OPOSSUM

Integrated Pest Management for Homes, Gardens, and Landscapes

The opossum (*Didelphis virginiana*) is the only native North American marsupial. Marsupials are distinguished by their abdominal pouch used for carrying their young. The opossum is not native to California but was introduced in San Jose in 1910 from the east coast of the United States and has now become well established throughout much of the state.

IDENTIFICATION

An opossum is about the size of a house cat, has coarse grayish fur, a pointed face, and hairless, rounded ears (Figure 1). With its long hairless prehensile tail, the opossum can carry things such as nesting materials and even hang upside down from a tree branch.

Opossums are about 2 to 3 feet long, including the tail, and weigh up to 15 pounds, although most fall within the 4 to 7 pound range. Males are usually larger than females. Their feet resemble small hands with five widely spread fingers (Figure 2). All of the toes have a claw except for the opposable thumb on the rear foot. Opossums are well adapted for climbing (Figure 3). The opposable toe on the hind foot assists in holding on to small branches or similar structures.

BIOLOGY AND BEHAVIOR

While their natural habitats are diverse, ranging from arid to moist and wooded to open fields, opossums prefer environments near streams or wetlands. They take shelter in abandoned burrows of other animals, in tree cavities and brush piles, and beneath other dense cover.

In urban and suburban settings they may den under steps, porches, decks, garden tool sheds, and if accessible, in attics, garages, and beneath houses, where they make an untidy nest of sticks and whatever else may be available. The nest components appear piled together rather than woven or stacked. They have complex but flexible social relationships, with overlapping home ranges that allow high populations to develop when food is plentiful.

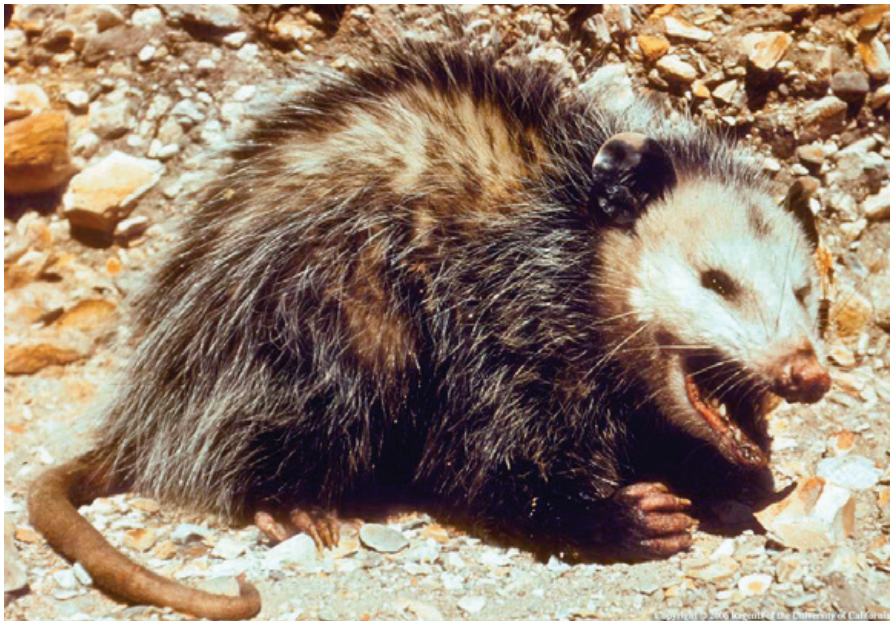

Figure 1. Adult opossum.

In its foraging, the nocturnal opossum is a true omnivore, feeding on fruits, nuts, green plants, insects, snails, snakes, frogs, birds and their eggs, and small mammals such as meadow voles, mice, and rats. It eats both fresh meat and carrion and is often seen feeding on road kills, a habit that makes it vulnerable to also being killed.

Opossums that live near people may visit vegetable gardens, compost piles, garbage cans, or food dishes intended for dogs or cats. Having lost much of their natural fear of people, they will even enter a home through a pet door in search of food. Fortunately, they are not aggressive unless cornered, when they may hiss, growl, and show their teeth.

There are typically two mating seasons for opossums in California: January through February, and June through July. The resultant two litters yield an average of about 7 young each. After a short 13-day gestation period, the tiny, hairless young are born. Like other marsupials, the blind, helpless young find their way into the mother's pouch where they each attach to one of the 13 teats. No bigger than one-half inch and weighing less than 0.13 gram, they do not let go for about 8 weeks, during which time they continue their development and growth.

At approximately 11 weeks of age they can leave the pouch for short periods. When the young become too large for all of them to fit inside the pouch at one time, some will ride along by hanging on to the mother's back (Figure 4).

The young are weaned at about 14 weeks, at which time they are about 9 inches long, not including the tail.

