UC IPM *Pest Notes*, Publication 74176
Published June 2021

UC IPM

UC PEER REVIEWED

Wild Turkeys

Integrated Pest Management for Home Gardeners and Landscape Professionals

Turkeys (Figure 1) belong to the taxonomic order Galliformes, a widespread order of birds that includes chickens, jungle fowl, quail, pheasants, peafowl, partridge, grouse, and others. This group of fowl has been an important part of human history, with some species being purposefully introduced to address human needs. As a group, they are often reared for their meat and eggs and for recreational and subsistence hunting.

Like the bald eagle, the wild turkey (*Meleagris gallopavo*) is an iconic American species, credited with sustaining Native Americans for centuries and later, Europeans during the early days of colonization and settlement (c. 1600s), at which time as many as 10 million birds were thought to be present. By the turn of the 20th century, turkeys were on the brink of extinction from overhunting and habitat destruction. Today, it is estimated that nearly 6 million birds are found in North America. Many consider the turkey's recovery the greatest conservationist achievement of the 20th century.

Though turkeys are not native to California, several attempts have been made to establish wild populations from both farm-raised flocks and wild caught birds, with eventual success by the California Department of Fish and Wildlife in 1959 and subsequent years. Today, two wild turkey subspecies are well established in California. The Rio Grande subspecies, *M. gallopavo intermedia*, has the widest range and is found throughout the state's oak woodlands, urban areas, and agricultural lands. The other, the Merriam's turkey, *M. gallopavo merriami*, is limited to mountainous regions dominated by coniferous trees.

Turkeys have expanded their range throughout California since the 1970s, most recently in the Sacramento Valley. The current population of wild turkeys in California is estimated at roughly a quarter million birds.

Author:

Gregory A. Giusti, UC Cooperative Extension, Lake and Mendocino Counties (emeritus).

Figure 1. Adult wild turkey toms, *Meleagris gallopavo*.

Figure 2. Adult wild turkey hen.

IDENTIFICATION AND BIOLOGY

Turkeys (Figure 2) are large birds, making them difficult to confuse with most other birds. The only similar bird would be a peafowl (*Pavo* spp. or *Afropavo* sp.), often seen in parks or zoos. For general purposes, it's not critical to identify the bird to one of the two subspecies of turkey found in California since their behaviors are very similar. For the purposes of this publication which addresses problem birds in residential locations, the most likely subspecies will be the Rio Grande wild turkey.

Adult wild turkeys have long reddish-yellow to grayish-green legs. Males, called toms or gobblers, have body feathers that are generally blackish and dark, while the females, called hens, have feathers that are duller overall, often gray-brown with a coppery sheen. Males have a large, featherless, reddish head, red throat, and red wattles on the throat and neck (Figure 4). The head has fleshy growths called caruncles. When males are excited, the wattles and the bare skin of the head and neck fill with blood, almost concealing the eyes and bill. The long fleshy object over a male's beak is called a snood. Each foot has three toes in front, with a shorter, rear-facing toe in back; males have a spur behind each of their lower legs. The adult male's tail feathers when fanned will be all the same length. Juvenile males are called jakes and can be separated from adult males by very short beards and longer feathers in the middle of their tail fans. Young, immature birds, called poults (Figure 3), could be confused with quail when very small but should be easily distinguished by the presence of nearby adult turkeys.

Turkeys breed in the spring. Males, being polygamous (more than one mate), display by strutting with wings and tails flared in an attempt to breed with several females. Males often court in groups, with the dominant male gobbling, spreading his tail feathers (strutting), drumming / booming, and spitting.

Once bred, hens tend to go off by themselves to secure a safe nest site. Often, nest sites are located in tall grass, ground covers, or thick shrubs that conceals both the adult and the eggs. Females only lay 1 egg a day. It takes a hen about 2 weeks to lay a full complement of 9 to 13 eggs. A hen will only visit the nest long enough to deposit her egg for the day. The rest of her time will be spent elsewhere feeding and roosting to protect the nest's location. Once egg laying is completed, incubation starts, and the hen will only leave the nest for a short time each day to forage for high protein insects, grubs, and spiders. Incubation takes about 28 days. All the eggs will hatch at the same time even though some eggs have been in the nest several days longer than others.

