

RHODE ISLAND DEPARTMENT
OF ENVIRONMENTAL MANAGEMENT
DIVISION OF FISH & WILDLIFE

Understanding the Eastern Coyote

A MANAGEMENT AND RESPONSE GUIDE



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 $\begin{tabular}{ll} \bf THIS\ PROJECT\ WAS\ SUPPORTED\ by\ State\ Wildlife\ Grants\ administered\ by\ the\ U.S.\ Fish\ and\ Wildlife\ Service,\ Wildlife\ and\ Sport\ Fish\ Restoration\ Program: \end{tabular}$

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program, activity, facility, or if you desire further information, please write to the Office for Equal Opportunity, US Department of the Interior, Office of the

Secretary, Washington, DC 20240.

This document was created by the Rhode Island Department of Environmental Management, Division of Fish & Wildlife and is intended as a tool to educate the public on coyote biology and behavior, to help identify causes of negative coyote behavior, and to help prevent and minimize conflicts between humans and coyotes. It is a compilation of research and publications created by many agencies, including RIDEM, The Conservation Agency: Narragansett Bay Coyote Study, Colorado Division of Wildlife, The Humane Society of the United States, and many others. We would like to thank these dedicated and knowledgeable professionals for their contribution to this document, and for their continuing research and outreach for the benefit of people and wild canids.

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SITUATION

- Eastern coyotes have successfully established themselves throughout Rhode Island: in undeveloped, rural, suburban and urban areas alike.
- Residents and visitors of Rhode Island may become concerned for their safety, and the safety of their pets and livestock, when they see coyotes in their yards or neighborhoods.
- Coyotes provide an ecologically important role by controlling populations of rodents and other wildlife.
- The adaptability and reproductive capacity of coyotes requires specific management approaches.
- Successful coyote management requires ongoing research to provide effective results which minimize negative impacts on people, coyote populations, and ecosystems.

GOALS

- To provide the public with background knowledge of coyote biology and life history which informs management and conservation decisions.
- To provide the public with tools to avoid and/or mitigate coyote issues within their community.
- To provide the public with an understanding of Rhode Island's current coyote management plan.

Introduction

The Rhode Island Department of Environmental Management (RIDEM), Division of Fish & Wildlife (DFW) is responsible for managing the state's natural resources in an equitable, sustainable, and ecologically sound way. The Division continues to address issues regarding eastern coyotes; working with residents, officials, police departments, and housing authorities to resolve human-coyote conflicts, as well as to address underlying circumstances which may be precipitating these incidents. Human safety is a priority of RIDEM. To this end, these regulations and policies aim to protect Rhode Island residents and visitors from dangerous situations involving coyotes, and to enforce scientifically-sound and ecologically-conscious coyote management practices. We must acknowledge and remember that a variety of ecological, social, and legal constraints associated with reducing humanwildlife issues make these efforts increasingly complex.

Coyotes first became established in Rhode Island in the mid-1960s when the expansion of their range, through natural dispersal, spread to southern New England. Since then, these highly-adaptable animals have learned to thrive across the state. Increasing exposure to humans has emboldened some coyotes, making them more likely to search for food in suburban and urban neighborhoods. Nuisance coyote issues may be created or



worsened by intentional or unintentional feeding. Food could be provided through garbage, compost, bird feeders, gardens, fruit trees, livestock, or unprotected pets.

It is important to remember that not all coyotes are a nuisance, pose a threat to people or pets, or are "out of place" in suburban and urban settings. Often, coyotes pose no threat to the public, and provide an ecological service by regulating other wildlife populations. Most nuisance coyote behavior can be discouraged by removing attractants and using deterrents and hazing techniques. RIDEM will intervene when a dangerous coyote poses a threat to public safety. However, it is not the responsibility or mission of RIDEM to remove wildlife deemed a nuisance by a property owner.

Residents are best equipped to respond to non-dangerous, nuisance coyotes quickly, consistently, and effectively in their own backyards and neighborhoods while the coyote is still present. Therefore, RIDEM encourages residents to use these tools and methods on their properties, and to share this information with neighbors, homeowner associations, local businesses, friends and family. Efforts to minimize human-coyote conflicts are most effective when a community collaborates to these ends. Each situation involving coyotes is unique and may require unique strategies to resolve; using the most current, science-based management techniques will not only be most effective but will also be most beneficial to both humans and coyotes.

Wildlife management and response protocols will continue to be established and reviewed to guide residents, community groups, and municipalities in their efforts to address concerns associated with eastern coyotes in Rhode Island. Please contact the RIDEM, Division of Fish & Wildlife for more information about this guide by emailing DEM.DFW@dem.ri.gov.

FOR EMERGENCIES, PLEASE CONTACT THE RIDEM DIVISION OF LAW ENFORCEMENT (ENVIRONMENTAL POLICE) BY CALLING THE 24-HOUR HOTLINE: 401-222-3070



DEFINITIONS

It is important that a consistent and clear definition of terms is used throughout this guide, and when assessing situations involving coyotes. What some may consider a "coyote attack" may not be the coyote displaying any dangerous or worrisome behavior at all, but rather exhibiting normal behavior. Understanding the differences in behavior is essential to ensure proper management responses, for the safety of the public, and to avoid unnecessary lethal control of non-dangerous coyotes. The following definitions will be used for the process of categorizing human-coyote conflicts:

COEXISTENCE: Humans and coyotes exist together. Humans take an active role in helping coyotes in their community stay wild by removing attractants, taking responsibility for pet safety, hazing coyotes in their neighborhood, and learning about coyote ecology and behavior.

OBSERVATION: The act of noticing signs of a coyote(s), such as tracks, scat, or vocalizations, but without visual observation of the coyote(s).

SIGHTING: A visual observation of a coyote(s). A sighting may occur at any time of the day or night.

ENCOUNTER: A direct meeting that is between human and coyote(s) with no physical contact and that is without incident.

INCIDENT: A conflict between a human and a coyote where the coyote exhibits any of the following behaviors: growling, baring teeth, lunging or making physical contact with the person. A human is not bitten.

LIVESTOCK / OUTSIDE PET LOSS / PREDATION: Coyote(s) kills or injures livestock or outside pets (*i.e.* koi fish, free-range chickens, hutch rabbits, *etc.*)

PET ATTACK: Coyote(s) kills or injures a domestic pet.

<u>Unattended</u>: Pet is free-roaming, walking off-leash more than six feet from a person, or on a leash longer than six feet.

<u>Attended</u>: Pet is on a leash less than six feet in length or is in the presence of a person less than six feet away.

HUMAN ATTACK: A human is bitten by a coyote.

<u>Provoked</u>: An attack where the involved human encourages the coyote to engage. Examples include a human hand-feeding a coyote, approaching a coyote with pups or intervening in a coyote attack on a pet.

<u>Unprovoked:</u> An attack where the involved human does not encourage the coyote to engage.

DANGEROUS COYOTE: A coyote that has precipitated a human attack or an <u>attended</u> pet attack.

HABITUATION: Reduced fear behaviors in a coyote due to exposure to humans and human activity and disturbance. May be common in urban wildlife species as an adaptation to continue to feed, and find shelter, and reproduce in a continuously developed landscape.

NUISANCE COYOTE: A coyote that shows signs of habituated or emboldened behavior, *e.g.* entering yards where a person is present, and/or eating food out of the garbage. This does not include coyotes exhibiting normal coyote behavior.

HAZING: An Action or series of actions carried out in an attempt to change behaviors of habituated coyotes and/ or to re-instill a healthy fear of people in the local coyote population.

