

Don't Let New Hampshire Go...

HOG WILD!

Voracious, destructive feral swine leave havoc in their wake.

They're big, hairy, hungry and hopefully not coming to a neighborhood near you. Today's free-ranging feral swine (*Sus scrofa*) are known by many names – wild pig, razorback, feral hog, Russian boar and piney-woods rooter among them. They are not native to North America and claim a varied ancestry that can be traced to swine brought by Spanish explorers, escaped domestic swine, Eurasian wild boar and hybrids of these three.

In the past few decades, feral swine have expanded their range in the United States, and have arguably become the most invasive and destructive large mammal species in North America. They have been labeled an ecological disaster, in large part because our ecosystems did not evolve with feral swine and therefore have not adapted to their damaging behavior. Feral swine also serve as vectors for a number of diseases and parasites that pose a threat to humans, livestock, wildlife and pets. Vehicle collisions are another concern because of the animals' dark coloring, low profile and nocturnal nature.

Historically, feral swine populations in New Hampshire have either been Eurasian wild boar or hybrids. Swine were first introduced by European settlers in the early 1500s; over time, it became commonplace to free-range these domestic pigs. Many years later, sport hunting operations imported European wild boar throughout the U.S. Today, we are left with a hybrid that has resulted from years of cross-breeding.

Although they are a relatively new phenomenon in the

northern United States, we now have a confirmed feral swine population in New Hampshire that presents a unique management challenge. Reports of feral swine were documented as early as 1895 and continue today statewide, primarily in Grafton, Sullivan and Cheshire Counties. Although it is difficult to estimate the number of feral swine in our state, damage complaints and sightings have been on the increase.

BREEDING MACHINES

Feral swine should not be confused with the collared peccary or javelina (*Tayassu tajacu*), the only native pig-like animal free-ranging in North America. Razorbacks are both habitat generalists and opportunistic omnivores, making them one of the most highly adaptable animals in the world. They thrive in the sweltering swamps of southern Florida and can endure the rugged winters of Canada. They come in many colors, shapes and sizes due to their hybridizations. Individuals can be gray, red, tan or cream colored, but are most often black or brown. They can also be belted, spotted or striped, with various color patterns. Those descendants of Eurasian stock normally have longer legs, longer snouts and longer guard hairs (which run neck to tail), and are grizzled brown to black in color. An average adult weighs anywhere from 100-200 pounds. In rare instances, they can grow to be 350 pounds or more, but these abnormally large swine tend to be of recent domestic ancestry.



by
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Above: Feral sow and piglets. With multiple litters in a year, razorbacks can triple their population in a single year.

Feral swine have the greatest reproductive potential of any large mammal worldwide.

Below: Amazingly resilient, feral swine can tolerate tropical heat or rugged northern winters.



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No, that's not a deer track. Feral swine tracks are rounder and more blunt at the tips than those of deer.

Feral swine have the greatest reproductive potential of any large mammal worldwide. They can breed any time of year and under optimal conditions, sows are bred at six months of age and may produce multiple litters in a given year (gestation is about 115 days), with each litter consisting of 3-13 piglets. Piglets are weaned at about three months of age. Adult males (boars) are often solitary outside of breeding season, but females (sows) live in groups (called “sounders”) which typically consist of 2-3 adult sows, their piglets and sub-adult males and females from previous litters. Feral swine have the highest productivity of any ungulate (hoofed animal) in North America, with the ability to triple their population in a single year. They have a high survival rate because of a lack of natural predators and their ability to endure high hunting harvest rates.

ENVIRONMENTAL DESTRUCTION

Feral swine are voracious omnivores and have documented negative impacts on native animals and plants. Although tubers, roots, grasses and other plant matter represent a majority of their diet, they will consume nearly anything they come across or catch, from carrion to invertebrates. Their varied menu includes soft and hard mast (berries, nuts, etc.), earthworms, insects, frogs, salamanders, lizards, snakes, small mammals, ground-nesting birds like wild turkey and grouse, and even white-tailed deer fawns. They can have a direct impact on threatened and endangered or sensitive species. In Florida, they have contributed to the decline of many listed species, including at least 22 plants and 4 amphibians, and have been linked to the destruction of up to 80% of sea turtle nests in some regions. Feral swine are fierce competitors and will out-compete native wildlife for food and forage, including acorns, which are an important and variable resource for white-tailed deer, wild turkey, black bear, ruffed grouse and other wildlife in New Hampshire.

