# Armadillos

Figure 1. Armadillo (*Dasypus novemicinctus*). Photo by USFWS.

## Objectives

1. Communicate control options to clients.
2. Effectively control armadillos in different scenarios.
3. Diagram of a typical set used to capture armadillos.
4. Identify various risks involved with working with armadillos.

## Overview of Damage Prevention and Control Methods

### Exclusion

Difficult due to digging and climbing

### Habitat Modification

Removal of brush or other cover

### Frightening

None are effective

### Repellents

None have proven successful

### Toxicants

None are available

### Fumigants

None registered

### Shooting

Spotlighting and shooting at night; local regulations on discharging firearms may prohibit this method

### Trapping

Cage or box traps:

single door 10-x 12- x 32-inches
double-door 10-x 12-x48-inches

### Other Control Methods

Hand netting

## Species Profile

### Identification

"Armadillo" is Spanish for "little armored one." Nine protective plates between the shoulder and the hip provides for "nine-banded."

### Physical Description

The nine-banded armadillo (*Dasypus novemcinctus*) is an unusual animal that has a protective armor of "horny" material on its head, body, and tail (Figure 1). More than 90 percent of an armadillo's diet is made up of insects and insect larvae. The damage they cause is localized to turf and can be extensive and troubling to people who care about their lawns, especially golf courses, parks, sports fields, and commercial turf.

The body armor of the armadillo has nine movable rings between the shoulder and hip shield. The head is small with a long, narrow, pig-like snout. Canine and incisor teeth are absent. The peg-like cheek teeth range in number from seven to nine on each side of the upper and lower jaw. The long tapering tail is encased in 12 bony rings. Armadillos are about the size of opossums, weighing from 8 to 17 pounds.

### Species Range

Armadillos have a range from south Texas to the southeastern tip of New Mexico, through Oklahoma, the southeastern corner of Kansas, the southwestern corner of Missouri, most of Arkansas, and southwestern Mississippi. The range includes central Alabama, Georgia, and most of Florida. Their range has been extending northward (Figure 2).

Figure 2. Armadillo range in the US. Image by PCWDM and Stephen M. Vantassel.

### Voice and Sounds

Armadillos make a variety of low grunting sounds when feeding to call young to mother. Other sounds are described as “wheezy grunt,” “pig-like sound,” “buzzing noise,” and a “weak purring” made by very young armadillos while attempting to nurse.

### Tracks and Signs

Tracks usually appear to be 3-toed and show sharp claw marks (Figure 3).

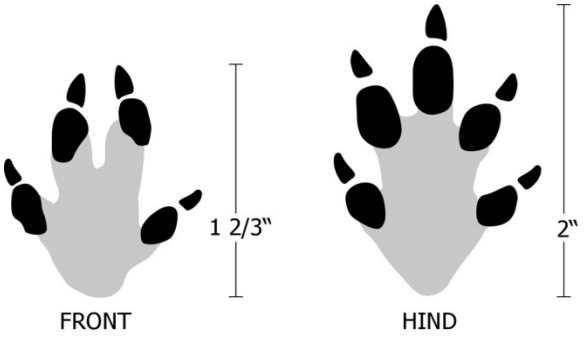


Figure 3. Armadillo tracks. Image by Dee Ebbeka.

## General Biology

### Reproduction

Young armadillos are born in a chamber within the burrow. Females produce 1 litter each year in March or April after a 150-day gestation period. Litters always consist of identical quadruplets derived from a single egg. Young are self-sufficient in three to four months. Males are sexually mature in six to 12 months from birth and females in 12 to 24 months.

### Nesting Cover

Armadillos usually dig burrows 7 or 8 inches in diameter and up to 15 feet in length for shelter and raising young. Burrows are located in rock piles, around stumps, brush piles, or terraces around brush or dense woodlands. Armadillos often have several dens in one area.

### Behavior

Armadillos are active primarily from twilight through early morning hours in the summer. Armadillos are active during times that avoid temperature extremes. In the winter armadillos forage during the warm part of the day. In the summer they forage during the evening or earlier if shaded conditions are favorable. Mating, typically in July, may result in greater movement of male armadillos.

### Habitat

Armadillos prefer dense, shady cover such as brush, woodlands, forests, and areas adjacent to creeks and rivers. They prefer sandy or loam soils that are loose and porous. Armadillos will inhabit areas with cracks, crevices, and rocks that are suitable for burrows.

### Food Habits

More than 90 percent of an armadillo's diet is made up of insects and larvae, though they also feed on earthworms, scorpions, spiders, and other invertebrates. Armadillos eat fruit and vegetable matter such as berries and tender roots, as well as maggots and pupae in carrion. Adults and eggs of skinks (a salamander-like creature), lizards, small frogs and snakes, are occasionally eaten. Armadillos have been implicated in nest depredation of upland birds.

### Legal Status

Armadillos are unprotected in Alabama and most other states.

## Damage Identification

Characteristic signs of armadillo activity are shallow holes 1 to 3 inches deep and 3 to 5 inches wide, which are dug in search of food. Some people complain that armadillos keep them awake at night by rubbing their shells against houses or other structures.

