Gould's Wild Turkey

(Meleagris gallopavo mexicana)

NWTF Wildlife Bulletin No. 5

by Mary C. Kennamer





It's the least known of the 5 wild turkey subspecies, but it is the largest with longer legs, larger feet and larger center tail feathers than any of the other wild turkey subspecies in North America.

The fifth recognized, but least known, wild turkey subspecies is the Gould's found in the southern portions of Arizona and New Mexico as well as northern Mexico. It was first described by J. Gould in 1856 during his travels in Mexico.

Like the Merriam's, the Gould's is a bird of the mountains. It exists in very small numbers in Arizona and New Mexico along the U.S./Mexico border, but is apparently abundant in the northwestern portions of Mexico. The Arizona Game and Fish Department, U.S. Forest Service, the Centro Ecologico de Sonora, the National Wild Turkey Federation, and other agencies are working cooperatively to reintroduce a strong Gould's population first into Arizona and then into other states where suitable range exists.

The Gould's turkey is the largest of the 5 subspecies and somewhat resembles the Merriam's turkey. They have longer legs, larger feet, and larger center tail feathers than any of the other wild turkey subspecies in North America. Gould's differ by having distinctive white tips on the tail feathers and tail rump coverts which usually separate to show an "eyelash" appearance. Lower back and rump feathers have copper and greenish-golden reflections, not like the faintly iridescent

velvety black found on the Merriam's. Gould's body plumage is said to be somewhat blue-green in coloration. Adult females have a less pronounced metallic greenish and reddish sheen and are more purplish.

The Sierra Madre Occidental Mountains in Mexico are the center of the Gould's turkey Mexican range, extending south from the U.S./Mexico border. Populations exist in Chihuahua, Sonora, Sinaloa, Durango, Zacatecas, Nayarit, Jalisco and Coahuila. In the U.S. Gould's turkeys are found in the Animas and San Luis mountains of New Mexico and in the Peloncillo Mountains of New Mexico and Arizona. Mountain ranges where Gould's are found orient north and south with elevations ranging from 4,500 to 6,500 feet in the U.S. and over 9,800 feet in Mexico. Turkey habitat can be rough with steep and rocky canyons.

Gould's turkey range in the U.S. has a continental climate characterized by wide daily and annual fluctuations in distinct seasonal changes with hot summers and mild winters. Average annual precipitation is 18 inches—more than half falling between July and September. About 10 inches of snowfall in winter accounts for the rest. In Mexico climate conditions are about the same as those found in the U.S., however, winters are colder and there is more snow in the higher mountains.

Breeding behavior is triggered primarily by the increasing day length in spring, but unusually warm or cold spells may accelerate or slow breeding activity. This behavior can begin while birds are still in large winter flocks prior to separating as individuals or into small groups.

The basic social organization of these flocks is determined by a pecking order with the most dominant bird at the top

Arizona and New Mexico offer limited hunting opportunities for the Gould's wild turkey. For additional information please contact the Arizona Game and Fish Department and the New Mexico Department of Game and Fish.



Typical habitat in Chihuahua, Mexico, can be rough and steep with rocky canyons.

PHOTO BY JAMES EARL KENNAMER





The Gould's somewhat resembles the Merriam's but differs by having distinctive white tips on the tail feathers and tail coverts which separate in an eyelash effect.

and the least on the bottom. Males and females have separate hierarchies, and there can be pecking orders within and between flocks of the same sex; while stable pecking orders within flocks of the same sex seem to be common to all wild turkey subspecies. Turkeys have home ranges, not territories where individuals defend space within a given habitat from other members of the same sex. Instead they fight for dominance recognizing individuals within the pecking order while sharing overlapping home ranges.

Courtship behavior patterns include gobbling and strutting by the males. Gobbling attracts hens to males who court the hens by strutting. If the hen selects the gobbler for mating she crouches, which signals the male to copulate. The first peak of gobbling activity is associated with the beginning of the breeding period when gobblers are searching for hens. The second peak occurs a few weeks later, when most hens begin incubation. Gobbling activity for the Gould's has been documented to begin in April and May in Mexico and from late April into June in New Mexico. Later gobbling by the subspecies seems to coincide with the plant green-up in the Gould's habitat. The gobble of the male is distinguished by a lower frequency than either of the other 2 western subspecies.

Hens become secretive while searching for a site near water to nest prior to laying eggs. Laying hens may continue to feed with other hens and mate with gobblers, but this social activity will be away from the nest site. Water is a key habitat component and a limiting factor in Gould's turkey range. The existence of livestock ponds and watering facilities is sometimes the only source of water for the subspecies.

Nests are shallow depressions formed mostly by scratching, squatting, and laying eggs rather than by purposeful construction. The arrangement of twigs and leaves is minimal in sites chosen

for their moderately dense understory which still allows the hen a view but gives protection from avian predators.

Laying a clutch of 10 - 12 eggs takes about 2 weeks and unincubated eggs are usually covered with leaves. Continuous incubation begins about the time the last egg is laid at which time the hen no longer tries to conceal her eggs when she leaves for short periods to feed.