COYOTE INTERACTION ASSESSMENT

Assessing coyote interactions is important to identify if action is necessary, what actions should be taken, and which authorities should be contacted. If a coyote(s) is exhibiting normal coyote behavior (green), no action is necessary, but the observation or sighting may be reported to the RIDEM/DFW by submitting a Coyote Activity Report. Coyote(s) exhibiting habituated behavior (yellow) may pose a threat to unattended pets or livestock; if seen in the yard, remove or secure attractants and employ coyote deterrents and hazing techniques. Occurrences of aggressive coyote behavior without an attack (orange) should be reported to the RIDEM/DFW to assess if it is a dangerous coyote, or if this behavior is situational (e.g.- a person unknowingly walks past a coyote den with pups and the female is attempting to defend them). A coyote that attacks a human (red), whether provoked or unprovoked, should be immediately reported to the RIDEM Division of Law Enforcement and the local Animal Control Officer (ACO).

Coyote Behavior	CLASSIFICATION	Response	AUTHORITY
Coyote(s) heard, scat and/or prints seen	Observation	Normal coyote behavior: no response necessary	May report observation to RIDEM/DFW
Coyote seen moving through area (day or night)	Sighting	Normal coyote behavior: no response necessary	May report sighting to RIDEM/DFW
Coyote seen resting in open space area (day or night)	Sighting	Normal coyote behavior: no response necessary	May report sighting to RIDEM/DFW
Coyote seen entering a yard (no person present outside)	Sighting	Normal coyote behavior. Employ coyote deterrents and hazing techniques	May report sighting to RIDEM/DFW
Coyote entering yard with people or pets present, no pet attack	Encounter	Employ hazing techniques and pet safety measures	May report encounter to RIDEM/DFW
Coyote following or approaching a person with no incident	Encounter	Employ hazing techniques and pet safety measures	Report encounter to RIDEM/DFW
Coyote injures or kills unattended pet in yard or in open space area (humans farther than 6 feet from pet)	Unattended Pet Attack	Report encounter to RIDEM/DFW. Employ hazing techniques and pet safety measures. Coyote may be lethally controlled if legal by state & local law	Report encounter to RIDEM/DFW
Coyote injures or kills outdoor pets/ livestock	Livestock Loss/ Predation	Report to RIDEM/DFW. Employ hazing techniques and livestock enclosure improvements. Coyote(s) may be lethally controlled if legal by state & local laws	Report encounter to RIDEM/DFW
Coyote acts aggressively toward human(s); baring teeth, back fur raised, lunging forward, nipping without physical contact	Incident	Report to RIDEM/DFW. Employ hazing techniques and pet safety measures if safe to do so. Coyote(s) may be lethally controlled if legal by state & local laws	Report to RIDEM/ DFW and RIDEM/ Law Enforcement
Coyote injures or kills pet on leash within 6 feet of human	Attended Pet Attack	Report to authorities immediately. Coyote will be euthanized by Law Enforcement and tested for rabies	Report to ACO or RIDEM Law Enforcement
Coyote bites human (human encouraged coyote to engage by feeding it, approaching a coyote with pups, intervening during a pet/livestock attack)	Provoked Human Attack	Report to authorities immediately. Coyote will be euthanized by Law Enforcement and tested for rabies	Report to RIDEM Law Enforcement
Coyote bites human (human did not encourage coyote to engage)	Unprovoked Human Attack	Report to authorities immediately. Coyote will be euthanized by Law Enforcement and tested for rabies	Report to RIDEM Law Enforcement

Understanding the Eastern Coyote

Coyotes (*Canis latrans*) are the most successful wild canid in North America, with populations found across the country. This success is owed largely to the coyote's feeding habits. They are not specialized predators, but instead generalist and opportunistic predators and scavengers, consuming a wide variety of foods, including small mammals, deer, birds, carrion, insects, fruit, berries and human-sourced food. Additionally, they can thrive in a wide variety of natural and human-altered environments, including deserts, grasslands, forests, farm land, neighborhoods, and cities.

DESCRIPTION

The coyote belongs to the mammalian Order Carnivora, a large group of mammals that are characterized by teeth designed primarily for chewing meat. The scientific name *Canis latrans* means "barking dog" and coyote (pronounced "ky-o-tee") is thought to have come from a Spanish modification of the Aztec word "coyotl."

The eastern coyote is predominantly brownish-gray, with varying amounts and shades of brown, black and tan. However, coloration of individuals can be highly variable; individuals photographed in Rhode Island have been tan, brown, black, red, silver, and an even mixture of these colors. The tail is bushy, straight and has a black tip, and the fur is dense, long and coarse. Adult coyotes average 35 pounds; males typically weigh more than females at around 40 pounds, with some individuals approaching 50 pounds. Adult females usually weigh between 30 - 40 pounds.

EASTERN COYOTE VS. WOLF

It is a misconception that there is a wolf or "coywolf" population in Rhode Island. Eastern coyotes may look enormous, in their big winter coats running through a yard, but realistically they average only 35lbs. An adult gray wolf weighs between 70-130 pounds. Coyotes are slender built, with a sharp, pointed face and large, pointy ears. The coyote paw print tends to be 2 in. x 2.5 in. across. A wolf paw print tends to be around 4 in. x 5 in. across – about twice the size.

Research into the genetic similarities, differences, hybridizations and divergences of North America's wild canids has continued to expand, and the evidence debated. As our technology and understanding of genetics improves, so does the complexity of these concepts. It is known that coyotes, wolves and domestic dogs can interbreed, thus creating hybrid animals, but how commonly this occurs, or how it translates to speciation, is far from a consensus.

Through genetic testing, we know that today's eastern coyotes originated from populations of western coyotes. It is thought that as their populations expanded and moved eastward, coyotes bred with wolves (*Canis lupus*) in the







Coyotes can have a wide variety of coat colorations: grey, black, red, tan, and even white. All these coyotes were photographed in Rhode Island.

wolves northern Midwest, where considerably outnumbered coyotes. The resulting offspring passed on wolf DNA into future generations of coyotes. This may explain why eastern coyotes are slightly larger than western coyotes. Over time, coyote populations grew and expanded farther still, where they were not only breeding with other coyotes, but also with domestic dogs (*C*. familiaris) (vonHoldt, et al.. 2011). Some researchers have suggested this may be the reason for the varied and unique pelage (fur) of eastern coyotes, but the validity of this theory is yet unknown. There is no evidence that coyote-wolf interbreeding has ever occurred in Rhode Island.

Even though wolves were extirpated (regionally eradicated) from New England hundreds of years before coyotes arrived here, eastern coyotes have some small percentage of DNA from wolves, as well as DNA from domestic dogs.

HISTORIC RANGE AND CURRENT RANGE

- Coyote populations expanded east over hundreds of years
- First showed up in R.I. in the 1960s
- Currently found in every R.I. town except Block Island

At the time Europeans first established settlements in North America, the coyote's range was likely restricted to the prairie regions of North America, west of the Mississippi River from southwestern Canada to central Mexico. The dominant canine predator in Northeast North America at that time was the gray wolf. Throughout the 18th and 19th centuries European settlement expanded westward, and the extensive eastern forests were cleared for agriculture and timber products. A network of linear travel corridors was created as roads, bridges, and railway systems were constructed. In

Tracking tip: Keep in mind that tracks seen in mud or snow may sometimes appear larger than they are because body weight tends to displace soft surfaces outward, expanding the track and making it look bigger. The trajectory and stride of the tracks matter as much as the appearance of a single track. When taking photos of tracks for identification, try to photograph the line of tracks as well as a few different prints. Don't forget to include a ruler, measuring tape, or common item (e.g. permanent marker) next to the track for scale!

addition to the unprecedented alteration of habitat, there was direct persecution of large predators, such as wolves and mountain lions, with which coyotes had previously competed for food resources in areas where their population ranges overlapped out West. Through habitat loss and unregulated hunting, populations of white-tailed deer, the primary prey of wolves and mountain lions, were also devastated. The result was the complete eradication of New England's two largest predators.