Newly hatched turkeys (poults) develop quickly and leave the nest within 12 to 24 hours after being hatched. They are most vulnerable at this time to predation by domestic cats, dogs, foxes, bobcats, coyotes, and predatory birds (jays, crows, and ravens). Mortality of poults is greatest in the first 14 days of life. This decreases significantly after half a year, when they grow to near adult size. During this time, hens will try to keep poults concealed in heavy cover to avoid detection and limit mortality. Young birds can fly in about 10 days, enabling them to roost in trees, thereby greatly increasing their chances for survival. Turkeys generally roost in trees, spending the nights well above ground. It is not uncommon for birds to a have a preferred roost tree that they return to night after night.

Turkeys are omnivorous and will eat insects, spiders, grubs, mice, lizards, seeds, acorns, fruits, grasses, and forbs. All gallinaceous birds scratch the ground, disturbing soil and leaf litter in search of food. Young birds need high protein diets (insects and spiders) since they grow quickly. High protein food allows juvenile males to get bright colors in their feathers.

Figure 3. Wild turkey poult.

Turkeys are a flocking species and enjoy the company of their own kind. It is not unusual to witness several family groups come together after hatching into one large flock of several hens with their broods. Jakes will form bachelor groups, and mature toms will gather during the non-breeding season.

IMPACT

Conflict with Humans. Wild turkeys in urban and suburban settings have been considered by some as nuisances, pests, annoyances, destructive, and aggressive. In these environments, the presence of turkeys can be infuriating

Figure 4. Wild turkey toms displaying by strutting with wings and tails flared.

by those who do not want them around. As urban and suburban turkey populations have grown, so have human–turkey conflicts. Turkeys may cause traffic hazards and congestion when crossing streets. They may foul sidewalks, walkways, roofs, gardens, decks, porches, parks, and other public places with their droppings (Figure 5). Toms can become aggressive during the breeding season, occasionally charging and threatening people, and damaging automobiles by "attacking" their reflection or jumping on cars. Their nonstop searching for food can destroy gardens, raised beds, new landscape plantings, and even turf.

In areas where turkeys have become accustomed to people, they may see human beings as part of the flock and, therefore, part of their pecking order. If a human is viewed as dominant, the turkey may act passively or fearfully toward them. Viewed as a subordinate, a human might be bullied. An aggressive tom may charge at the person, chase them, or even attempt to attack by flapping its wings, pecking, or spurring. Humans seen as male may be challenged by adult males or followed by hens, especially in spring. Humans seen as female could be displayed to or followed by toms.

Turkey damage may be aesthetic, such as soil disturbances caused by turkeys foraging for food among garden and landscape plants (Figure 6), or economic, such as stains left from turkey droppings on decks and porches that then require reconditioning.

An aggressive tom may attack an item in which he can see his reflection, believing it to be another competing male. This may result in scratches and dents to cars (especially ones with shiny, reflective chrome bumpers, see Figure 7). It may also result in damage to windows or window screens.

LEGAL STATUS

Wild turkeys in California are defined as Resident Upland Game Birds. As such they are protected and managed through laws and regulations established by the California Fish and Game Commission; Title 14 of the California Fish and Game Code. There are established hunting seasons and bag limits on the taking of wild turkey. A hunting license and an Upland Game Bird stamp are required to legally take (remove or kill) a turkey during established hunting season dates. Wild turkeys can be hunted with an appropriate firearm or archery equipment, but local ordinances and statutes may limit the use of these tools in urban and suburban settings. Like most wild animals, turkeys can quickly get used to environments and people. Feeding wildlife is illegal and often leads to animals becoming complacent around people, potentially causing problems, as detailed in the Damage section above.

Figure 5. Wild turkey droppings on a structure.

Figure 6. Damage from wild turkeys foraging in a mulched landscape bed.

Figure 7. An aggressive wild turkey tom may attack an item in which he can see his reflection, believing it to be another competing male.

MANAGEMENT

Minimizing the Nuisance

Managing neighborhood turkey population numbers may require agreement among neighbors and collaboration with State Fish and Wildlife or Federal Fish and Wildlife Services. As with other wildlife-human conflict scenarios, one person's nuisance may be another person's pet. Therefore, it is often difficult to find agreement when discussing removal of animals from an area. The option to remove wild turkeys from a neighborhood can be controversial and, in most cases, not feasible, so other approaches to minimizing conflicts should be considered. Generally, turkeys are here to stay. If urban and suburban habitats are suitable, even removing nuisance birds will not guarantee that others won't move in to take their place. Instead, nonlethal options for managing nuisance turkeys should be considered. Nonlethal options and strategies should focus on:

1. understanding the types of conflicts caused by turkeys to people (see Damage section above),
2. considering turkey behaviors that may cause conflicts: foraging, aggression, interference with traffic, roosting, and
3. identifying features that may be attractive to turkeys or cause their damaging behaviors and associated conflicts, such as people feeding turkeys or other wildlife, unprotected garden food or fruit crops, and commonly used turkey foraging corridors.

