

Bring in the Clean-Up Crew!

Turkey vultures are adapted for their special way of life—feasting on **dead** animals.

BY CHRISTINE PETERSEN

You never know what you'll see on a hike, which is exactly what prompts me to get on the trail whenever I can. Today I've chosen a regional park just north of my home in the Twin Cities. Starting down a narrow woodland path alongside a slow-flowing stream, I walk until the trail opens onto a wide grassland.

And that's where I spot them: five huge, dark birds perched in a tall, dead tree at the edge of the woods. Wings spread wide, still as statues, they look like stern sentries guarding the prairie.

Moving slowly, I lift my binoculars for a closer look. A few characteristics

help me make a quick identification:

- Body about as large as a bald eagle.
- An unfeathered, bright red head.
- A wide stripe of light-colored feathers under each wing.

These are turkey vultures—birds that cause many people to shudder and say, “Ewww!”

Gazing up at the resting birds, I ponder this reaction. OK, turkey vultures are odd-looking. And yeah, they eat the remains of dead animals. Still, everything in nature has a purpose and value. What's the deeper story of turkey vultures? I know exactly who to ask.

RYAN PENNESI



Meet the Raptors

At The Raptor Center in St. Paul, Gail Buhl and a team of experts work to protect birds of prey such as bald eagles and hawks, falcons, owls, and turkey vultures.

These *raptors* aren't all related, Gail points out as we stroll through the facility. But they share similar built-in tools for finding and eating their food. Those include excellent vision, a sharply curved beak, and claws on their toes called *talons*.

Turkey vultures are unusual among raptors because they rarely hunt live prey. Instead, they're *scavengers* that dine on *carriion*—the remains of animals that have already died from disease,

injury, hunting, or other causes. To us, that's gross. But imagine what our environment would be like if nothing ate carrion. Talk about a disgusting mess!

Scavengers are nature's clean-up crew, and everything about turkey vultures is related to this way of life.

A CLOSER LOOK. Gail's Raptor Center co-worker John Arent brings Aura, the resident turkey vulture, out of her display. I've never been so close to a live raptor, and it's seriously impressive. "Her wingspan is about 5½ feet," John tells me. Wow. That's my height, and it's at least a foot wider than I can spread my own arms.

RYAN PENNISI



Another surprise is her coloration. From a distance, turkey vultures appear plain brown or sooty gray. But up close, Aura's feathers actually have a gorgeous blend of colors—dark chocolate-brown, shimmering bronze, and metallic blue on the upper parts of her body, and silvery-gray under her wings and tail.

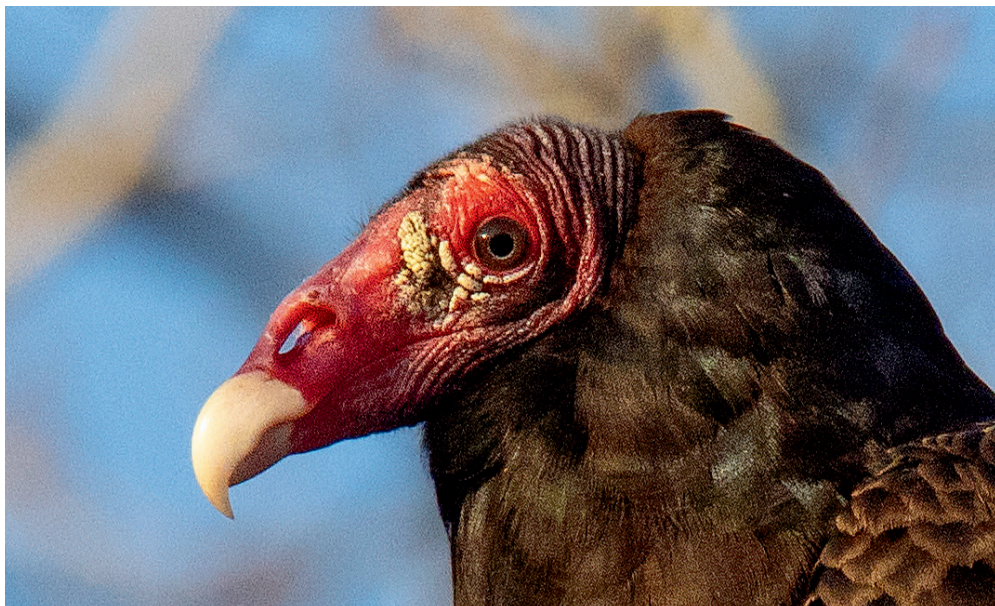
NOT QUITE BALD. Then there's that famous "naked" head. This trait, shared with wild turkeys, gives Aura and her kind their common name. But Aura's head isn't bare. It's covered in black bristles, rather like a short beard.

Feathers are everything to a bird: a

way to identify their own species, a kind of insulation from extreme heat or cold, and their key to flight. So all birds spend part of the day cleaning their *plumage*.