The range expansion of the coyote in North America is well documented. Coyotes followed settlers and prospectors westward, feeding on dead horses and livestock, as well as in garbage dumps along travel routes. With the wolf gone from most of eastern North America, and the landscape now consisting of a patchwork of agricultural and forest lands, there was an opportunity for the adaptable coyote to move east as well. The first eastern coyotes in New York State were documented in the 1920s. By the 1930s, coyotes had been documented in Maine, and in the 1940s Vermont (1942) and New Hampshire (1944). They were first reported in Massachusetts in 1957 and in Connecticut in 1958. In the 1962 edition of "The Mammals of Rhode Island" by John Cronan and Albert Brooks, it states, "The coyote has never occurred in Rhode Island, but its



"It sounds like there's a hundred coyotes out there!"

In 2017, a team of researchers studied people's ability to discern the number of coyotes in a group by playing recordings of one to four coyotes howling and vocalizing (Brewster, et al. 2017). The study found that, although a majority of the 427 participants could tell when a coyote was "added to the group," they consistently estimated that there were twice as many coyotes as there actually were on the recording. This may mean that when we hear what we think is a huge pack of coyotes, there may not be nearly as many as we assume.

range has been extending steadily eastward in recent years, and at some future date it might be seen in Rhode Island." In 1966 there were two reports of coyotes being killed by automobiles, one in North Smithfield and one in Cranston. In 1969, a coyote was shot in the Touisset section of Warren. Within the next several years coyotes began to appear in other communities, such as Warwick, Smithfield, South Kingstown, and North Kingstown. Today, coyotes can be found in all Rhode Island communities except on Block Island.

BEHAVIOR

- The vast majority of coyotes are not dangerous, nor do they cause issues
- Coyotes are smart; they can be taught to avoid nuisance behaviors if effectively hazed and deterred

Coyotes are generally shy and secretive animals. In proximity to humans, coyotes tend to be mostly active at night (nocturnal) but may also be active during early morning and sunset hours (crepuscular) or during daylight hours (diurnal) searching for food. With a litter of pups, adults may need to forage for food continuously to keep them fed.

In urban and suburban environments coyotes prefer to travel through and remain near areas with abundant hiding cover. This could include powerline right-of-ways, urban stream corridors, or parks and other "green space" areas. Taking shortcuts through suburban backyards to and from food sources is common.

An animal's home range is generally defined as the area that is used on a regular basis but not actually defended. The home range area can be flexible and may

vary considerably with food availability, geography, season, and other factors. It may also overlap with the home range of other individuals.

A territory is a smaller area within a home range, and it is defended against other individuals or groups of the same species. Home ranges for coyotes have been measured between 5 and 25 square miles. Coyote family groups or "packs" are often territorial and will defend their territory against other coyotes. They delineate territorial boundaries with markers consisting of scat and scent posts. Within any given area there may also be individuals that are <u>transient</u> or, in other words, do not belong to a pack.

Coyotes can produce a variety of sounds, including barks, yips and howls. They use these sounds to communicate amongst each other, identify themselves, declare their territory, and to convey their location or distance from other individuals.



FOOD HABITS

- Coyotes will eat meat, vegetables & fruit
- Coyotes are opportunistic feeders
- Removing food attractants is key

Coyotes are generalists and eat a wide variety of food items. They will prey on many animals including rabbits, squirrels, woodchucks, deer, mice, voles, birds, snakes, and insects. A large component of their diet consists of carrion: carcasses of animals that may have died naturally or of other causes, such as auto strikes. Fruit and other plant materials are an important element of their diet as well. Coyotes will readily eat wild and cultivated apples, grapes, blueberries, strawberries, and even cultivated corn when it is available.

REPRODUCTION: BREEDING & REARING OF YOUNG

- Coyotes breed in winter to late spring
- Do not maintain a den all year and leave when pups are big enough to travel with family

Female coyotes become sexually receptive (come into "heat") once per year, usually during January or February. Coyotes are largely monogamous and maintain pair bonds for several years but not necessarily for life. Gestation lasts for approximately 63 days. In Rhode Island, pups are typically born in April. Litter sizes typically range between four and seven, varying due to factors such as resource availability and the female's age and health. Pups are born blind and helpless (altricial), and generally weigh between 8 and 10 ounces. The pups' eyes open at about 14 days. The mother nurses the pups for the first two weeks, after which they are fed regurgitated food by the adults. The young begin eating solid food at three weeks and are weaned around seven weeks of age. The young begin to emerge from the den after about three weeks, and after weaning, will gradually move farther from the den, eventually following the adults on forays for food.

Occasionally other individuals, usually one or more

offspring from the previous year's litter, assist the parents with rearing the pups. After weaning, the den is abandoned, and the pups are taught to hunt by the adults and older siblings. Pups reach adult weight at about nine months. The family (pack) stays together until mid to late winter, after which time the young coyotes begin to disperse.

Sometimes the young will remain

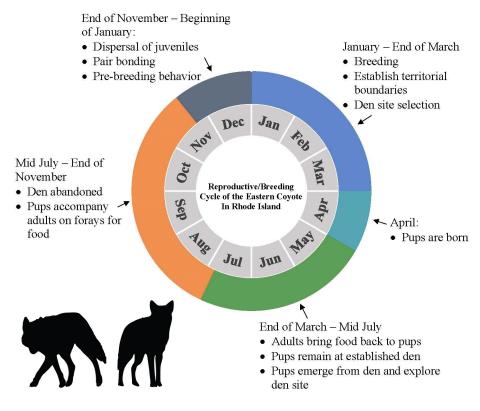
with the adults through the

following year.

Coyotes den in a variety of locations, including holes dug into embankments, rock piles or ledges, and dense thickets or under piles of debris, preferably in areas that are free from human disturbance. The same den may be used from year to year; however, coyotes do not



maintain a den throughout the year. Instead, the family abandons it once the pups are large enough to travel with the adults. Moving pups from one den to another because of disturbance or parasite infections is common.



DISEASES

- Keep pets up to date on vaccinations
- Keep pets away from ALL wild and feral animals
- Do not feed wildlife or feral animals

Coyotes are affected by a wide variety of parasites and diseases including ticks, fleas, intestinal worms and heartworms. In severe cases, parasites can lead to impaired stamina and death. Coyotes can also be infected with canine distemper and canine parvovirus.

Coyotes, like all other mammals, are susceptible to the rabies virus; however, coyotes historically have not been a frequent host of the virus. According to the R.I. Department of Health, since their arrival to Rhode Island in the mid-1960s, there have been only around three confirmed cases of a coyote infected with rabies in Rhode Island. For more information about pet attack response procedures, refer to the Rules & Regulations Governing the Prevention, Control and Suppression of Rabies Within the State of Rhode Island.

This can be found on the RIDEM website Rules & Regulations page under Agriculture in the Animal Health section.

