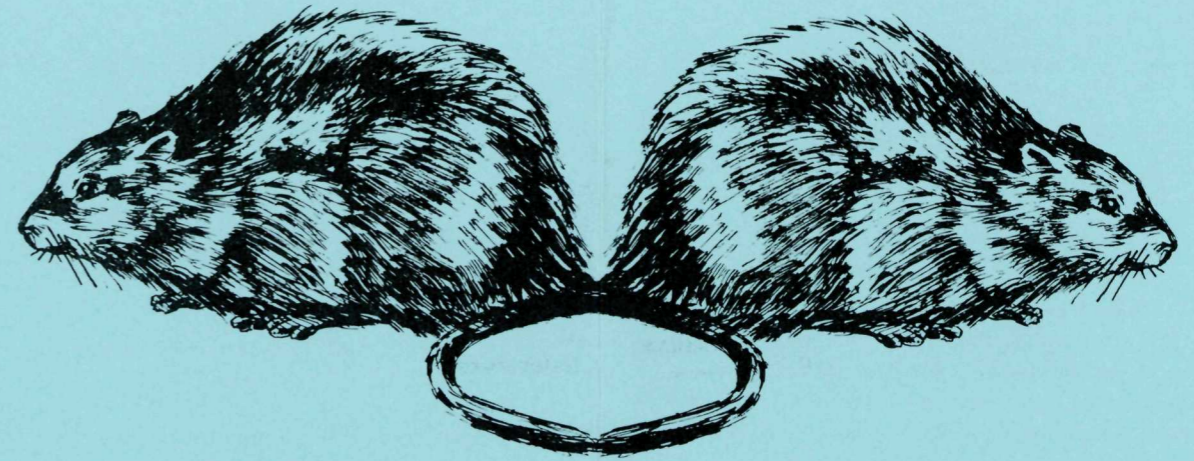


- **Pine Vole** (*Microtus pinetorum*).  
Tunnels through the carpet of leaf mold and loose soil on the forest floor.
- **Muskrat** (*Ondatra zibethicus*).  
Common in the freshwater impoundments and in the salt marsh.
- **Norway Rat** (*Rattus norvegicus*).  
Lives around buildings, grain fields, and marsh edges. Often moves into tidal debris along beaches.
- **House Mouse** (*Mus musculus*).  
Found about buildings and in weedy and grassy fields.
- **Meadow Jumping Mouse** (*Zapus hudsonius*).  
Inhabits the grassy fields. Might be mistaken for frogs as they leap through the grass.
- **Red Fox** (*Vulpes vulpes*).  
Common in the upland habitats.
- **Gray Fox** (*Urocyon cinereoargenteus*).  
Uncommon in the upland areas. Normally active by night.
- **Raccoon** (*Procyon lotor*).  
Common in the woodlands, along the field edges, and in the salt marsh. Most active at night.

- **Longtail Weasel** (*Mustela frenata*).  
A few are present in the upland areas.
- **Mink** (*Mustela vison*).  
An occasional mink may be found in the marsh or along the streams.
- **Striped Skunk** (*Mephitis mephitis*).  
Common in the upland areas at night.
- **River Otter** (*Lutra canadensis*).  
A few live in the refuge impoundments.
- **Whitetail Deer** (*Odocoileus virginianus*).  
Common in the uplands and along the marsh edges. Most active at early morning and evening.



Other species are probably present on the refuge but have not yet been verified. Reports of additional species are welcome. Please contact:

Refuge Manager  
Bombay Hook National Wildlife Refuge  
RD #1, Box 147,  
Smyrna, Delaware 19977  
Telephone: (302) 653-9345.

