



Wildlife Information Guide

VIRGINIA OPOSSUM

(*Didelphis virginiana*)

DESCRIPTION

The Virginia Opossum (*Didelphis virginiana*) is North America's only native marsupial and has successfully expanded its range northward into New England over the past several decades. These adaptable mammals represent an ancient lineage with unique biological characteristics that distinguish them from placental mammals.

PHYSICAL CHARACTERISTICS

- Size: 24-33 inches in body length, with tails adding another 10-21 inches
- Weight: 8-13 pounds for adults, with males typically larger than females
- Coloration: Grayish-white to brownish fur with darker guard hairs; white face with dark markings around eyes
- Distinguishing Features: Pointed snout, pink nose, large naked ears, prehensile tail, opposable thumb on hind feet
- Dental Formula: 50 teeth - *more than any other North American mammal*

Unique Anatomical Features

- Prehensile Tail: Semi-hairless tail used for grasping and balance, not for hanging as commonly depicted
- Opposable Thumbs: Clawless thumbs on hind feet for gripping branches
- Pouch (Marsupium): Females possess a forward-opening pouch for carrying young
- Body Temperature: Lower than most mammals (94-97°F vs. typical 98-102°F)

Adaptations to Climate Opossums are relatively recent arrivals to New England, with populations establishing in New Hampshire within the last 40-50 years. Their thin fur and naked ears and tail make them susceptible to frostbite, limiting their northward expansion. **Habitat Preferences** Virginia Opossums are highly adaptable, utilizing diverse habitats including deciduous and mixed forests, agricultural areas, suburban neighborhoods, and urban environments. They prefer areas with access to water sources and abundant shelter options such as hollow trees, abandoned burrows, or human structures.

BEHAVIOR

Opossums are primarily nocturnal and semi-arboreal, exhibiting remarkable behavioral flexibility that has enabled their successful range expansion and adaptation to human-modified environments.

Activity Patterns

- **Nocturnal:** Most active from dusk to dawn
- **Seasonal Variation:** Reduced activity during coldest winter periods
- **Weather Sensitivity:** Remain in shelters during harsh weather, particularly important in New Hampshire's climate

Social Structure Opossums are predominantly solitary except during mating periods and when females are raising young. They are generally non-aggressive toward conspecifics and avoid direct confrontation when possible. **Shelter Utilization** Unlike many mammals, opossums do not construct permanent dens but instead utilize various temporary shelters including:

- Hollow trees and logs
- Rock crevices and brush piles
- Abandoned burrows of other animals
- Human structures (sheds, crawl spaces, attics)
- Dense vegetation thickets

Movement Patterns Opossums maintain large home ranges relative to their body size, typically 12-40 acres depending on habitat quality and food availability. They follow established travel routes and may use the same shelter sites repeatedly. **Climbing and Arboreal Behavior** Excellent climbers with semi-prehensile tails and opposable thumbs, opossums frequently forage in trees and use elevated routes for travel. Despite popular myths, they cannot hang by their tails for extended periods, particularly as adults. **Swimming Ability** Opossums are capable swimmers and will cross water bodies when necessary, though they prefer to avoid swimming when alternative routes are available. **Grooming and Hygiene** Opossums are meticulous groomers, spending considerable time each day cleaning their fur and maintaining personal hygiene. This behavior is important for parasite control and thermoregulation.

REPRODUCTION

Virginia Opossum reproduction involves unique marsupial characteristics that differ significantly from placental mammal reproductive strategies.

Breeding Season In New Hampshire, opossums typically have two breeding seasons:

- **Primary Season:** January-February
- **Secondary Season:** May-June (if conditions permit)

Mating System Opossums are polygynous, with males mating with multiple females



during breeding periods. Males do not participate in raising offspring and may travel considerable distances seeking receptive females. **Courtship and Mating** Males locate females through scent tracking, often following pheromone trails for significant distances. Courtship involves vocalizations, scent marking, and persistent following behavior.

Gestation and Birth

- Gestation Period: 12-13 days (shortest of any North American mammal)
- Litter Size: 6-20 young born (average 8-12)
- Birth Size: Approximately 0.5 inches long, weighing 0.15 grams (size of a honeybee)
- Development Stage: Born in extremely premature state

Marsupial Development

- Pouch Journey: Newborns must crawl from birth canal to pouch within minutes
- Pouch Attachment: Attach to one of 13 nipples (typically only 6-9 survive)
- Pouch Development: 60-70 days attached to nipple
- Eyes Open: 55-60 days
- First Pouch Exit: 70-80 days
- Weaning: 95-105 days
- Independence: 4-5 months

Maternal Care Female opossums exhibit intensive maternal care during the extended pouch period. Young gradually spend more time outside the pouch but continue to nurse and seek shelter with the mother.

Reproductive Success Factors

- Survival Rate: High infant mortality due to limited nipple availability
- Climate Sensitivity: Northern populations may have reduced reproductive success due to cold stress
- Nutritional Status: Female condition significantly affects litter size and survival

DIET

Virginia Opossums are opportunistic omnivores with one of the most varied diets of any North American mammal, enabling their adaptation to diverse environments and seasonal food availability changes.