Mange (sarcoptic mange) is caused by a mite (*Sarcoptes scabei*) that burrows into the skin, creating a great deal of discomfort and often leading to a weakened condition of the animal. Animals infected with mange often have little or no hair on their tails and backs. Mange is commonly found to infect both coyotes and red foxes. Some individuals recover from mange over time; others succumb to it – particularly in the winter months. Animals become infested when coming into contact with infected animals or contaminated dens or burrows. Sarcoptic mange is not a human health risk.

It is important to keep domestic animals and wildlife away from each other, and make sure all domestic pets are up to date on their shots. For any concerns regarding pet health, contact your veterinarian or local Animal Control Officer.

Q: I see a coyote out during the day. Does that mean it has rabies?

A: Daytime activity is not a definite indication that a coyote has rabies. Coyotes are commonly active during the day searching for food, especially when they have pups to feed in the spring. This would be considered a **coyote sighting**. There are other behavioral signs that may indicate a coyote is sick. Abnormal behaviors might include erratic movements, shaking, stumbling, moving sluggishly or lethargically, or acting aggressive towards people or pets. It is impossible to tell if an animal is rabid just by looking at it, but if you see a coyote that is displaying these behaviors, contact RIDEM Division of Fish & Wildlife (401-789-0281) or the Environmental Police at 401-222-3070.



COYOTE REGULATORY STATUS

Coyotes are classified as protected furbearers under Rhode Island General Law 20-16-1, which means they may only be hunted, trapped, or killed by legal methods during specific seasons, as outlined in state regulation. However, in Rhode Island, this state law also allows a property owner to kill, by legal means, any furbearer (as defined in RIGL 20-16-1) that is killing or attempting to kill any livestock or domestic animals, destroying crops, creating a health hazard, or causing economic damage to their property. The law does not allow for the random taking of wildlife, for the taking of furbearers for their pelts outside an open season, or for the killing of animals outside the boundaries of the concerning property. does not allow for unlawful methods of take such as poisons, snares, foothold traps, or discharge of

firearms in violation of state or local law. By State law, firearms may not be discharged withing 500 feet, and archery equipment within 200 feet, of an occupied without dwelling written permission of landowner. Town ordinances may not allow for the discharge of weapons, or restrictions in addition to laws. state For information on local ordinances, contact the local police or town hall. The law states that animals taken under such circumstances must be reported to the RIDEM within 24 hours.

Although lethal control is not practical for all situations, these regulations are intended to allow residents to protect pets, livestock, and property from predation losses and damage.

COYOTE HUNTING

Although not as commonly practiced as in other parts of the United States, coyote hunting is legal with a valid Rhode Island hunting license and applicable permits. Coyotes are hunted to reduce livestock predation, or for their pelts to be sold at fur trade auctions.

STATEWIDE:

- Shooting hours are ½ hour before sunrise until ½ hour after sunset on both private and state land.
- When coyote hunting during deer season, on either private or state land, the hunter must be in possession of a valid deer permit.
- The daily bag limit for coyote hunting is unlimited.

COYOTE HUNTING ON STATE LAND:

- The hunting season for coyotes on state land is from
 September 15 until the last day in February, inclusive,
 and during the spring turkey hunting season.
- Legal methods of take for coyote hunting include shotgun (no lead shot larger than No. 2) and rimfire rifle not larger than .22 caliber at any time, bow and arrow, and crossbow.
- Coyote hunters on state lands must wear a minimum of 200 square inches of fluorescent orange during the small game hunting season. During the shotgun deer season, 500 square inches is required.
- During the spring turkey season, coyote hunters must possess a valid turkey hunting permit while hunting on state lands.
- The placement or use of carcasses or meat parts thereof for purposes of hunting coyotes is <u>prohibited</u>. on state lands.

COYOTE HUNTING ON PRIVATE LAND:

- There is no closed season for coyote hunting on private lands.
- Legal methods of take on private lands include shotgun (no lead shot larger than No. 2) and rimfire rifle not larger than .22 caliber at any time, bow and arrow, and crossbow. However, from April 1 to September 30 (both dates inclusive), centerfire rifles not larger than .229 caliber may be used (RIGL 20-13-13) as well as any means allowed during any concurrent hunting season. Check with local authorities on restrictions.
- The placement or use of carcasses or meat parts thereof for the purposes of hunting coyotes is allowed on private property.

FOR COMPLETE INFORMATION ON RHODE ISLAND HUNTING REGULATIONS, PLEASE VISIT:

https://www.eregulations.com/rhodeisland

COYOTE TRAPPING

Coyote trapping is not often a suggested method of mitigation for nuisance coyotes because of restrictions on the types of traps that can be used, and without addressing the underlying issues, it will not resolve the problem. The only legal method is the use of cage traps, which may not be an effective method for capturing coyotes. Trapped animals are the responsibility of the trapper; <u>RIDEM will not take</u>, <u>dispatch</u>, <u>relocate</u>, <u>or release trapped wildlife</u>.

STATEWIDE:

- The use of foothold traps or snares is prohibited in Rhode Island
- The placement of body-gripping type traps with a jaw spread exceeding eight (8) inches cannot be set on land and must be set either completely submerged in water or six feet above the ground
- The daily bag limit for hunting or trapping coyotes is unlimited.
- Cage or box traps may be used on both private and state land, provided all trapping laws and regulations are followed. Trapped coyotes cannot be relocated, and are the responsibility of the trapper to dispatch.

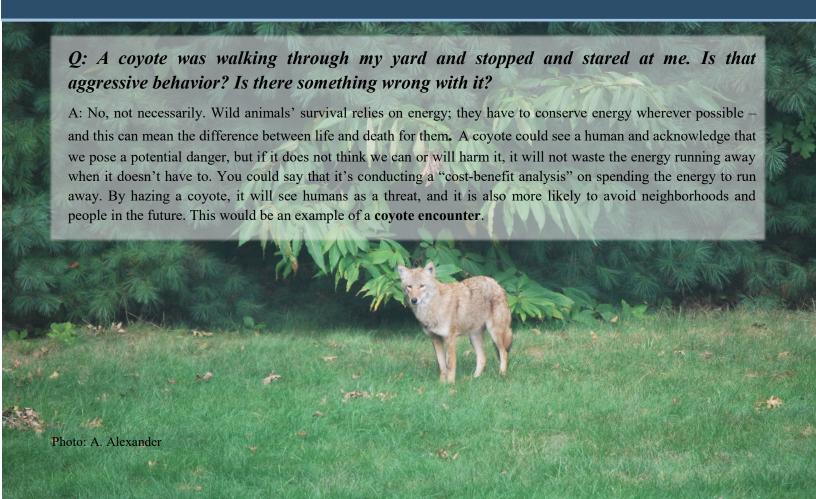
COYOTE TRAPPING STATE LAND:

• Coyote trapping is allowed on state land, with a valid R.I. trapping license and a State Land trapping permit, from November 1 through January 31.

COYOTE TRAPPING PRIVATE LAND:

- Coyote trapping on private land with the intention of take requires a valid R.I. trapping license
- There is no closed season for coyote trapping on private land.

For complete rules and regulations regarding the hunting or trapping of coyotes or other furbearers, contact the Rhode Island Division of Fish and Wildlife at DEM.DFW@dem.ri.gov



"Why Can't We Just Cull the Coyote Population?"

Cull: The lethal removal of individuals to reduce a population

Throughout history, people cohabitating with coyotes have tried to eradicate them due to fear of predation on their livestock and agricultural loss. They have been persecuted for hundreds of years — hunted, trapped, poisoned - and yet their populations have continued to expand across the country. Lethal control is effective in removing an individual, but it is not effective as a population control strategy due to the coyote's unique physiology and life history. When a population is being lethally controlled, fewer coyotes in an area means more available territory and resources, and less competition for them. Research has shown that this increase in land and resources allows for more of the surviving individuals to breed, and have larger litter sizes.