Since turkeys are diurnal and usually roost in trees at night, management activities usually focus on minimizing conflicts that may take place during the day.

Habitat Modification

Remove attractants, like birdseed and pet foods, that may be causing turkeys to come onto your property. Pet foods can attract turkeys and, if left out at night, can also attract many other animals, including raccoons, opossums, and feral cats. Consider fruit that may be attractive to turkeys. Berry bushes and other low-growing fruiting plants can be covered using bird netting, and fallen fruit under trees should be removed regularly. Consider pruning plants that produce edible seeds, berries, and other fruit to remove branches within 4 feet of the ground.

Managing trees in which turkeys roost can be challenging; the birds and their droppings can create both aesthetic and economic problems. Removing a roost tree may not be an option, so preventing turkeys from roosting in particular trees should be the focus. When birds begin to gather near the tree at dusk, scare them away (see Harassment and Frightening Devices section below) to prevent them from flying up into the tree for the night. They will simply choose another roost tree, (hopefully one that does not create a similar problem).

Harassment and Frightening Devices

Turkeys are wary, smart birds capable of remembering frightening or uncomfortable experiences and avoiding those experiences in the future, even in urban environments where they may be considered "tame." It is legal to harass turkeys as long as they are not physically harmed. The simple act of chasing or allowing a dog to chase a flock of turkeys can discourage them from returning to a location for some time. Spraying water with a garden hose to chase away turkeys can also be effective. Motion sensor sprinklers can be set to discourage marauding birds from visiting a landscape.

Turkeys are particularly adept at noticing and remembering their surrounding environments. Therefore, another frightening tactic to consider, a modification of the agricultural "scarecrow" practice, is placement of unusual objects in your yard. Sticks with strands of reflective Mylar tape, aluminum foil pie tins hung from poles or trees, and even old compact discs tied to sticks can be placed around the yard to frighten the turkeys. If a reflective strategy is employed, reflective objects should readily move in the breeze. Relocating and rearranging these objects is important so turkeys do not get used to what might otherwise look like stationary garden art.

Noisemaking devices, such as radios and noise cannons, have also been shown to discourage turkeys, but these can also annoy neighbors. If you use noisemaking devices, make sure it is legal within your municipality and be considerate of neighbors.

Exclusion

Exclusion involves placement of an barrier between turkeys and locations where they may cause nuisance problems. Examples of exclusionary tactics include fencing and netting. Bird spikes, sold in sections or rolls, are usually used to discourage crows and pigeons from landing or roosting on railings, roofs, windowsills, and other parts of a house or structure, but they may also be used to keep turkeys off a house or other roosting site. Turkeys are capable of flight but prefer to stay on the ground when foraging during the day. Fencing can usually keep nuisance turkeys out of an area but is most effective when protecting a small area such as a garden or small portion of a yard. If the fenced-in area is large, then turkeys may fly over the fence to access the abundant habitat on the other side. If turkeys are damaging a small portion of a yard or garden while looking for worms, grubs, or seeds, burying poultry wire or hardwire cloth just below the surface may prevent their "scratching" behavior and discourage them from frequenting the area. Also consider managing lawn insects to prevent this problem.

Repellents

Commercial bird repellents are available, but they are generally not considered effective at minimizing damage.

Neighborhood Efforts

Since eradication of turkeys is not practical, residents, park managers, and municipal staff should consider an integrated pest management (IPM) strategy utilizing a combination of non-lethal tactics and limited lethal tactics to address the many scenarios faced in urban settings. Neighborhood communication and collaboration are effective ways of sharing information and approaches to minimizing turkey-human conflicts. Identifying and managing the neighborhood properties most attractive to wild turkeys is likely the best approach to minimizing the conflicts.

REFERENCES

California Department of Fish and Wildlife. 2020. *Keep Me Wild: Wild Turkey*. Sacramento, CA. **wildlife.ca.gov/Keep-Me-Wild/Wild-Turkey** (accessed June 10, 2021).

California Department of Fish and Wildlife. 2013. CDFW Wildlife Investigations Blog: *Coexisting with Wild Turkeys*. Sacramento, CA. **calwil.wordpress.com/tag/wild-turkey-in-california/** (accessed June 10, 2021).

Drake D, Bublitz C, Preisler M, Suckow, J, Koele B. 2013. *Wild Turkey Ecology & Damage Management*. Madison, WI. University of Wisconsin Cooperative Extension Publication G3997-010. **wildlifedamage.uwex.edu/pdf/WildTurkey.pdf** (accessed June 10, 2021).