### Damage to Structures

Damage by armadillos to structures is caused by burrowing under foundations, concrete slabs, driveways, pools, and other structures.

### Damage to Pets and Livestock

Armadillos will eat domestic poultry eggs. This loss can be prevented through proper housing or fencing of nesting birds.

### Damage to Landscapes

Armadillos uproot flowers and other ornamental plants. Damage to turf can be extensive, though it can be difficult to distinguish from raccoon damage to turf (Figure 4).

Figure 4. Armadillo damage to turf. Photo by Ron Fry.

### Health and Safety Concerns

Armadillos can be infected by the bacterium *Mycobacterium leprae*, the causative agent of leprosy. It is unclear how easily infected armadillos can transmit the disease to humans during handling. Avoid touching armadillos with

bare skin. Armadillos also can carry *Trypanosoma cruzi*, the parasite responsible for Chagas disease, though this infection normally is vectored to humans by an insect bite. Avoid contact with armadillo blood and fluids.

## Integrated Pest Management

### Habitat Modification

Armadillos prefer to have their burrows in areas that have cover. The removal of brush or other cover may discourage them from becoming established.

### Exclusion

Armadillos climb and burrow. Fencing or barriers, however, may exclude armadillos under certain conditions. A fence should be buried 12 to 18 inches (go deeper for sandy soil) and should extend at least 3 feet high. Slant the above ground portion at an outward 40$^{o}$ angle to prevent climbing.

### Frightening Devices

No effective frightening devices are known to control armadillos.

### Repellents

No repellents are currently registered for control of armadillos.

### Toxicants

No toxicants are currently registered for control of armadillos.

### Fumigants

No fumigants are registered for control of armadillos, though there are some that are effective. State pesticide registrations vary so check with your local extension office or state wildlife agency for information on pesticides that are legal in your area.

### Shooting

Shooting may be used to control nuisance armadillos where it is legal to discharge a firearm. Recommended firearms include a shotgun with No. 4 to BB-sized shot or .22 or other small caliber rifle.

A permit must be obtained before harvesting armadillos with the aide of a light. Armadillo meat is edible if properly prepared.

### Trapping

#### *Cage Traps*

Armadillos can be captured in 10- x 12- x 32-inch single-door cage or box traps. The best locations to set traps are along pathways to armadillo burrows and along fences or other barriers where the animals may travel. **Note: armadillos will destroy poorly constructed traps. Use only professionally manufactured traps when trapping armadillos**.

The best cage or box trap type is one that can be opened at both ends (10 x 12 x 48 inches). Trap effectiveness is enhanced by using “wings” of 1- x 4-inch or 1- x 6-inch boards about 6 feet long to funnel the target animal into the trap (Figure 5).

Sets such as those depicted in Figure 5 do not need baiting. If bait is desired, use overripe or spoiled fruit, rotten meats, or mealworms. Research has not found bait that is highly effective for attracting armadillos. The use of bait provided no added advantage over using traps with wings in blind sets in a recent study.

Figure 5. Wings situated on a 2-door cage trap. Photo by Tomahawk Live Trap Co.

**Caution:**

Armadillos are aggressive diggers. They may "finish" feeding at a small yard before you begin to set your trap which will cause trapping to be in vain. If the lawn is less than a ¼ acre in size, ask the client how long the damage has occurred. If it was more than a day before you arrived, trapping is unlikely to be effective.

Foothold Traps

No. 1 or 2 foothold traps can be placed in runways and entrances to burrows. Stake them securely with a long trap stake or two shorter double-crossed stakes.

### *Snares*

Snares are not recommended with the exception of the use of 1/8-inch snares in front of a den. Securely anchor snares to a tree, trap stake, or other solid object. Some states restrict use of snares for wildlife control.

## Handling

### *Relocation*

Relocation of armadillos usually is not practical.

### *Translocation*

Translocation is not recommended.

### *Euthanasia*

Carbon dioxide is effective euthanasia for armadillos.

### *Disposal*

Check your state regulations regarding carcass disposal.

## Other Control Methods

In open areas, armadillos can be captured with a fishnet. One researcher found that trained dogs were effective in identifying burrows inhabited by armadillos.

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## Resources

## Key Words

Wildlife, wildlife control, damage management, nwco, armadillo

## Online Resources

http://wildlifecontroltraining.com

http://icwdm.org/

http://wildlifecontrol.info

## Questions for Reflection

1. What bait is effective for catching armadillos?
2. Name the two primary ways armadillos cause damage to personal property.
3. What diseases are of concern with armadillos?
4. A client's lawn has been destroyed by an armadillo, and he wants you to set a trap. What would you do and why?

## Disclaimer

Implementation of wildlife damage management involves risks. Readers are advised to implement the safety information contained in Volume 1 of the National Wildlife Control Training Program.

Some control methods mentioned in this document may not be legal in your location. Wildlife control providers must consult relevant authorities before instituting any wildlife control action. Always use repellents and toxicants in accordance with the EPA-approved label and your local regulations.

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