Although lethal removal can be effective in the short term to remove individuals – this significant reproductive capacity means that lethal control can cause the coyote population to grow over time.

In the event that there is a dangerous coyote which endangers the health and safety of the public, the RIDEM Environmental Police will attempt to dispatch it. In many cases of non-dangerous, nuisance coyotes in neighborhoods, a visit by an RIDEM Law Enforcement Officer or DFW Biologist may not be practical or necessary. Mitigation of nuisance coyote situations requires a coordinated effort between residents, local authorities, and RIDEM. Coyotes can be harvested by

- Lethal population control is ineffective for coyotes
- Culling coyotes has shown in the past that it can cause the population to increase over time
- May cause more nuisance coyote issues and will not resolve the underlying problems

legal means any time of the year on private land, and property owners can dispatch a coyote that is predating their livestock or pets or destroying property as long as it does not violate state and local law.

Not all coyotes have bad habits or create problems. A coyote walking down the street during the day or walking through a yard should not immediately be perceived as dangerous or malicious. Coyotes have been part of Rhode Island's fauna for more than fifty years and are an important natural resource and component of the ecosystem. As proven in the West, campaigns to eradicate coyotes, though sometimes effective at lowering population levels for a short time, are expensive and have proved unsuccessful in the long term. Wildlife managers and scientists researching coyotes believe that the best way to minimize human – coyote interaction is to remove attractants from our yards, and "educate" local coyotes using hazing techniques to teach them to avoid neighborhoods and people.

"Why Can't We Relocate the Coyotes?"

It is not uncommon for RIDEM to receive a request from an individual or community asking to trap a coyote, or pack of coyotes, and release them elsewhere. Although this may seem like the simplest and most humane solution, there are many reasons why it is not. Wildlife relocation may cause more harm to the coyotes themselves, as well as to other animals, habitats, ecosystems, and people. It is also unlikely to resolve the issue because coyotes will travel long distances to return to their home range. We must also consider what will happen after we relocate an animal to a new

place; where will it find food and shelter? How will it impact, or be impacted by the habitat? What parasites and diseases could it bring with it? All these questions need to be addressed when considering trapping and transporting wild animals and are ultimately why relocating wildlife is prohibited in Rhode Island. For all these reasons, RIDEM/DFW policy does not allow for relocation of wildlife.

- Relocation is ineffective and does not resolve the issue
- Relocated coyotes may cause harm to their "new home"
- Relocated coyotes may increase nuisance problems for someone else

RELOCATION IS INEFFECTIVE

Faced with unfamiliar surroundings, competition for limited resources, and possibly having been separated from their pack, relocated coyotes will often attempt to return to home ranges or breeding sites. Many animals have excellent homing skills. Coyotes have demonstrated that they can travel great distances to return to the point of capture. Some will not survive the journey as they attempt to cross roads or are potentially killed as they pass through someone's property.

RELOCATION DOES NOT CHANGE BEHAVIOR

It is likely that the nuisance animal, relocated elsewhere, will continue this behavior in someone else's yard or neighborhood. It is worth considering how we would feel about our neighbors releasing nuisance wildlife onto our property. We must ask ourselves: Are we resolving our issue by creating an issue for someone else?

Nuisance coyote issues will not be resolved without first removing or minimizing the attractants that brought the coyotes to the neighborhood in the first place. Simply removing a coyote will just free up that food/shelter for another coyote, other wildlife, or small mammals (now unchecked by coyote predation).

POTENTIAL SPREAD OF DISEASE

Coyotes, like all wild animals, can carry a wide variety of parasites and diseases. Some diseases can quickly spread between animals and have serious impacts wildlife populations. A person relocating wildlife may think they are helping one animal, when they are putting many animals in the area at risk. Moving animals randomly around the landscape will increase the chance of introducing diseases into uninfected populations. You cannot tell if an animal is sick just by looking at it. An animal that appears healthy may carry diseases or parasites which can be transmitted to susceptible species, domestic animals, or humans. Traps and cages used to capture or transport animals can become contaminated by disease-carrying organisms, creating potential exposure risks to humans and pets.

HARM TO ECOSYSTEMS AND OTHER WILDLIFE

A wild animal trapped and relocated to a park, management area, or nature preserve, does not automatically have everything it needs right there. It must now struggle to find food and water sources in this unfamiliar territory. Relocated wildlife, faced with the threat of starvation and competition from other wildlife, will seek food and

shelter wherever available. Releasing them into wildlife management areas and refuges will increase predation of local wildlife. Keep in mind, these management areas and wildlife refuges are often set aside to protect vulnerable species, and introducing predators to this area would negate those protections.

Any animal introduced to a new habitat must compete for resources with the wildlife that lives there which increases an animals' stress, and its likelihood to have a conflict. Many This is why removing attractants, using deterrents, and hazing habituated coyotes is key.

wildlife species are territorial and will vigorously defend their territories against others; animals without established territories are at an immediate disadvantage and their odds of survival are compromised.

Lethal population control and relocation are not viable options and will not resolve nuisance coyote issues, but taking action to prevent and mitigate nuisance issues by removing or securing food sources and den sites, and using coyote deterrents and hazing techniques.

Q: Why is the coyote here? Wouldn't it prefer to be out in the forest somewhere?

A: Not necessarily. Suburban habitats may provide coyotes (and other species of wildlife) many advantages that forests do not. There may be plenty of food sources available in the form of accessible discarded food in garbage, compost, bird feeders, fruit trees/bushes, gardens, agricultural crops, and small mammals (also attracted by the food/shelter human habitat provides.) They may have access to pre-made den sites under sheds, porches, or abandoned buildings – and there's less (if any) hunting allowed in neighborhoods. Since the suburbs provide coyotes with ample food, shelter and safety – they may decide it's worth the risk of being around people for these many benefits. By removing attractants, we make our yards less appealing to wildlife, and thus reduce the chances of causing nuisance wildlife issues for ourselves.



Preventing Interactions with Coyotes: Removing Attractants

"What Do We Do If A Coyote Is Causing A Problem?"

- Assess the situation using the <u>Coyote Interaction Assessment</u> section to see if it is anything other than normal behavior, and what can be done to prevent future coyote interactions
- Depending on the assessment, determine the best response and employ deterrents if necessary
- Contact the appropriate authorities for information or assistance if action is necessary

The first thing to do is assess the situation; find out what may have caused the human/pet - coyote interaction in the first place. For instance, were you walking your dog? Do you have outside pets or livestock on your property? Were you in your yard or out in a forested/less-populated area? Did the coyote approach you or your pet, or was it just crossing your path and stopped to look at you? Is the season, time, weather, or human activity impacting the coyote's behavior? You can use the Definitions section and the Coyote Interaction Assessment section of this guide to determine the appropriate response. In the vast majority of cases, coyotes are not a threat to people or pets if preventive measures are taken. If there is a situation involving a

dangerous coyote, contact the RI Environmental Police immediately.

Decades of research into resolving nuisance coyote issues has afforded us the understanding that coexistence with coyotes is the best way to prevent nuisance coyote issues. This does NOT mean that we do nothing and let them run amok in or yards and neighborhoods. It means we accept that lethal control of coyotes is ineffective and may worsen the nuisance coyote issue, and that having a smaller local population of "educated" coyotes is better than continuously removing them and having a larger population of "un-educated" nuisance coyotes. Therefore, removing attractants, using deterrents, and hazing nuisance coyotes are key.