It's easy to tell if feral swine have been in an area, because they leave behind obvious, unique sign. Their tracks are similar to those of deer, although they are rounder in overall shape and tend to be more splayed and blunt at the tips than deer tracks. The most common marker results from their aggressive rooting behavior. They use their snouts to uproot vegetation and earth in search of invertebrates, roots and tubers. Severity can range from superficial rooting of less than 6 inches deep to more extensive gouging 1-2 feet deep. Their rooting can cause substantial property damage in suburban communities, destroying lawns and landscape, backyard gardens, parks and golf courses. Areas rooted by feral swine look like they have been run over by a fleet of out-of-control Rototillers. Fences, roads and earthen dikes may be damaged. Swine also damage the landscape by creating wallows, which they lie in to cool off and get

rid of external parasites. Trees can be damaged when feral swine rub on them to remove excess mud and parasites, and boars use their tusks to remove tree bark as a scent-marking behavior.

Feral swine destroy native habitat by rooting, trampling and wallowing. This causes soil erosion and runoff, leading to sedimentation in streams, ponds and lakes. They impact forest regeneration by rooting, trampling and devouring mast and seedlings. They damage wildlife plantings and food plots, and the disturbed soils they create favor growth of exotic plants. Besides humans, feral swine have been labeled the greatest vertebrate modifier of our natural communities.

Nationally, the destructive behavior of feral swine causes an estimated \$1.5 billion dollars in agricultural and environmental damage annually. Razorbacks consume and trample crops like corn and soybeans and damage pasture by rooting and creating wallows. They prey upon lambs, goats, newborn cattle and poultry. They can also stress livestock through harassment and food competition, as well as serving as a vector for disease transmission.

DISEASE RISK

Feral swine are known to carry as many as 30 diseases and 37 different parasites. Many of these are a risk to humans, livestock, wildlife and pets. Humans are susceptible to such diseases as brucellosis, leptospirosis, influenza viruses, toxoplasmosis, and trichinosis. In 2006, feral swine were implicated in the contamination of California spinach fields that infected hundreds of people with *E. coli*. Along with the human health risks, these disease threats pose a great concern to the multi-billion dollar U.S. livestock industry. They can carry livestock diseases such as foot and mouth disease and classical swine fever, both foreign animal diseases that have been eradicated from the United States; if reemerged, they could severely impact our livestock trade exports and result in billions lost. Some of these infectious diseases would be very difficult, if not impossible, to eradicate and likely would be amplified if established in feral swine populations.

PLAN OF ATTACK

Feral swine populations have expanded significantly across the U.S. over the past 20 years. Currently, an estimated 5 million animals inhabit 38 states, whereas in 1982 they were found in just 17 states. They are most prevalent in California, Texas and the southeastern states. While some increase in range is natural, much of the recent expansion is due to illegal and intentional introductions. In some instances, high-fenced hunting operations may have many miles of fence line that can be damaged by storms, neglect or even poachers looking to release animals. Along with escapes from domestic swine

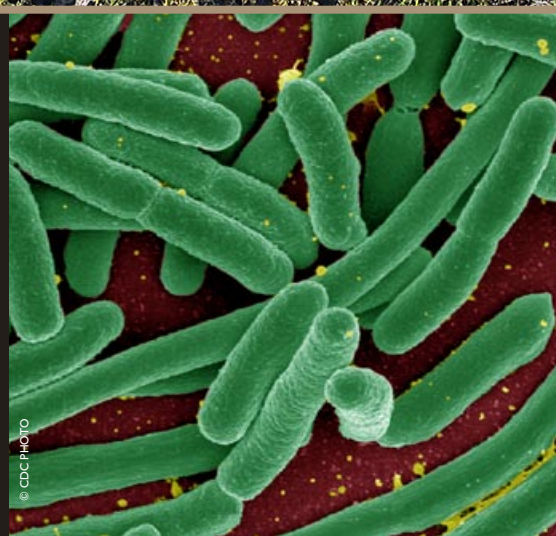


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From top: Rooting swine can leave a lawn looking like it was attacked by a fleet of out-of-control Rototillers; wallows created by swine damage the landscape; swine can transmit diseases and contamination from *E. coli* bacteria.



© CDC PHOTO

facilities, some rural backyard operations still free-range their domestic pigs. Natural range expansion and illegal introductions, coupled with the extreme adaptability of feral swine, fuel the continued spread of this destructive animal.