The hen will incubate for 26-28 days sitting quietly and moving about once an hour to turn the eggs. Actual hatching begins in early to late June with pipping—the poult rotating within the shell, chipping a complete break around the large end of the egg. Hens respond to the pipping sounds by making soft clucks at random, a form of communication which begins



National Wild Turkey Federation partners and volunteers release a Gould's wild turkey into Southeastern Arizona.

to imprint the poults to the hen as she inspects the eggs and turns them. Damp poults clumsily free themselves from the eggs but are dry and fully coordinated so they can follow the hen within 12 to 24 hours after hatching. This vocal communication between hen and poults still in the eggs is an important part of the hatching process and is critical to survival of the young.

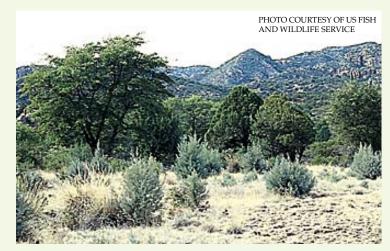
Imprinting is a special form of learning which facilitates the rapid social development of the poults into adults. It's a strong social bond between the hen and her offspring which occurs up to 24 hours after hatching. Imprinting describes the rapid process by which the young poults learn to recognize their species, essential for their survival. It happens at this time and cannot be reversed.

Day-old poults learn to respond to the hen's putt or alarm call before leaving the nest and respond by freezing or running to hide beneath her. The Gould's alarm putt is higher pitched, sounding more like "pitt, pitt". The hen, clucking almost continually, slowly leads her poults away from the nest until within a few hours her pace is more normal. By now the poults have formed into a brood group that is constantly feeding by pecking at food items, a behavior learned from their mother.

By the second day out of the nest, wild turkey poults are performing most of the characteristic feeding, movement, and grooming behavior patterns. By the end of the first week they are regularly dusting with the hen. By their second week they are able to fly short distances and at the third week they are able to roost in low trees with the hen. The ability to roost in trees is an important event in the brood's development as it removes them from the danger of ground predators. Riparian area roost trees are an important component in turkey survival. Roosting occurs at the beginning of another phase of rapid development, the acquisition of juvenile plumage and a change in diet from predominantly insects to a higher percentage of plant matter, mainly oak acorns and grass seeds and leaves. This phase of behavioral and physical development is accompanied by a sharp decline in poult mortality. Poults that survive the first six weeks have a much better chance of surviving to adulthood.

At age 14 weeks, male and female poults are distinguishable by body size and plumage. They have formed sepa-

rate pecking orders although still dominated by the hen until all males have finally left the brood group to form their own social units. By fall, the pecking order of the sibling groups has been established and the young flocks are ready to enter the social organization of the surrounding population. The body growth of juveniles ends by the beginning of winter when the flocks, separated by age and sex class, settle into winter range.



Riparian area roost trees are an important component in turkey survival like this range in southern Arizona.

The Gould's turkey has been studied the least and, as a result, has the smallest amount of information available about it. However, new studies are underway in Arizona, New Mexico, as well as Mexico to help us learn more about this unique subspecies.

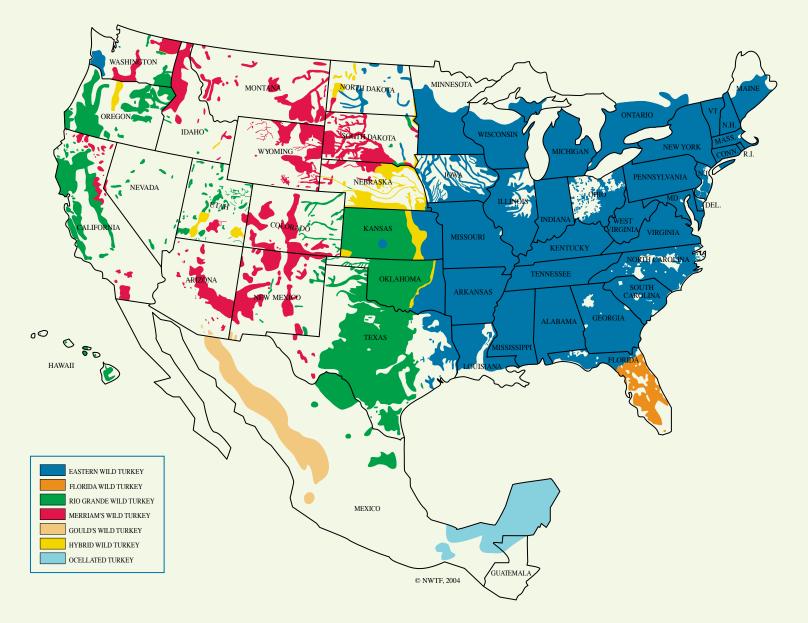
For additional information on this subject refer to "The Wild Turkey Biology and Management," edited by Jim Dickson. The book is available for \$59.95 from the National Wild Turkey Federation, call 1-800-THE-NWTF, or visit www.nwtf.org.

Financial support for this publication was provided in part by the National Fish and Wildlife Foundation, Federal Cartridge and Wildlife Forever and published by the National Wild Turkey Federation.









The Gould's wild turkey may be found in varying numbers in the light brown shaded areas of Arizona, New Mexico and south into Mexico.