Attractants may not be obvious at first. A hole under a shed or behind a brush pile may go unnoticed, but it could provide a denning site for a family of coyotes. Coyotes may venture closer to homes looking for easy food sources such as gardens, bird feeders, fruit trees, compost piles, or pet food. They may also have den sites in proximity to "human-habitat" like residential neighborhoods, cemeteries, or public parks. We sometimes inadvertently provide great habitats for wildlife by creating an area with ample shelter, food, and water sources. Performing a yard audit may help you identify attractants so that you can remove them, secure them, or minimize access to them.

We have provided a Yard Audit Checklist. Take the time to thoroughly survey your property for potential den sites and food sources of which coyote and other wildlife may be taking advantage.

Putting food out for wildlife will attract <u>ALL</u> **wildlife.** Feeding squirrels, deer, turkeys and other wildlife is not only prohibited by law, it can cause nuisance wildlife issues for residents and communities. We can't pick and choose which wildlife is attracted to the food we put out, so the only way to avoid issues is to not put out food.

Identifying Attractants in your Yard

Conducting A Yard Audit

The purpose of a yard audit is to identify any attractants which may be bringing coyotes into your yard or neighborhood so that they can be removed, secured, or avoided in order to minimize the chance of precipitating nuisance wildlife issues. It may not be your yard, but a neighbor's yard, or a local business. Talk to your neighbors and community about coyote issues; they may not know their actions are attracting coyotes.

Attractant	Prevention/Mitigation
FOOD SOURCES	NEVER hand feed or intentionally feed coyotes. It leads to habituation and dangerous coyote behavior that can endanger people and pets.
	Do not feed wildlife or feral animals
Pet Food	Do not feed pets outside, store pet food inside
Livestock Feed	Store animal feed securely inside or in a wildlife-proof container
Bird Feeder/Bird Seed	Take down bird feeders and/or clean up bird seed off ground
Garden	Install wildlife-proof fencing around gardens that is at least 6 feet high and buried 12 inches to prevent wildlife from going over/under fence
Fruit Trees/Bushes	Clean up dropped fruit around trees/bushes
Compost	Secure compost piles in enclosure. Do not compost meat, dairy or eggs
Garbage	Secure garbage in wildlife-proof containers. Only put out on garbage pickup day
Grills/Patios	Remove all food and clean grills, grilling equipment, and outdoor eating areas completely after use. Store recycling in a secure container.
SHELTER/STRUCTURES	Secure outbuildings such as barns and garages when not in use
Sheds/Outbuildings	Install fencing or construction cloth around bottom edge of shed at least 12" down to restrict access and prevent wildlife from burrowing underneath
Porches	Install fencing around underside of porch to restrict access and prevent wildlife from denning underneath
FENCING	Install fencing at least 6 feet high around gardens and livestock enclosures to keep wildlife out. Frequently check fencing for holes, breaches or other access points.
Landscaping	Remove or cover brush piles to reduce potential denning sites
Pets & Livestock	DO NOT leave pets outside unattended, even for a short amount of time.
	Keep cats indoors
	Fully enclose and secure outdoor pet and livestock enclosures
	Keep dogs on leash 6 ft. or less when outside





Identifying Attractants in your Yard

Did you know?

A hungry coyote will raid gardens and fruit trees, pet food and grain bins. If there is a coyote frequenting your yard, it may be returning to the area because there is an attractant - either food or maybe shelter, and it won't be as easily deterred if the attractant isn't secured or removed.

Assessment in Action

The illustration below shows a yard with many of the attractants listed in the Yard Audit list on the previous page. See how many food sources and shelter sites you can identify, and any that you don't see here. Use this exercise to assess your own property.

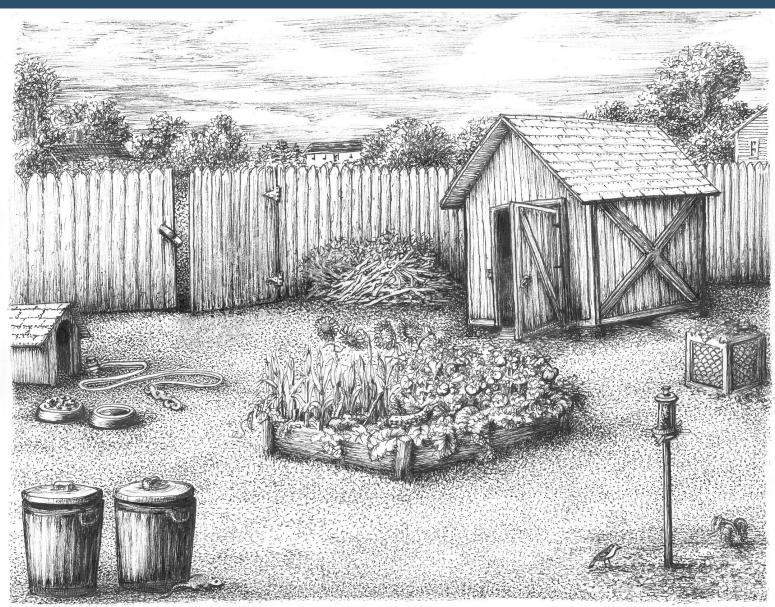


Illustration by James Cashman

Coyote Deterrents & Hazing Techniques

Coyotes have learned to find resources in urban and suburban areas, as well as the many other habitats they utilize. So much exposure to people without a clear threat of danger, may cause coyotes to occasionally forget their healthy fear of humans and become emboldened. When this happens, they are more likely to venture closer to homes looking for food sources and shelter sites. It is important that we "re-educate" coyotes to be wary of people, and to discourage them from using neighborhoods as habitat. It is better to have a population

of "educated" coyotes in an area, providing the many ecological benefits that predator species provide, than to have many "uneducated" coyotes causing nuisance issues and potentially presenting a threat to people or pets.

This will not only keep coyotes away from us, but it will also be safer for the coyotes, because they will be less likely to be hit by cars or killed as a nuisance animal. Remember that not all coyotes seen in neighborhoods and cities are dangerous, this can be typical coyote behavior.

What is "hazing"?

COYOTE HAZING: An action or series of actions carried out in an attempt to deter coyotes, or change behaviors of habituated coyotes and/or to re-instill a healthy fear of people in the local coyote population.

THE GOALS OF HAZING ARE TO:

- Discourage coyotes from entering public areas or yards when people are present
- Reverse the habituation of coyotes to people, teaching them to once again fear and avoid humans
- Discourage coyotes from approaching people and pets
- Empower residents by giving them tools to use when they encounter a coyote, thereby reducing their fear of coyotes
- Increase awareness about coyote behavior among residents and involve the community in coyote management efforts

WHY DOES HAZING WORK?

- Coyotes aggressively defend their territories from other coyote packs by howling and barking, and chasing off rival coyotes
- When we act big and loud and chase them off, we are "speaking their language." They understand that it is our territory and that they should not hang around.



Hazing uses harassing techniques without physically harming the coyote. Using a variety of different hazing tools is critical because coyotes can become desensitized to the continued use of a single technique, sound, or action. The more often an individual animal is hazed, the more likely its behavior will be changed. These techniques include:

ACTING AGGRESSIVE TOWARDS THEM BY:

- Yelling, waving your arms and clapping loudly
- Making loud noises (screaming, banging pots and pans, using an air horn, blowing a whistle)
- Spraying them with a hose or citronella pet-training spray
- Throwing things towards them, such as tennis balls

Using Passive Hazing By:

- Installing motion-sensing noise makers, sprinklers and lights
- Leaving a radio playing outside
- Educating your neighborhood; these techniques are most effective if used consistently, frequently, and when the whole neighborhood works together.