"When a vulture dips its head into a carcass, it gets covered in gore," Gail points out. Now I understand the problem. A bird has no way to clean its head. If vultures had feathered heads like other birds, that could get very messy.

"The ucky-yucky stuff dries on its skin," she continues. "The bird just scratches it off with a toe or rubs it on its wing. They often go sit in the sun and let the sun dry and disinfect it, and then it flakes off."



The Nose Knows

Aura is clearly curious, swiveling her head to watch us and others passing nearby at The Raptor Center. As she moves, I notice a wide opening at the top of her beak. It's so wide, in fact, that I can see part of John's face through the gap. What's that all about?

Carrion produces chemicals that rise and spread on the wind. Wide nostrils allow this scavenger to detect and follow the scent of carrion to its source—even if the carcass is hidden beneath trees or leaf litter. Few birds in the world have a better sense of smell.

PICKY, PICKY. While I stare at her nostrils, Aura busily plucks at the thin leather straps connecting her feet and John's hand.

RYAN PENNISI

"That's similar to what she'd do when feeding in the wild," John tells me. A turkey vulture's beak isn't strong enough to slice through thick skin or crunch large bones. But the birds can delicately—and quite thoroughly—remove bits of flesh and small bones. When a group of turkey vultures is done with a carcass, there may be only large bones and *hide*, or skin, left behind.

How do turkey vultures stay healthy on their diet of carrion? "Their digestive system is extremely acidic," Gail explains. "Their stomach acidity is the same as battery acid. We're still not sure how, but turkey vultures can break down bacteria, viruses, and toxins that harm other creatures."

Turkey Vulture Anatomy

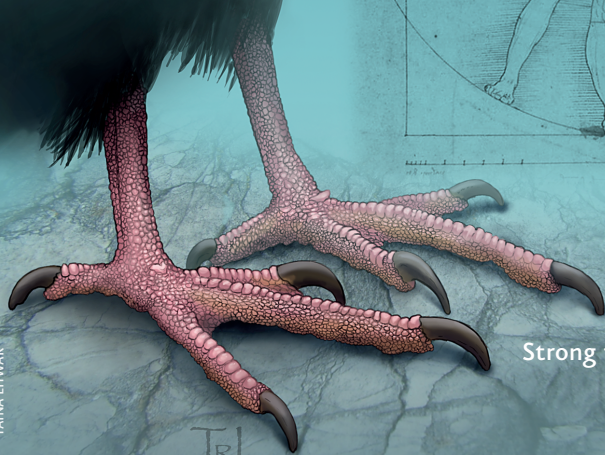
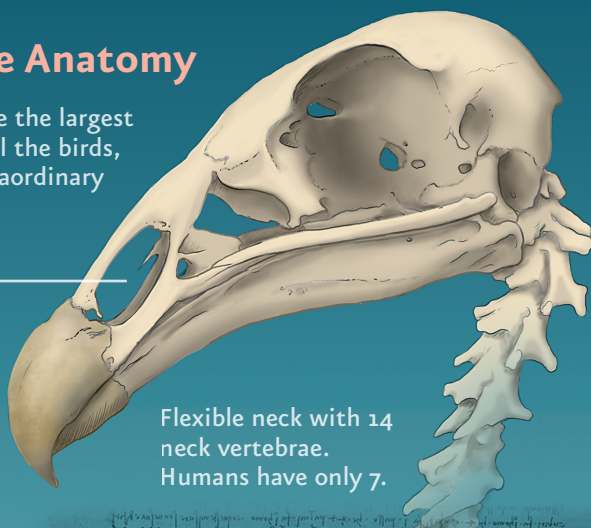
Turkey vultures have the largest olfactory bulbs of all the birds, giving them an extraordinary sense of smell.

Greatly enlarged nasal cavity

Fairly delicate beak

Flexible neck with 14 neck vertebrae.
Humans have only 7.

With a wingspan up to 72 inches, they weigh only about 4 pounds.



Strong feet with blunt talons



On the Road

In our modern world, a common place to spot turkey vultures is close to roads. Why? Because that's where they can find and eat easily available meals: animals that have been struck and killed by vehicles.

You might see a vulture perched atop a deer *carcass* on the roadside, using that featherless head to reach in for a bite. Or you might see vultures pecking at what's left of a squirrel, rabbit, coyote, or other *roadkill*.

Cars and wildlife don't mix well, so there's always plenty of roadkill to fill vulture bellies.

SKY SAILORS. Another place to look for turkey vultures is up in the sky. Wherever you live in Minnesota, you have a good chance to spot turkey vultures in flight. They are so widespread, in fact, that you might see them anywhere from southern Canada to the tip of South America.

SPARKY STENSAAS



Getting a Lift

Hilly landscapes, such as river valleys and lakeshores, appeal to turkey vultures in flight. Why? Sloped landscapes cause air to rush upward. The result is *lift*, a force that helps these large birds get into flight and stay aloft.