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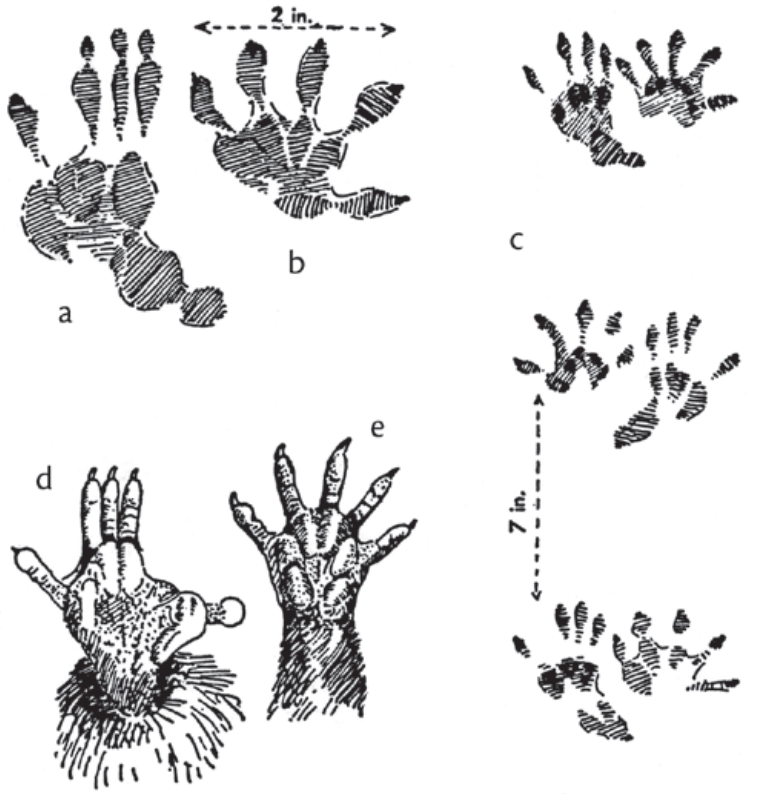

Figure 2. a: Hind foot track; b: front foot track; c: trail pattern; d: hind foot, note unusual arrangement of the toes; e: front foot.

Females mate again after the first litter of the season is able to live on their own. The second litter will be sufficiently grown to leave the mother by fall. Mortality in the young is high; most will perish before they are a year old. Those that survive will breed the following spring. Few opossums live beyond 3 years.

Opossums have a top running speed of only 7 miles per hour, so they have developed strategies to escape enemies. They readily enter burrows and climb trees in an attempt to elude danger. When threatened, an opossum may bare its teeth, growl, hiss, and exude a repulsive, smelly, greenish musk like fluid from its anal glands, which offers some degree of protection from predators.

"Playing possum" is another characteristic reaction; the animal rolls over on its side, becomes limp, shuts its eyes, and lets its tongue hang from an open mouth. The heartbeat slows and the animal appears to be dead. This is a nervous shock reaction, but the opossum recovers quickly and takes the first opportunity to escape. When surprised during daylight, opossums appear bewildered and sluggish.

DAMAGE

Opossums are considered a nuisance in gardens and near homes where they feed on berries, grapes, tree fruits and nuts, and defecate on garden paths and patios. They get into fights with dogs and cats and can inflict serious injury with their mouthful of sharp pointed teeth.

Opossums carry diseases such as leptospirosis, tuberculosis, relapsing fever, tularemia, spotted fever, toxoplasmosis, coccidiosis, trichomoniasis, and Chagas disease. They may also be infested with fleas, ticks, mites, and lice. Opossums are hosts for cat and dog fleas, especially in urban environments. This flea infestation on opossums is particularly concerning for transmission of flea-borne typhus,

Figure 3. Opossums are well adapted to climb trees.

which is increasing in prevalence in Orange and Los Angeles Counties.

LEGAL STATUS

The California Fish and Game Code classifies opossums as nongame mammals. If you find opossums threatening growing crops or other property of which you are the owner or tenant, you may control the opossum using any legal means. California Department of Fish and Wildlife regulations prohibit the relocation of wildlife without written permission from the department. Check to make sure there are no municipal or county restrictions pertaining to the removal of opossums prior to taking any action.

MANAGEMENT

Control methods for opossums are the same or similar to those for skunks and raccoons. Opossums do not usually become as numerous as raccoons and are not as objectionable as skunks. Opossums are highly adaptable and are great survivors. Once they have invaded a neighborhood they are probably there to stay so long as food, water, and shelter are available.

Detection

Because they are only active at night and low-light hours, opossums might

never be seen as they travel through neighborhoods or yards. Barking dogs and disappearing pet food left out overnight may be the first apparent clues.

Sometimes strange-looking droppings (scat) may be found on garden paths, walkways, and patios, though typically opossums defecate in protected and leafy areas. The scat is difficult to describe as the omnivorous eating habits of the animal preclude an average size, shape, or texture.

Figure 4. Young opossums are sometimes seen riding on their mother's back.

Since opossums are messy feeders, you may find remnants of the previous night's foraging and feeding. An occasional visit by an opossum or a family of opossums may not present cause for concern unless you have pets that remain outdoors at night. Pet and opossum confrontations are relatively common and the pets are often injured. Early action may be warranted to avoid such a problem.