IMPORTANT: Never use these techniques on a coyote that is cornered or with pups, coyotes will defend themselves and their pups under these circumstances.

Need to see what effective coyote hazing looks like? Watch this educational video by Coyote Smarts on how to effectively haze nuisance coyotes:

What to Do if you See a Coyote

Q: If I haze a coyote, won't it just attack me?

A: A healthy coyote will not risk attacking a human and will run away from you if the hazing is effective. If hazing is not effective, it may just stand there and look at you. This doesn't necessarily mean that it is sick or acting aggressive; it just means that it isn't going to waste the energy running away because it doesn't recognize you as a threat. Be bigger, louder, and more aggressive to get the point across. In the rare event that a coyote does begin to approach you aggressively, do not run. Calmly back away and get to safety, and contact the RIDEM Environmental Police. Citronella dog training/pet safety spray can be used to scare off a coyote in the rare event that you or your pet are approached by one.

Pet Safety

For many, pets are a part of the family. It is essential that we provide protection for them to ensure they do not encounter any wildlife, including coyotes.

Some might say that we should not have to change our behavior to protect our pets when they are outside, but the fact remains that our yards and properties are still part of an active ecosystem – and home to wildlife as well. Just as we take measures to protect our pets from cars, parasites, and other domestic animals, so too must we protect them from other potential outside dangers, like wildlife.

Coyotes are opportunistic feeders and will take advantage of any available food source; as wild animals, this is intrinsic in their nature and can be a matter of life and death for them. Smaller pets may be less able to escape or defend themselves and are at risk of being killed by coyotes. This is natural coyote behavior and will not be prevented if we do not take preemptive actions.

Most importantly, **make sure all cats and dogs are vaccinated** against rabies and up to date on their shots. Make sure you have the contact information for your local Animal Control Officer and your veterinarian, in the case of an emergency.

CATS

The only safe cat is an indoor cat. Although cats are agile climbers and possess the ability to defend themselves, this may not be enough to escape a wild predator. Old and overweight cats are especially disadvantaged. Keeping cats indoors will not only protect them, it will also protect wild species that often fall victim to the predatory nature of cats. Songbirds, native wild rodents, reptiles, and amphibians are all in danger of being needlessly killed by domestic and feral cats, some at the great cost of their overall populations. Caring about the environment and being a good wildlife steward means keeping cats indoors.







Secure Outdoor Pet Enclosures

For your pet's safety, consider installing a secure outdoor enclosure, such as a large kennel, or "catio" (enclosed outdoor caging for cats to be outside and still protected. Make sure the outdoor pet enclosure is:

- Protected from all sides with fencing, top and bottom as well
- Made with fencing that has mesh fine enough to prevent wildlife from slipping through
- Made from adequately sturdy materials

P. 21

If you are not willing to keep your cat inside, bring it in at night and make sure it has a way to escape from wild animals and dogs. If there are no trees to climb, make sure it has easy access to a climbable pole with a platform on top so that it can stay out of harm's way until the danger is gone. However, this may not be enough to protect a cat, and once again, the only safe cat is an indoor cat. Feeding cats outside can attract coyotes and other wildlife; do not feed cats outdoors.

Dogs

Dogs, especially small dogs, can face conflicts with coyotes as well. Elderly, overweight, and sick dogs are particularly likely to have issues if left outside unattended. Even a dog tied up with a leash or lead and left unattended is at a risk. To keep our pets safe, it is best to be outside with them, close by. Keeping a dog on a leash less than six feet will protect it from many outside dangers.

Dogs can be very territorial. Keeping them on leash will prevent them from attempting to chase off a coyote that comes into the yard. An invisible fence can prevent a dog from chasing a coyote out of the yard and out of your control. Coyote hazing is most effective when there are no dogs in the yard, as coyotes are naturally curious about dogs. Their curiosity may outweigh their flight impulse while you're trying to haze them away.

If an encounter occurs while walking a dog, do not run away. If possible, pick up your dog and continue to walk away calmly. If your dog is too large to carry, keep it close on leash and walk away. You can carry a whistle or airhorn to scare it away. Pet safety/training citronella spray may work to deter a coyote if you or your pet are approached.



LIVESTOCK & **OUTDOOR PETS**

The best way to protect our outdoor pets and smaller livestock is to make sure they are housed in wildlifeproof enclosures. This means making sure they are protected from above and below. Perimeter fencing should go completely around the entirety of the enclosure, be at least six feet tall, and be buried at least 12 inches below ground. Adding fencing or a roof to the top of enclosures will prevent predators from climbing over. Inadequate fencing is as good as no fencing at all.

Keep in mind, a predator does not know that your hutch rabbits or chickens or koi fish are your pets – they see an easy meal. When every meal could mean the difference between life or death, they will take advantage of every opportunity. If outside pets are able to be attacked by wildlife, they are not properly protected.

These suggested methods are not intended for livestock farmers; there are very different needs, requirements and complications regarding mitigating predation under these circumstances. For assistance with livestock predation, please contact the Division of Fish & Wildlife directly.

COYOTE ATTACKS ON PETS OR LIVESTOCK

If your pet is attacked by a coyote, call your local Animal Control Officer and veterinarian immediately. You should also report the attack to the Division of Fish & Wildlife. The Animal Control Officer or veterinarian will be able to assess your pet's needs and inform you if it needs to be brought in for care.

COYOTE RESEARCH, OUTREACH & EDUCATION PROGRAMS

RIDEM/DFW WILDLIFE OUTREACH PROGRAM

The DFW offers educational coyote programs for schools and communities through our Wildlife Outreach Program. To learn more, contact our Wildlife Outreach Coordinator, Mary Gannon, at Mary.Gannon@dem.ri.gov or by calling 401-782-3700.

COOPERATIVE COYOTE RESEARCH PROJECT

The Rhode Island Natural History Survey & the Conservation Agency, Rhode Island Coyote Study: Research biologists have teamed up with RIDEM, Division of Fish & Wildlife, to conduct a five-year research study into coyote food resource and land use. information that can he found on project http:// theconservationagency.org/narragansett-bay-coyote-study/. Call or email the Narragansett Bay Coyote Study to report coyote observations, sightings, incidents, encounters or attacks so that we may collect, track and analyze data involving coyotes in Rhode Island.

TOWN COYOTE AWARENESS & SAFETY COMMITTEES

Towns can better coordinate a plan of action regarding incidents with coyotes if they have a coyote management plan in place. This will help residents better understand their rights and options, the roles of town and state officials regarding nuisance coyotes, and how to find and utilize available resources. Ordinances such as "No Coyote Feeding" laws can help prevent coyote issues. Some towns elect to set down a Coyote Safety & Coexistence Plan so that policies and procedures are in place to respond to coyote incidents. For an example of this, see the Town of New Castle Coyote Safety & Coexistence Plan: https://www.village.mamaroneck.ny.us/sites/mamaroneck.ny/files/uploads/coyote-proposal.final-for-printing.pdf

COMMUNITY COYOTE HAZING GROUPS

There are many resources available to those who are interested in forming community coyote hazing groups to more effectively reeducate habituated coyotes. A Template Coyote Management & Coexistence Plan, available from The Humane Society of the United States at: https://www.humanesociety.org/sites/default/files/docs/coyote-management-coexistence-plan.pdf, can provide guidance along with the additional resources in the following section.

