

Who's your Daddy?

Turkey Toms know a Trick or Two

by Wayne Lynch



Photo: Doug Manzer, ACA Inset Photo: Wayne Lynch

Finding a bird on a nest is a precious moment—a rare glimpse into a secret avian life. On a pleasant spring day in the foothills of Alberta, a female wild turkey huddled over a clutch of eggs at the base of a large cottonwood tree. Her chocolate brown plumage, accented with metallic highlights of bronze and rust, disguised her presence in the dappled sunlight and shadows of the forest floor.

From inside a photo blind, I watched the hen's life unfold as she warmed the precious eggs beneath her.

The big hatch

The hen sat quietly, monitoring the forest around her for the slightest movement that might betray the approach of a hungry bobcat or cougar. At least once an hour, she lifted her breast, and with her beak gently turned a few of her tan-coloured eggs. Sometimes she revealed the red engorged skin of her brood patch with which she warmed her clutch. It seems trivial now, but tedious hours in a blind can elevate these moments to exaggerated importance. Now and then she would idly rearrange a few twigs around herself, tilt her head skyward to monitor a raven or hawk flying overhead, or peck at a ground beetle scuttling across the leaf litter.

Three weeks into the waiting game, the incubating hen had a surprise. An inquisitive female mule deer approached, close enough to sniff around the nest. The turkey flattened herself on the ground with her neck outstretched and fluffed the feathers on her back. Whether it was an act of intimidation or concealment, within seconds the deer quietly walked away, her curiosity seemingly satisfied.

In the first days of June, the hen started clucking repeatedly whenever she turned her eggs, a common behaviour believed to synchronize hatching. The chicks respond, making audible chipping sounds and clicking vocalizations from inside the eggs. Together, the mother and young coordinate hatching so all the poults break free in 24 hours or less. In a commercial incubator turkey eggs hatch in two or three days, but if the eggs are subjected to tape-recorded clucking sounds of a hen during the last few days of incubation, the eggs hatch within 12 hours of each other. A couple days later, the hen finally hatched her brood and I never saw her or her family again.

Born to be wild

For the mother turkey, the early summer hatching of her clutch was the conclusion of a process that began in late winter, when she heard the gobbles of gaudy males priming themselves for courtship. The gobble call of the male wild turkey is probably its most characteristic feature, helping to attract females and frighten rivals. Gobbling peaks in the spring, is absent in summer, and resumes on a small scale in autumn and winter. When conditions are ideal with little wind, a gobbling tom can be heard two to three kilometres away. The gobble call of one male frequently stimulates neighbours to respond with their own proclamation of machismo. Sometimes gobbling can be elicited by loud noises such as a dog barking, the slamming of a truck door or the hooting of an owl. Biologists call this behaviour *shock gobbling*.

The rainbows of romance

The physical appearance of the male wild turkey is an example of how hard-to-please hens have driven the process of natural selection to colourful heights. The head and upper neck on a male turkey has few feathers and the skin is heavily wrinkled and covered with bumps, called *caruncles*. During the breeding season, the caruncles enlarge and change colour from bright red to blue and turquoise. The intensity of the colour varies greatly, depending upon whether the tom is feeling excited and aggressive or subdued and subordinate.

On the forehead, just above the beak, the male has an additional conical structure

called a *snood*. When flaccid, the snood is only a centimetre or two in length, but when the tom is aroused it flushes red, lengthens and droops over the side of his bill, extending six to eight centimetres. The body feathers of a healthy male also carry their share of colourful accents. From a distance, the plumage of a turkey tom appears to be a uniform chocolate brown or black, but up close, when the sun is shining, his body feathers glint with iridescent patches of metallic red, green, copper, bronze and gold. There's no question that the colourful facial bumps, swlooen snood, and flickering feather tips are meant to excite hens and intimidate rival males, but what can a female actually discern from what she sees? *As it turns out, a lot.*

Fading glory

Colour is indeed an honest indicator of avian health and vitality. Parasites can diminish the colouration in birds. Infections sap energy, leaving fewer reserves for extravagant, gaudy displays.

Parasites not only dampen the colour of a tom's complexion but also affect the iridescence of his feathered finery. In wild turkeys, an infection with the parasite *coccidia* causes males to grow feathers with less brilliant iridescence. The iridescence results from the structural design of the feathers themselves whereas the colouration of the birds' skin is derived mainly from pigments, but both types of colour are sensitive reflections of a bird's health. Numerous studies have revealed that viruses,

bacteria, malaria-like blood parasites, lice and fleas all have a negative effect on both pigment and structural colours. A turkey tom's tint truthfully signals if he has the right stuff, and hens undoubtedly use this information when selecting a mate to father their chicks. ■

Humans are not much different than wild turkeys

WHAT?

We routinely assess our own health by our complexions. Researchers in Scotland wanted to know how sensitive we are to changes in facial colouration. In the study, they asked college students to use computer graphics to alter the facial colour of photographed people, making them look as healthy as possible. In virtually every case, the students added redness to the faces.

Physically fit people or ones with higher levels of sex hormones have more blood vessels in their face, flushing easier than people who are unhealthy, unfit, elderly or smokers. Healthy humans also have more oxygen in their blood. The 2008 report concluded people are quite sensitive to the subtleties of facial colouration, and we unconsciously rely on skin colouration to advertise our health and attract mates.

Dr. Lynch is a popular guest lecturer and an award-winning science writer. His books and photography cover a wide range of subjects, including the biology of owls, penguins and northern bears; arctic, boreal and grassland ecology; and the lives of prairie birds and mountain wildlife.

Merriam's Turkey *Meleagris gallopavo*

Diet: grass, leaves and seeds

Average Life Span: 3 to 4 years

Body Size: Males, 48-50 inches and females, 35-37 inches

Wingspan: 1.3 to 1.4 m (4.1 to 4.8 ft)

Weight: 2.5 to 10.8 kg (5.5 to 18.8 lbs)

Alberta Status: Exotic/Alien

Hunting: Special licenses are issued to resident hunters only. Check the *Alberta Guide to Hunting Regulations* for details.

WILD ON THE WEB
ab-conservation.com/mag
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Photo: Wayne Lynch

TURKEY TALES

In the early 1960s, two dozen wild turkeys were transplanted from South Dakota into Cypress Hills Provincial Park. A decade later, a second group was released into Alberta's Porcupine Hills, and from there, to areas near Pincher Creek. Currently, the only turkey population in Alberta large enough to be hunted is the one located around Pincher Creek. The total population size in the province is unknown.