Groepper SR, Hygnstrom SE, Houck B, Vantassel SM. 2013. Real and Perceived Damage by Wild Turkeys: A Literature Review. J of IPM. 4(1): A1-A5. doi.org/10.1603/IPM12013 (accessed June 10, 2021).

Humane Society of the United States. 2020. *What to do about wild turkeys*. Washington, DC. **humanesociety.org/resources/what-do-about-wild-turkeys** (accessed June 10, 2021).

Miller JE. 2014. *Prevention and Control of Wildlife Damage: Wild Turkeys*. Mississippi State, MS. Mississippi State University Department of Wildlife, Fisheries, and Aquaculture. **pcwd.info/wp-content/uploads/2016/01/Turkey-Wild.pdf** (accessed June 10, 2021).

Miller JE. 2018. Wild Turkeys. Wildlife Damage Management Technical Series. Fort Collins, Colorado. USDA, APHIS, WS National Wildlife Research Center. **aphis.usda.gov/wildlife_damage/reports/Wildlife%20Damage%20Management%20Technical%20Series/Wild-Turkeys-WDM-Technical-Series.pdf** (accessed June 10, 2021).

WARNING ON THE USE OF PESTICIDES

Pesticides are poisonous. Some pesticides are more toxic than others and present higher risks to people, nontarget organisms, and the environment. A pesticide is any material (natural, organic, or synthetic) used to control, prevent, kill, suppress, or repel pests. "Pesticide" is a broad term that includes insecticides, herbicides (weed or plant killers), fungicides, rodenticides, miticides (mite control), molluscicides (for snails and slugs), and other materials like growth regulators or antimicrobial products such as bleach and sanitary wipes that kill bacteria.

Always read and carefully follow all precautions and directions provided on the container label. The label is the law and failure to follow label instructions is an illegal use of the pesticide. Store all chemicals in the original labeled containers in a locked cabinet or shed, away from food or feeds, and out of the reach of children, unauthorized persons, and animals. Never place pesticides in food or drink containers. Consult the pesticide label to determine active ingredients, correct locations for use, signal words, and personal protective equipment you should wear to protect yourself from exposure when applying the material.

Pesticides applied in your garden and landscape can move through water or with soil away from where they were applied, resulting in contamination of creeks, lakes, rivers, and the ocean. Confine pesticides to the property being treated and never allow them to get into drains or creeks. Avoid getting pesticide onto neighboring properties (called drift), especially onto gardens containing fruits or vegetables ready to be picked.

Do not place containers with pesticide in the trash or pour pesticides down the sink, toilet, or outside drains. Either use all the pesticide according to the label until the container is empty or take unwanted pesticides to your local Household Hazardous Waste Collection site. Contact your county agricultural commissioner for additional information on safe container disposal and for the location of the Hazardous Waste Collection site nearest you. Follow label directions for disposal of empty containers. Never reuse or burn the containers or dispose of them in such a manner that they may contaminate water supplies or natural waterways.

Produced by the **Statewide Integrated Pest Management Program**, University of California, 2801 Second Street, Davis, CA 95618-7774.

Technical Editor: K Windbiel-Rojas

ANR Associate Editor: AM Sutherland

Editor and Designer: B Messenger-Sikes

ILLUSTRATIONS: Figures 1, 4: K Windbiel-Rojas; Figures 2, 5, 6: B Messenger-Sikes; Figure 3: T Greer; Figure 7: K Cabrera.

This and other Pest Notes are available at 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: **ucanr.edu/County_Offices**.

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

To simplify information, trade names of products have been used. No endorsement of named products is intended, nor is criticism implied of similar products that are not mentioned.

This material is partially based upon work supported by the Extension Service, U.S. Department of Agriculture, under special project Section 3(d), Integrated Pest Management.

Suggested citation: Giusti GA. 2021. UC IPM *Pest Notes: Wild Turkeys*. UC ANR Publication 74176. Oakland, CA.

ANR NONDISCRIMINATION AND AFFIRMATIVE ACTION POLICY STATEMENT

The University of California Division of Agriculture & Natural Resources (UCANR) is an equal opportunity provider. (Complete nondiscrimination policy statement can be found at **http://ucanr.edu/sites/anrstaff/files/215244.pdf**). Inquiries regarding ANR's nondiscrimination policies may be directed to UCANR, Affirmative Action Compliance Officer, University of California, Agriculture and Natural Resources, 2801 Second Street, Davis, CA 95618, (530) 750-1343.