*Take Pride in Bombay Hook  
National Wildlife Refuge*



RL-51550-3  
August 1986

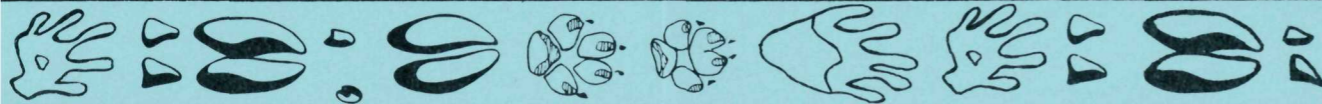


# MAMMALS

of

# BOMBAY HOOK

National  
Wildlife  
Refuge



UNITED STATES  
DEPARTMENT OF THE INTERIOR  
FISH AND WILDLIFE SERVICE

Delaware

## MAMMALS of the BOMBAY HOOK National Wildlife Refuge

Bombay Hook National Wildlife Refuge is located in coastal Delaware. The 15,099-acre refuge is relatively flat with most elevations less than ten feet above sea level. The major habitat type, consisting of 12,257 acres, is tidal marsh intersected by winding rivers and creeks. Landward of the marsh are freshwater impoundments, timbered swamps, mixed deciduous woodlands, brushy thickets, grassy fields, and croplands.

This variety of habitats provide essential food and cover requirements for an interesting combination of mammal species. Those most frequently seen, especially in the early morning and the late afternoon, are the cottontail rabbit, woodchuck, gray squirrel, muskrat, and white-tail deer. Less commonly observed are the raccoon, skunk, opossum, and red and gray foxes.

Because of a combination of small size, secretive habits, or nocturnal activity, many mammals are seldom seen. However, the careful observer will see tracks, trails, tunnels, burrows, nests, and other signs that reveal their presence.

The following list of 34 species was prepared by refuge personnel with the cooperation of Frederick A Ulmer, Jr. of the Philadelphia Zoological Garden. Order of listing and scientific names generally follow Hall, *Mammals of North America*. Common names are from Burt and Grossenheider, *A Field Guide to the Mammals*.

- **Opossum** (*Didelphis virginiana*).  
Commonly found in all sheltered habitats. Normally active only at night.
- **Masked Shrew** (*Sorex cinereus*).  
Common on all land areas. Hunts for insects and other food day or night.
- **Shorttail Shrew** (*Blarina brevicauda*).  
Most abundant in damp woods with thick leaf mold.
- **Least Shrew** (*Cryptotis parva*).  
Found in open, grassy areas.
- **Eastern Mole** (*Scalopus aquaticus*).  
Inhabits moist, upland soils where it tunnels its way under the surface.
- **Star-nosed Mole** (*Condylura cristata*).  
Prefers low, wet ground where it burrows for insects.
- **Little Brown Myotis** (*Myotis lucifugus*).  
Present during the warm months. Seen in flight at dusk near the woods and over the pools.
- **Silver-haired Bat** (*Lasionycteris noctivagans*).  
Found in the swamps flying among the flooded trees.
- **Eastern Pipistrel** (*Pipistrellus subflavus*).  
Active during summer evenings. One of the smallest bats.
- **Big Brown Bat** (*Eptesicus fuscus*).  
Active on warm evenings when beetles are flying.
- **Red Bat** (*Lasiurus borealis*).  
A common woodland bat that roosts in trees all day, until deep dusk.
- **Hoary Bat** (*Lasiurus cinereus*).  
The largest eastern bat, it is found in the woodlands; flies late, high and solitary.
- **Eastern Cottontail** (*Sylvilagus floridanus*).  
Abundant. Lives in bushy areas and grassy fields. Often seen from the roads in the early morning and late afternoon.
- **Woodchuck** (*Marmota monax*).  
Abundant. Lives in deep burrows excavated in fields, woods, and along dikes.
- **Eastern Chipmunk** (*Tamias striatus*).  
Uncommon among logs and stumps in the hardwood areas.
- **Eastern Gray Squirrel** (*Sciurus carolinensis*).  
Common in the oak-hickory woodlands.
- **Southern Flying Squirrel** (*Glaucomys volans*).  
Inhabits hollow trees to emerge only after darkness fills the wetlands.
- **Beaver** (*Castor canadensis*).  
Discovered during the fall of 1977 after an approximate twenty year absence. Presently beaver inhabit Finis and Upper Shearness Pools.
- **Rice Rat** (*Oryzomys palustris*).  
Common in the salt marsh areas. Chiefly nocturnal.
- **White-footed Mouse** (*Peromyscus leucopus*).  
Abundant in wooded and brushy areas. Very white belly.
- **Meadow Vole** (*Microtus pennsylvanicus*).  
Abundant in grassy, upland fields and among the grasses of the salt marsh.