Primary Food Categories

- Invertebrates: Insects, worms, slugs, snails (40-50% of diet)
- Small Vertebrates: Mice, birds, eggs, amphibians, reptiles
- Fruits and Berries: Seasonal consumption of wild and cultivated fruits
- Vegetation: Leaves, shoots, roots, and agricultural crops
- Carrion: Dead animals of various sizes



- Human Food Sources: Pet food, garbage, compost materials

Seasonal Dietary Patterns

Spring (March-May):

- Emerging insects and invertebrates
- Bird eggs and nestlings
- Early green vegetation
- Carrion from winter mortality

Summer (June-August):

- Peak insect abundance and consumption
- Fruits and berries
- Small vertebrates
- Garden crops and ornamental plants

Fall (September-November):

- Nuts, seeds, and late fruits
- Increased carrion consumption
- Persistent fruits (apples, persimmons)
- Preparation for winter food scarcity

Winter (December-February):

- Reduced foraging activity
- Reliance on cached food sources
- Increased scavenging behavior
- Human-provided food sources

Foraging Behavior Opossums are methodical foragers with excellent senses of smell and hearing compensating for relatively poor eyesight. They investigate potential food sources thoroughly and can remember productive foraging locations. **Beneficial**

Ecological Role Opossums provide significant pest control benefits by consuming large quantities of insects, including agricultural pests, disease-carrying ticks, and other arthropods.

Feeding Adaptations

- Dental Arrangement: 50 teeth adapted for omnivorous diet
- Jaw Strength: Capable of crushing shells and bones
- Manual Dexterity: Use front paws to manipulate food items
- Taste Discrimination: Avoid toxic or spoiled foods effectively

DEFENSIVE MECHANISMS

Virginia Opossums have evolved unique defensive strategies that compensate for their relatively slow movement and non-aggressive nature. **Primary Defense** - "Playing Possum": Thanatosis (Death Feigning): The most famous opossum defense is



involuntary thanatosis, commonly called "playing possum." This is an involuntary physiological response, not a conscious decision.

Physiological Response

- Unconsciousness: Animal becomes truly unconscious for 40 minutes to 4 hours
- Muscle Rigidity: Body becomes stiff and immobile
- Breathing: Becomes very shallow and slow
- Scent Emission: Anal glands release foul-smelling secretions mimicking decay
- Appearance: Eyes remain open, tongue may protrude

Trigger Mechanisms Thanatosis is triggered by extreme stress or fear, typically when escape is impossible. The response is more common in younger animals and may not occur in all threatening situations.

Secondary Defenses

1. Threat Display When initially threatened, opossums rear up on hind legs, open mouth wide displaying 50 teeth, hiss loudly, and drool excessively. This display makes them appear larger and more formidable.
2. Climbing Escape Excellent climbing ability allows escape to elevated positions where many predators cannot follow. Their semi-prehensile tail and opposable thumbs provide secure grip on branches.
3. Aggressive Defense When cornered, opossums can bite forcefully and scratch with sharp claws. Their 50 teeth can inflict significant wounds on attackers.
4. Nocturnal Activity Nighttime activity reduces encounters with many diurnal predators, though it increases vulnerability to nocturnal hunters.
5. Scent Marking Various scent glands allow chemical communication and may serve to deter some predators through unfamiliar odors.
6. Behavioral Adaptations
 - Freezing Response: Remain motionless when detecting threats
 - Route Memorization: Learn safe travel paths and escape routes
 - Shelter Selection: Choose secure resting sites with multiple exits

Predator Relationships Primary predators include coyotes, foxes, large owls, domestic dogs, and vehicles. Young opossums face additional threats from snakes, weasels, and various birds of prey. **Effectiveness of Defenses** The thanatosis response is particularly effective against predators that prefer live prey, as many carnivores are reluctant to consume apparently dead animals that smell of decay.



ADAPTATION TO NEW ENGLAND CLIMATE

Virginia Opossums represent a successful northward range expansion, though their tropical origins present ongoing challenges in New England's climate.

Cold Weather Adaptations

- Behavioral Thermoregulation: Seek insulated shelters during cold periods
- Reduced Activity: Decrease foraging during harsh weather
- Social Thermoregulation: Occasionally share shelters with other opossums

Cold Weather Vulnerabilities

- Frostbite Susceptibility: Naked ears and tail are vulnerable to freezing
- Thin Fur: Insufficient insulation for extended cold exposure
- Energy Requirements: Increased caloric needs during winter

Population Dynamics Northern populations experience higher winter mortality, particularly during severe winters. This mortality pressure may be selecting for individuals with improved cold tolerance

MANAGEMENT CONSIDERATIONS

Opossum management in New Hampshire requires understanding their unique biology, recent establishment in the region, and their generally beneficial ecological role alongside potential conflicts with human activities.

Human-Wildlife Conflicts

- Garbage and pet food consumption
- Denning in human structures
- Garden and poultry predation (minor)
- Disease transmission concerns (relatively low risk)

Management Philosophy Given their beneficial ecological role and recent establishment in New England, management approaches should emphasize coexistence and conflict prevention rather than population reduction.

SCIENTIFIC REFERENCES

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This document represents current scientific understanding of the Virginia opossum biology and behavior as of 2025. Information should be used in conjunction with local wildlife management guidelines and regulations.