RESOURCES & FURTHER READING

RIDEM Management & Response Protocols for Incidents Involving Coyotes http://www.dem.ri.gov/programs/bnatres/fishwild/pdf/coyotpol.pdf

RIDEM Division of Fish & Wildlife Information Sheets

http://www.dem.ri.gov/programs/fish-wildlife/wildlifehuntered/wildlifemanagement/

Visit <u>CoyoteSmarts.org</u> for more information about coyotes in Rhode Island, their research, or to report a coyote sighting.

www.wildlifehelp.org is a collaborative online resource created by governmental and non-governmental wildlife agencies. It gives situation and location specific advice on how to best mitigate wildlife conflicts.

The State of Rhode Island Manual for Rabies Management and Protocols http://www.dem.ri.gov/programs/agriculture/documents/rabiesprot.pdf

RIDEM regulations, including the following, can be found at the RI DEM website:

Rhode Island Hunting & Trapping Regulations https://rules.sos.ri.gov/regulations/part/250-60-00-9

Rules & Regulations Governing the Prevention, Control and Suppression of Rabies Within the State Of Rhode Island https://rules.sos.ri.gov/regulations/part/250-40-05-2

Rhode Island Rules and Regulations Governing Importation and Possession of Wild Animals https://rules.sos.ri.gov/regulations/part/250-40-05-3

Rhode Island Rules and Regulations Governing Collector's Permits https://rules.sos.ri.gov/regulations/part/250-60-00-4

Rhode Island General Laws, Fish and Wildlife: State of Rhode Island General Laws/ Title 20- Fish and Wildlife

RIGL: 20-1-2, 20-1-4, 20-1-8, 20-16

Rhode Island General Laws, Department of Environmental Management: <u>State of Rhode Island</u> General Laws/Title 42-17.1-Department of Environmental Management

Rhode Island General Laws, Criminal Offenses: <u>State of Rhode Island General Laws/ Title 11/</u> Chapter 47- Weapons

GLOSSARY

<u>Altricial:</u> Neonates that are born in a relatively undeveloped condition (eyes closed and with minimal fur present and require prolonged parental care; as opposed to precocial)

Crepuscular: exhibiting activity concentrated near sunrise and sunset

Diurnal: exhibiting peak activity during daylight hours and resting when it is dark.

Neonates: Newborn animals

Nocturnal: exhibiting peak activity during hours of darkness and resting when it is daylight

Pelage: All the hairs on an individual mammal, i.e. coat

<u>Precocial:</u> Born in a relatively well-developed condition (eyes open, fully furred, and able to move immediately) and requiring minimal parental care, *e.g.* snowshoe hares, deer, and porcupines, as opposed to altricial

Transient: Individuals that do not defend or maintain a home range, but rather travel throughout a larger territory

REFERENCES

Bonnell, M. A. and S. Breck. 2017. Using resident-based hazing programs to reduce human-coyote conflicts in urban environments. Human-Wildlife Interactions. 11(2): 146-155

Brewster, R. K., et al. 2017. Do you hear what I hear? Human perception of coyote group size. Human-Wildlife Interactions. 11(2): 167-174

[CDC] Centers for Disease Control and Prevention. 2015 May 18. Preventing Dog Bites. Retrieved From: http://www.cdc.gov/features/dog-bite-prevention/

Chapman, J. A., and G. Feldhamer. 1982. Wild Mammals of North America, Biology, Management, and Economics. The Johns Hopkins University Press, Baltimore and London. p. 1147

[CPW] Colorado Parks and Wildlife. 2010. Coyote Exclusions, Deterrents and Repellents. Updated January 2010. Available from: https://cpw.state.co.us/Documents/WildlifeSpecies/LivingWithWildlife/Coyote-Exclusions-Deterrents-Repellents.pdf

CoyoteSmarts [Internet]. Narragansett Bay Coyote Study: Rhode Island Natural History Survey [updated 8 Jan 2019]. Available from: http://www.coyotesmarts.org

Cronan, J. M. and A. Brooks. 1968 revised. The Mammals of Rhode Island. Wildlife Pamphlet No. 6 Rhode Island Department of Natural Resources, Division of Conservation. p. 133

Feldhamer, G.A., L. Drickamer, S. Vessey, J. Merrit. 2004. Mammalogy. 2nd Edition. New York, N.Y., McGraw-Hill.

[HSUS] The Humane Society of the United States. A template Coyote Management & Coexistence Plan. Available from: https://www.humanesociety.org/sites/default/files/docs/coyote-management-coexistence-plan.pdf

Parker, G. R. 1995. Eastern Coyote, The Story of Its Success. Nimbus Publishing, Halifax, Nova Scotia, Canada. p. 254

Ray, J. C. 2000. Mesocarnivores of Northeastern North America: Status and Conservation Issues. WCS Working Papers 15: 84

Rhode Island Department of Environmental Management [RIDEM]. 13 March 2006. Management & Response Protocols for Incidents Involving Coyotes. Available from: http://www.dem.ri.gov/programs/bnatres/fishwild/pdf/coyotpol.pdf

Special Topic: Cosmopolitan Coyotes. Fall 2017. Human-Wildlife Interactions. Vol. 11(2). Berryman Institute, Department of Wildland Resources, Utah State University, Logan, UT 84322-5230, USA

[TCA] The Conservation Agency. Best Management Practices for Coexistence with Coyotes on Aquidneck and Conanicut Islands [updated 27 Feb 2017]. Available from: http://theconservationagency.org/wp-content/uploads/Best-Management-Practices-for-Coexistence-with-and-Management-of-Coyotes-current-vers.pdf

[TCA] The Conservation Agency. 2014. Narragansett Bay Coyote Study. Retrieved From: http://theconservationagency.org/narragansett-bay-coyote-study/

Town of New Castle: Coyote Awareness & Safety Advisory Committee. 10 February 2015. Coyote Safety & Coexistence Plan. Available from: https://mynewcastle.org/coyote-awareness-safety-coexistence-plan/

Trout, J. 2001. Solving Coyote Problems, How to Outsmart North America's Most Persistent Predator. The Lyons Press, Guilford, CT. p. 286

[USFWS] United State Fish & Wildlife Service. Information on the gray wolf in California – Coyote or gray wolf: know the difference. Cited 9 July 2019. Available from: [https://www.fws.gov/nevada/nv_species/documents/gray_wolf/Wolf_handout_FINAL.pdf

vonHoldt, B. M., et al. 2011. A genome-wide perspective on the evolutionary history of enigmatic wolf-like canids. Genome Research: Cold Spring Harbor Laboratory Press. 21: 1294 – 1305.

Whitaker, J.O., Jr., W. Hamilton, Jr. 1998. Mammals of the Eastern United States. Cornell University Press, Ithaca and London. p. 583

White, L.A. & S. Gehrt. 2009. Coyote attacks on humans in the United States and Canada. Human Divisions of Wildlife. 14: 419-432

Coyote photographs courtesy of the United States Fish and Wildlife Service unless otherwise noted.



EASTERN COYOTE MANAGEMENT & RESPONSE **GUIDE**

RHODE ISLAND DEPARTMENT OF **ENVIRONMENTAL MANAGEMENT**

DIVISION OF FISH AND WILDLIFE

Great Swamp Field Headquarters 277 Great Neck Road, West Kingston, RI 02892 401-789-0281 | DEM.DFW@dem.ri.gov Hours of Operation: Monday – Friday 8:30am – 4:00pm

DIVISION OF LAW ENFORCEMENT CHIEF DEAN HOXIE

Closed Weekends

24hr Violation Line: (401) 222-3070

Created and compiled by Sarah M. Riley, AWB® Last Updated: February 2022