Once a turkey vulture is up, it travels along rivers of air that are invisible to us. That includes *thermals*, columns of warm air that rise off areas heated by sunlight. The bird can “ride” a thermal—spiraling upward, no flapping required—similar to the way you’d use an escalator. A vulture

soars with its wings held up in a V shape, a useful way to distinguish turkey vultures from many other raptors.

Every autumn, experts watch hundreds of turkey vultures soar on thermals past Hawk Ridge, on Duluth’s Lake Superior shoreline. How far do they travel this way? In 2014, researchers caught a vulture at Hawk Ridge and attached an electronic monitor. When released, “Tommy” the turkey vulture flew more than 2,500 miles—all the way to Guatemala. It took him just 23 days.

DOMINIQUE BRAUD



Family Time

Turkey vultures nest in places that are protected from hot sunlight or too much human activity. An old hollow tree in the woods, or a fallen one, makes a good turkey vulture nest. So does a pile of rocks, a cave, or a nook on a cliff. The birds will even nest in old abandoned houses or barns.

After they arrive in Minnesota in spring, the parents choose a nest spot or return to an old favorite. They hang out together for days or weeks, but they never bother to build anything. The female just lays her eggs—usually two—on the bare surface of the nest space.

Working together, the pair protect and warm their eggs for more than a month.

Turkey vulture chicks are small, fluffy, and helpless when they hatch, so the adults take turns with parenting chores. One *broods* the chicks—sitting on or near them—while the other flies off in search of food.

Most raptors have talons and strong feet. They can grab prey, hold it while flying, and tug off little pieces for their chicks. Turkey vultures have talons, but the talons aren't sharp, and their feet are too weak to carry prey. No problem! Like some other birds, vultures can store food in a special part of their stomach called the *crop*. When a parent returns to the nest, it just *regurgitates* food out of the crop to feed its chicks.

COURTESY OF BLANE KLEMEK



An immature turkey vulture (left) looks different from an adult (right).

LEFT: MICHAEL FURTMAN. RIGHT: BILL MARCHEL.

Growing Up

By about 10 weeks old, turkey vulture chicks are as large as adults and ready to leave the nest. The *fledgling* birds, now with fully feathered wings, follow their parents for a week or two, learning life skills like finding food. Then they are on their own.

From a distance, a young turkey vulture looks just like an adult. But up close, there are a couple of clues to its age: The head is sooty gray instead of red, and the curved beak is black instead of bone white.



Aura, a turkey vulture at The Raptor Center in St. Paul, is held by the center's John Arent.

Aura's Story

Once in a while, turkey vultures take shelter or nest in empty buildings. That's how Aura came to The Raptor Center in 2021.

"Aura was found as a chick in someone's barn," says Gail. "They tried to raise her, feeding her raw hamburger and hot dogs. But there was something important missing from that diet."

I can guess where this is going. "Bones," we say together.

Gail nods. "Young turkey vultures get

calcium and phosphorus from bones in their food," she says. "Those minerals help their own skeletons form properly. Without bones in her diet, Aura's spine grew crooked. She can't fly well, so she can't live in the wild."

It's an unfortunate outcome for Aura. But I'm glad she can serve as an ambassador here at The Raptor Center, helping people learn to appreciate her wild cousins.

CHRISTINE PETERSEN

TEACHERS RESOURCES. Find a Teachers Guide and other resources for this and other Young Naturalists stories at mndnr.gov/young_naturalists.



Falling, Rising Numbers

Turkey vultures weren't always as common as they are today. Beginning in the mid-1800s, a steady stream of settlers arrived in Minnesota. Woodlands were cut to build farms. And it wasn't unusual for people to shoot vultures, believing they were dirty or blaming them for killing livestock. Within a few decades, this combination of habitat loss and human fear caused the turkey vulture population to fall.

That situation has improved recently—oddly enough, thanks in part to the many roads we've built, which supply turkey vultures with a steady source of roadkill.

UP, UP, AND AWAY. Later in the summer, I return to the regional park where I previously saw turkey vultures. Once again, I arrive at the right time of morning to find them *roosting* in the sun with

their wings spread—a pose that helps warm them up.

As I watch, one seems to wake from a daydream. Folding wings against its body, the bird gazes slowly around. Then, barely a split-second later, it leans forward and launches into flight, massive wings making an audible *whoosh* as they press against the air. The other vultures soon follow, rising over the treetops and out of sight.

Over the coming weeks, the days will shorten and grow cooler. Turkey vultures can tolerate colder temperatures for a while, but not a full Minnesota winter. These turkey vultures, like tens of thousands across the northern breeding area, will head closer to Earth's equator where winter never comes. I hope that, like me, you'll keep an eye on the sky next spring to watch for their soaring return. 