

Merriam's Wild Turkey

(*Meleagris gallopavo merriami*)

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by Mary C. Kenamer



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PHOTO BY DONALD M. JONES

The Merriam's has a blacker appearance and nearly white feathers on the lower back and tail feather margins.

The Merriam's wild turkey is found primarily in the ponderosa pine, western mountain regions of the United States. It was named by Dr. E.W. Nelson in 1900 in honor of C. Hart Merriam, first chief of the U.S. Biological Survey.

Within its suspected historic range in Arizona, New Mexico and Colorado, the Merriam's was relatively isolated from the other subspecies of wild turkey. Current evidence supports the hypothesis that it was a relative newcomer to western American wildlife when the Europeans discovered it.

It has been successfully stocked beyond its suspected natural range in the Rocky Mountains and outside of the mountains into Nebraska, Washington, California, Oregon and other areas.

Merriam's are found in some habitat areas that, if altered by timber harvesting, overgrazing or development, populations may be lost. Their normal range receives annual rainfall amounts averaging between 15 and 23 inches.

Adult males are clearly distinguished from the eastern, Florida and Rio Grande by the nearly white feathers on the lower back and tail feather margins. Merriam's closely

resemble the Gould's turkey, but its tail margin is not usually quite as pure white nor is the lighter margin of the tail tip quite as wide.

Its size is comparable to the eastern turkey, but has a blacker appearance with blue, purple and bronze reflections. The Merriam's appears to have a white rump due to its pinkish, buff, or whitish tail coverts and tips. These tail feather tips are very conspicuous when the strutting gobbler appears against a dark background. The males exhibit black-tipped breast feathers, while the females, or hens, have buff-tipped breast feathers. The white areas on her wings are more extensive giving a whiter appearance to the folded wing. The head of the female is considered feather covered with smaller, dark feathers extending up from the back of the neck. Females lack the caruncles or fleshy protuberances of skin at the base of the front of the neck that are bright red on the gobbler but may exhibit more coloration than hens of the other subspecies. Beards and spurs are generally considered secondary sex characteristics in males. Beards may be present on about 10 percent of the hens, however, they are thinner and shorter than those of adult males. Spurs on hens are uncommon but, when present, are usually rounded and poorly developed.

Some Merriam's migrate from the foothills of the Rocky Mountains to higher elevations in summer for breeding and nesting and return to winter in the lower elevations. Movement distances vary but more than 40 mile movements are not unusual. Movements may differ annually and geographically, depending on snow conditions. Movements from wintering areas occur between mid-March and mid-April.



Merriam's wild turkeys occur in 15 states and four Canadian provinces.

A hen out with her growing poults, some dusting. The Merriam's hen displays more head coloration than the other subspecies.

PHOTO BY KAREN LOLLO



PHOTO BY DONALD M. JONES

Some Merriam's migrate from wintering in lower elevations to higher elevations in summer for breeding and nesting.

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 begins while birds may still be in large winter flocks prior to separating as individual 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 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. Hens become secretive while searching for a site 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.

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 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 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



PHOTO BY KAREN LOLLO

Turkeys have home ranges, and the toms fight for dominance recognizing individuals within the pecking order.

fully dry and coordinated so they can follow the hen away from the nest 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 only 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 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. 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. 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 separate pecking orders although still dominated by the hen until all males have finally left the brood group to form their own social units. Merriam's

juvenile hens remain with mature hens during the winter, while juvenile males may stay with hen flocks or form their own flocks. Rarely do they join adult males in winter flocks.

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. Where seasonal Merriam's ranges overlap, no distinct movement patterns are apparent.

Merriam's wild turkeys winter in low elevation ponderosa pine habitats and pinyon-juniper woodlands. Snow depth and duration, food availability, and the presence of suitable roost trees are key factors that determine where tur-



PHOTO BY BOB LOLLO

This mixed brood group of poults between 1-1/2 and 2 months old will, by age 14 weeks, be distinguishable as male and female by body size and plumage.