So what is being done to combat this problematic pest in New Hampshire? The U.S. Department of Agriculture/APHIS-Wildlife Services (WS) assists landowners in New Hampshire who have feral swine-

related property damage through trapping and shooting of hogs. The WS New Hampshire Program also participates in the WS National Wildlife Disease Program's feral swine disease surveillance and monitoring efforts.

Nonlethal methods of feral swine control may include fencing or using guard animals to protect livestock or property. These are often more expensive and less practical than lethal methods. Trapping and shooting are the most effective and efficient means of controlling feral swine; this can include the use of corral, box and cage-style traps.

In certain situations, shooting over bait and regulated hunting (in states where it is legal) can be successful. Hunting is unlikely to control free-ranging feral swine populations, however. On average, hunting can remove 20% of a population

annually, while population modeling suggests that maintaining a stable to decreasing feral swine population would require 50-70% annual removal. For an effective feral swine control program, an integrated approach is best – including trapping, shooting, fencing and public education.

Feral swine have no legal game status in New Hampshire, but are considered escaped private property and may only be hunted with permission of the property owner. Since 1949, feral swine have been defined in the state as animals "Running at Large" under RSA 467:3. Nationally, feral swine fall under a variety of legal classifications, from game species to escaped livestock, depending on the state. However, in most cases they are considered an invasive or exotic species.

At this time, feral swine populations in the northeastern United States appear to be relatively sparse. However, there are confirmed populations in New Hampshire, New Jersey, New York and Pennsylvania. Several of our neighboring states are also suspected to have transient populations. It is important to control their numbers and expansion, or the significant ecological and economic problems associated with feral swine will soon become all too common in New Hampshire.

"It's imperative that we prevent feral swine from becoming firmly established in our state," warns N.H. Fish and Game wildlife biologist Mark Ellingwood. "Their devastating impacts on plant communities and sensitive habitats; their deleterious impacts on amphibians, reptiles, ground-nesting birds and other native wildlife; and their role as a significant potential disease vector to wildlife, make feral swine a major threat to a cornerstone of the 'New Hampshire advantage' – our cherished wildlife resources." **W**

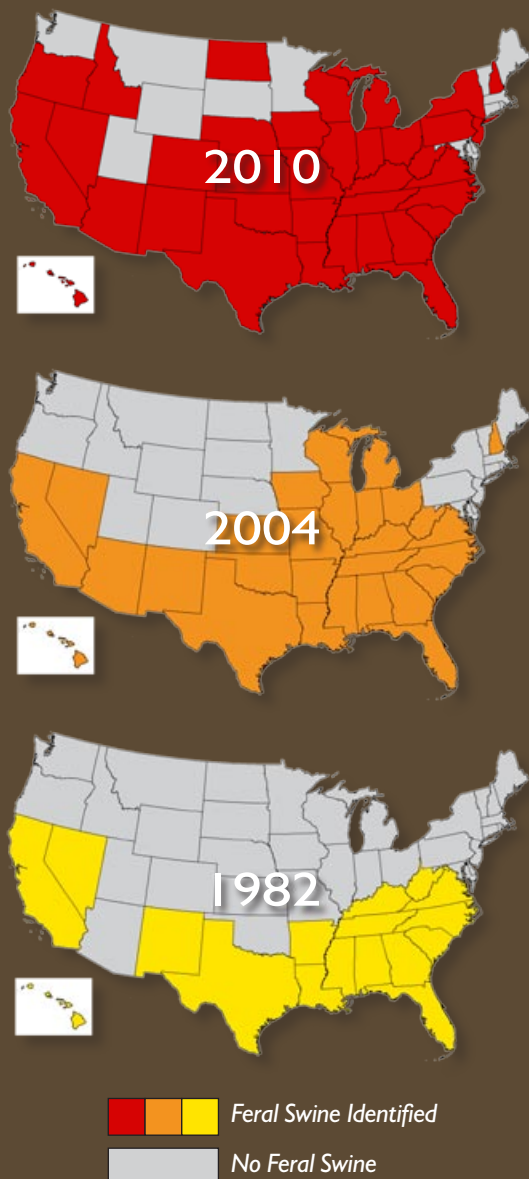
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Distribution of Feral Swine in the U.S.

Feral swine are quickly spreading across the United States due to natural population growth, illegal move-

ment by hunters, and escapes from domestic swine operations. Experts estimate their numbers at over 5 million animals nationwide.



To report feral swine damage or sightings, contact:

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