fox squirrel caught on a motion-triggered camera.*

spring, the squirrel will also eat fungi, insects, fruit, and seeds. In the summer and early fall, the squirrel enjoys eating mature, green pine cones. The animal generally lives in woodlands associated with farmland areas—not typically in suburban settings.

Less agile than the common gray squirrel, the Delmarva fox squirrel often ambles along the forest floor rather than leaping from branch to branch. The animal usually avoids confrontations by running away rather than climbing a tree but will do so to avoid a predator. The fox squirrel is also quieter than the gray squirrel. The home range of the fox squirrel varies, but averages about 40 acres.

The Delmarva fox squirrel may nest in tree cavities or build a leaf nest. Squirrels mate in late winter and early spring. About 44 days later in

February and March as many as four young are born. Females may give birth to two litters per year. They raise the young by themselves.

### Imperiled Population

By the early 1900s, the range of the Delmarva fox squirrel was reduced to the Eastern Shore of Maryland. Current threats include predators, such as red and gray foxes, and eagles and other raptors, such as great horned owls. Accidental deaths by vehicles also occur.

When the U.S. Fish and Wildlife Service provided it with Endangered Species Act protection, the squirrel occupied only four counties in Maryland—Kent, Queen Anne's, Talbot, and Dorchester. Thanks to reintroduction efforts by the Service, Maryland Department of Natural Resources, the Delaware Natural Heritage Program, and the Virginia Department of Game and Inland

Fisheries, the squirrel can now be found in Delaware and Virginia and in all counties on the Eastern Shore of Maryland except Cecil.

### Recovery Efforts

Habitat protection for the Delmarva Peninsula fox squirrel began in 1945 when the Maryland Department of Natural Resources bought LeCompte Wildlife Management Area in Dorchester County. Legal hunting for the squirrel was banned in 1971. Following the endangered listing, the Delmarva Peninsula Fox Squirrel Recovery Team began coordinating State and Federal conservation efforts. A major focus has been to increase the population size and distribution of this species through a reintroduction program to re-establish the squirrel throughout its range.

Of 16 reintroductions in Maryland, Delaware, Virginia, and Pennsylvania, 11 are succeeding more than a decade later. Much of the habitat now occupied is privately owned land. Fortunately, the Delmarva fox squirrel can thrive in a landscape that is managed for farming and sustainable timber harvest. Farmers can provide prime habitat by leaving uncut corn or soybeans along hedgerows for the squirrels' winter food. Developers can leave woodlot trees that produce nuts, seeds, and berries and can provide corridors from one woodlot to

another. Developers can also help fox squirrels by leaving buffers of trees and hedgerows between streams and development.

The Delmarva Peninsula fox squirrel receives additional protection under the Chesapeake Bay Critical Area Law of 1984, which requires endangered species habitat protection within critical areas—that is, 1000 feet landward of low mean high tide.

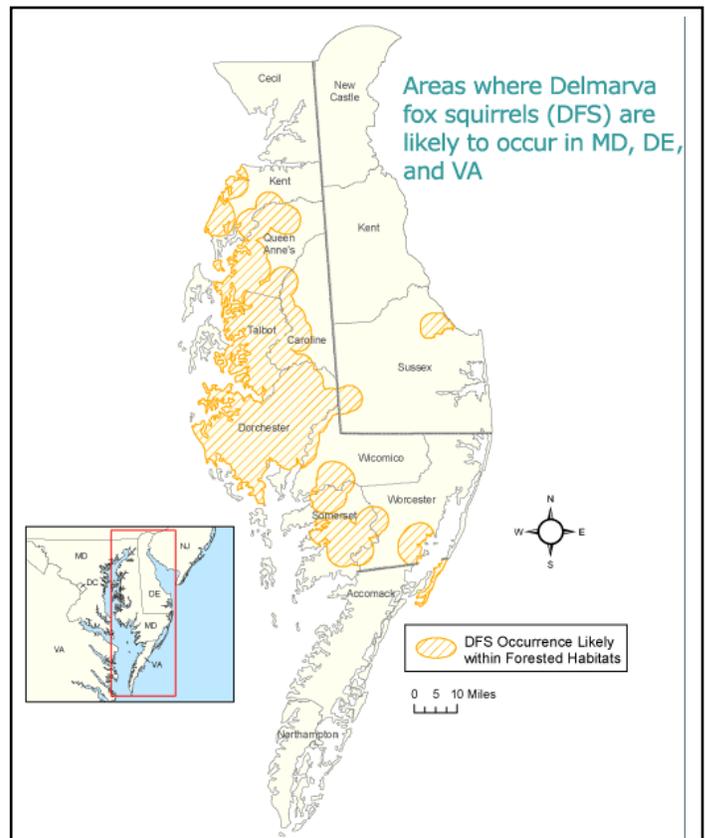
### Monitoring

One of the principal criteria of the species' recovery is the stability or expansion of Delmarva Peninsula fox squirrel populations. The range is expanding. The animals are now found in new areas. Their distribution is determined by the locations where they have been observed, trapped, found in next boxes, or photographed.

Motion-triggered cameras offer a new monitoring technique that enables evidence of their presence without the time and effort of trapping. Another technique under development is "hair-catching" at stations that can be baited and placed in the forest. Samples collected can be analyzed for their DNA. Research has determined that scientists can distinguish Delmarva fox squirrel hair from that of the gray squirrel.

### Chincoteague National Wildlife Refuge

From 1969 to 1971, biologists relocated 30 Delmarva Peninsula fox squirrels to Chincoteague National Wildlife Refuge and released them in habitat surrounding the historic Assateague Lighthouse. Since then the population of squirrels at the Refuge has reached 300 to 350, with new populations dispersing on their own throughout the southern portion. Refuge biologists conduct an annual fox squirrel nesting box check to



monitor the population and tag new animals to help determine their long-term presence.

### Where Can You See a Delmarva Fox Squirrel?

To see a Delmarva fox squirrel and learn more about this unique resident of the Delmarva Peninsula, visit any of the following National Wildlife Refuges in the area: Chesapeake Marshlands Complex (Dorchester County, MD), Chincoteague (Accomack County, Virginia), and Prime Hook (Sussex County, DE). Also, be on the look-out in the woods and field edges throughout its range.

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Photo by M. Simon, Maryland Environmental Service