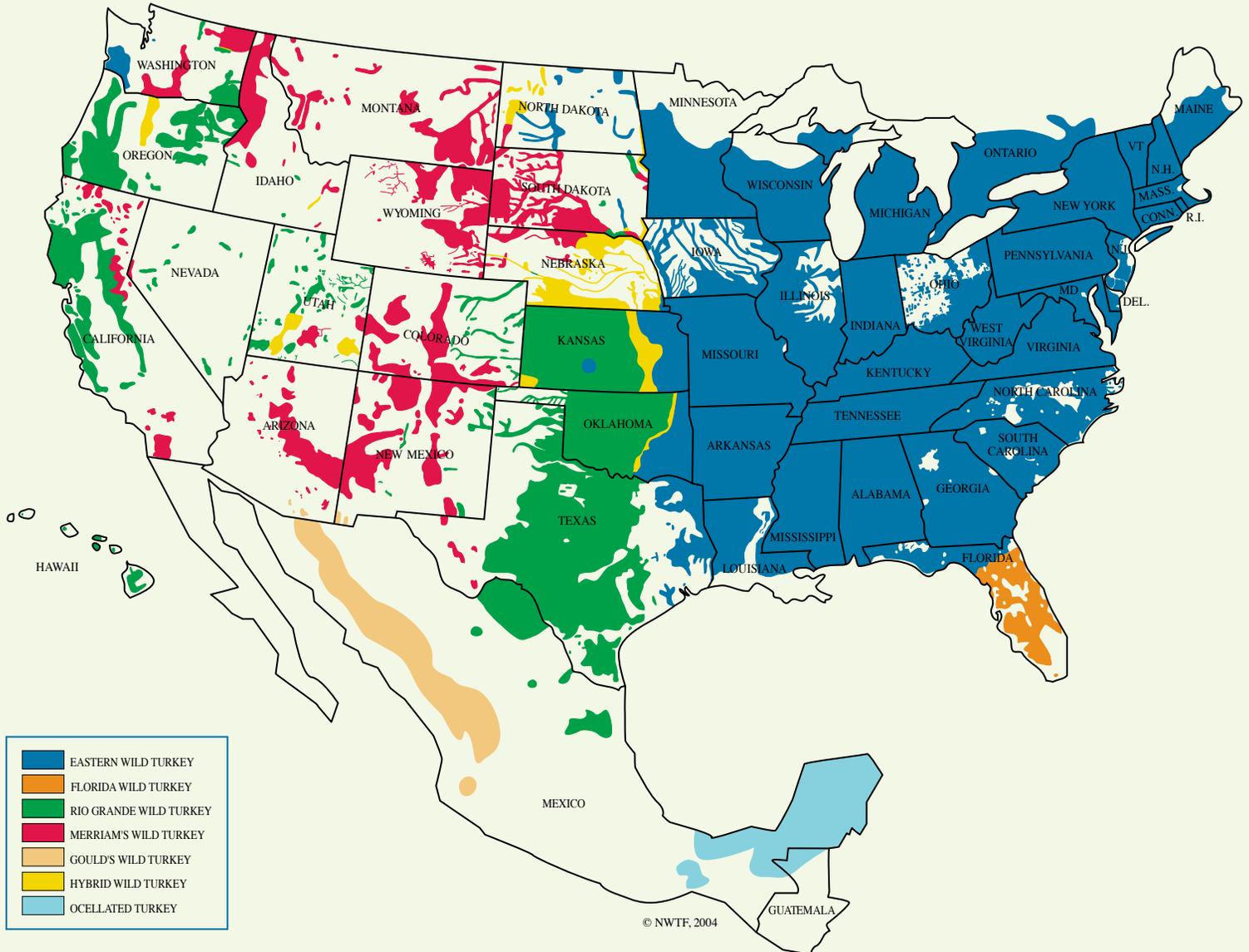
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keys winter or if populations will survive. Snow conditions may force turkeys into riparian habitats well below the conifer zone. Here turkeys may use cottonwoods for roosting and may become dependent upon human-related sources of food such as barnyards, grainfields, silage pits or feedlots.

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.

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- EASTERN WILD TURKEY
- FLORIDA WILD TURKEY
- RIO GRANDE WILD TURKEY
- MERRIAM'S WILD TURKEY
- GOULD'S WILD TURKEY
- HYBRID WILD TURKEY
- OCELLATED TURKEY

The Merriam's wild turkey can be found in the states shaded red on the map and the Canadian provinces of Alberta and Manitoba.