Habitat Modification

The aim of habitat modification is to make your premises less appealing to the opossum. Cut back overgrown shrubbery and trim back trees that overhang rooftops at least 5 feet from the roof edge. Continually remove any fallen fruit, which will be readily fed upon by opossums.

Be sure firewood is stacked tightly, leaving no major gaps suitable for a den. Store scrap lumber and other items in an orderly manner, preferably about 18 inches off the ground. Ensure garbage cans have tight-fitting lids and do not place food items or table scraps in your compost bin. Pet food placed outdoors should be removed by nightfall. This will substantially reduce or eliminate the potential negative interactions between pets and opossums.

Exclusion

As with skunks and raccoons, the best solution to an opossum's presence beneath stairs, porches, decks, or buildings is to screen or block access to the area. Close off all potential entrances or openings under the house, garden tool shed, mobile home, deck, etc. with 1/4–inch mesh hardware cloth. The advantage of using the small mesh is that it will also exclude rats and house mice. When possible, bury the hardware cloth up to 6 inches to deter the opossum from crawling or digging underneath the exclusionary structure.

Once an opossum has taken up residence beneath a building or deck, you have to be sure the animal has left before blocking the opening. A fairly easy way to make this determination is to sprinkle a smooth layer of flour about 1/8-inch thick just in front of the point of entrance to form a tracking patch, in which the animal's footprints will be evident. Examine the tracking patch soon after dark; the presence of footprints will indicate the animal has left and the opening can then be closed off.

Normally opossums live alone except when with young and then, since the young remain in the pouch, they leave with the mother.

Exclusion of opossums from gardens can be accomplished with a fence built of poultry wire. The fence should be 4 feet high with the top 12 to 18 inches of the fence bent outward, away from the garden, and not attached to any support. Since the top of the fence is not rigid and bends under the weight of the animal, it cannot be climbed over.

As an alternative, any standard wire fence can be made opossum proof by stretching a parallel electrically-charged wire near the top of the fence, 3 inches out from the mesh. A cattle-type electric fence charger activates the wire. A similar approach can be used to prevent opossums from climbing trees. More electric fence details are provided in Pest Notes: *Raccoons.*

Trapping

Opossums are not wary of traps and can easily be caught with a box- or cage-type live-catch trap. Traps should be at least 10 x 12 x 32 inches in size and set along trails or known routes of travel. Fish-flavored canned cat food works well as trap bait but often attracts cats as well. To avoid this possibility, try using whole raw chicken eggs or jam or peanut butter spread on a bit of bread. Other baits can include overripe fruit such as grapes, bananas, or melons.

Live-trapping presents the problem of dealing with the animal once captured. Since it is illegal to relocate an opossum without a permit, those not wanting to deal with its disposal may prefer to hire a professional wildlife control operator. They are equipped to handle problem wildlife in a legal and humane manner.

If the trapper is willing to dispatch the animal, shooting and the use of a carbon dioxide gas chamber are the only acceptable forms of euthanasia. Shooting is the simplest approach, but firearm discharge is not allowable in most residential areas. In these areas, a carbon dioxide gas chamber is the only option. Details on carbon dioxide euthanasia are available online from the New York State Department of Environmental Conservation and Cornell University (see References). Drowning is illegal in California as a form of euthanasia.

Other Control Methods

A motion-activated sprinkler device sometimes induces a fright response in opossums, skunks, and raccoons. If the animal has established the habit of visiting the yard or garden, such frightening responses rarely last for more than a few days. A greater

effect is observed on animals that have not habituated to the site.

An array of chemical products is marketed for repelling various wildlife species but, unfortunately, none offer significant results for opossums. The odor of mothballs, naphthalene crystals, or household ammonia has been used as a home remedy repellent. However, the use of these products in this manner is not legal, nor are they recommended, given the potential for these fumes to enter buildings. These chemicals may also build up toxicity in the soil thereby posing an additional threat.

There are no registered toxicants for poisoning opossums. Poison baits sold for the control of rodents should never be used in an attempt to control opossums, skunks, or raccoons. The penalty for such pesticide misuse can be substantial, and the practice usually becomes known as a result of the accidental poisoning of someone's pet.

In rural areas where it is legal and safe to do so, opossums may be spotlighted at night and shot during much of the year. However, be aware that spotlighting is not allowed during the deer hunting season.

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Author: Roger A. Baldwin, Wildlife, Fish, and Conservation Biology, UC Davis. Revised based on a previous version authored by T.P. Salmon, D.A. Whisson and R.E. Marsh.

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Editor: C. Laning

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Pest Notes are available at www.ipm.ucanr.edu.

For more information, contact the University of California Cooperative Extension office in your county. See your telephone directory for addresses and phone numbers, or visit: http://ucanr.edu/County_Offices.

University of California scientists and other qualified professionals have anonymously peer reviewed this publication for technical accuracy. Andrew Sutherland, ANR Associate Editor for Pest Management, managed this process.

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