

Disappearing Acts

The amazing ways that animals hide from us and each other. By Ellen Horowitz

RESTING EASY A white-tailed ptarmigan can sleep in peace knowing its white winter plumage disappears in the snow. Occasionally, however, some of these birds can turn white before the snow flies, making them highly visible prey for raptors and other predators.

DONALD M. JONES

The well-used game trails crisscrossing the talus slopes looked promising, so we pulled out our binoculars and began to scan.

After several minutes of methodical searching, my friend Brian announced, “Those rams are humongous!” I didn’t see a thing. While quickly setting up a spotting scope, Brian described exactly where the bighorn sheep were standing. Yes, I could see the lower rock ledges. Yes, I could see the thin stringer of small subalpine firs. But no matter how hard I looked, I couldn’t spot the six rams. “Take a look through the scope,” Brian said. “They’re smack in the center.”

I peered through the high-powered optics. Still nothing. Just as I began to ask Brian for yet another landmark, a curved shape appeared out of nowhere. The ram turned his head and I saw him. Now that I knew where to look, the other five rams materialized out of the mountainside as if by magic. All this time they had been hiding in plain sight.

Many animals have an extraordinary knack for blending in to their surroundings. For good reason. In a world of eat or be eaten, a prey animal’s ability to disappear from a predator’s view, or a predator’s ability to go undetected by prey, greatly increases its odds of surviving another day.

Such a vanishing act is known to scientists as crypsis—the ability or capacity to avoid detection. Commonly it’s called camouflage, a generic term covering a variety of forms and strategies that maximize concealment.

Cryptic coloration is the term for colors and patterns that prevent detection. One example is a prairie rattlesnake’s body color—tan to light brown or greenish—adorned with dark brownish splotches that help the reptile hide in dried grasses and rocky soil. Another is the mottled plumage of a spruce grouse, which allows the bird to disappear into conifer shadows and tree bark where it often roosts. And let’s not forget human bowhunters, waterfowlers, and photographers, who wear camo clothing patterned as marsh grass, oak leaves, sagebrush, snowy ground, aspen bark, and more.

Many cryptically colored creatures instinctively freeze at the first sign of danger. That lack of motion makes the animals

even harder to see, as I discovered one day in early June when I unintentionally stood within 5 feet of a few-days-old fawn. She lay perfectly still, the light spots on her dark fur mimicking the dappled light filtering through the treetops onto the forest floor. I’m unsure what small detail alerted me to her presence. Did I see a tiny black hoof? Did she twitch an ear? Finding her became the highlight of my day, but it also made me wonder how often I look at or walk past an animal without ever seeing it.

That’s no doubt the case with many ground-nesting birds I pass by without notice. Species such as snipe, sharp-tailed grouse, and various sparrows have brown, tan, gray, and white feathers that match rocky or sparsely vegetated backgrounds. When on the ground, the common night-hawk’s mottled and barred plumage dissolves into the surroundings. When not flying, the bird also squints its large, dark eyes, making it less conspicuous.

Owls are experts at disappearing acts, thanks to both cryptic coloring and shape shifting. Variegated, earth-toned plumage patterns help these camouflage wizards resemble backdrops of tree bark, shadows, and light streaming through branches. According to Denver Holt, president of the Owl Research Institute in Charlo, some owls actually alter their shape when threatened. “They elongate their bodies, twisting sideways, then raising and drawing a wing across the side of their bodies,” he says, to make themselves look less like an owl and more like the tree trunk. Holt adds that some owls erect the feathers of their facial disk to distort the

TOUGH TO SPOT When lying down, bighorn sheep disappear into their rocky, tan-gray surroundings. Only when the animals are standing—and thus easily able to escape predators—do their white rumps give them away.



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PLANT LIFE Owls sometimes alter the shape of their bodies by twisting sideways or drawing a wing across themselves to look more like bark. By squinting, they hide their large, distinctive eyes, and their feathered “ear” tufts resemble branch stumps. The American bittern’s striped plumage resembles the cattails and bulrushes where the bird lives. On windy days, bitterns will actually sway back and forth to mimic reed movement.

LEFT TO RIGHT: DONALD M. JONES; SHUTTERSTOCK; JAMIE & LISA JOHNSON; FRANCIS G. BERGQUIST

Where's wildlife? Many animals are masters of disguise



KILLDEER

Common shorebirds, killdeer lay their spotted eggs without a nest on the ground amid small stones. Upon hatching, the mottled chicks, round in shape and without movement, look like rocks or leaf litter.



SPINY SOFTSHELL TURTLE

This eastern Montana reptile has a soft, flat, leathery shell that looks like silt or a small boulder. The soft shell makes the turtle vulnerable to predators, so it spends much time buried in the mud of lake bottoms.



MULE DEER

The white spots on deer fawns and elk calves resemble the mottled sunlight streaming through trees or shrubs under which the young animals hide during their first few weeks before gaining enough strength to run from danger.



COMMON GRAY MOTH

Like many moths in the Geometridae family, the common gray blends perfectly against tree bark. The insect holds its wings flat against the surface so that no shadow forms, adding to the camouflage effect.



WHITE-TAILED JACKRABBIT

Like the snowshoe hare and white-tailed ptarmigan, the white-tailed jackrabbit displays seasonal dimorphism, meaning it changes its pelage (mammals) or plumage (birds) twice each year to blend in to seasonal surroundings.



CADDIS FLY CASING

The pupa of the caddis fly builds a protective casing of pebbles, tiny twigs, and other stream bottom materials, allowing the insect to blend in to its natural surroundings before emerging as an adult that can flee fish predators by flying.

shape of the birds' characteristic large head, thus making them less conspicuous.

Staying still is usually a great way to remain hidden, but not always. Some animals incorporate movement with body shape alterations and cryptic coloration to mimic the surrounding vegetation. The American bittern resembles the rushes and cattails where it lives by pointing its bill skyward, contracting its feathers to narrow its body profile, and standing as tall as possible. Aiding concealment are vertical streaks on the bird's throat and breast feathers. On windy days, the bittern gently sways back and forth, imitating the plants' movements. "We were within a dozen yards...yet if our eyes were turned away for an instant it was with difficulty that we could pick up the image again, so perfectly did it blend with the surrounding flags [cattails] and so accurate was the imitation of their waving motion," wrote the early 20th-century ornithologist Arthur Cleveland Bent in *Life Histories of North American Marsh Birds*.

Another illusionist is the greater short-

horned lizard, found in dry, open native prairie. The reptile's base colors—from tan-gray to reddish-brown to olive green-gray—match the soil of its home turf. Dark splotches and light spots conceal it further, while spines and fringes of scales help break up its outline. When a greater short-horned predator—it fades from sight as if absorbed into the earth.

Countershading, an effective and subtle component of camouflage, is exhibited by such diverse animals as field mice, mountain lions, ruby-crowned kinglets, and west-slope cutthroat trout. The backs of these and other countershaded animals are darker than their undersides. Ordinarily, an animal illuminated by sunlight is lighter on top and darker below. A countershaded animal's dark top and light bottom counter the effects of natural lighting to create a more uniformly gray form and look less like a three-dimensional animal and more like a flat, indistinct image.

Many animals that spend time both on and above ground benefit from countershading when viewed from different perspectives. For example, when observed from

above by a Cooper's hawk, the back of a red squirrel blends in with the dark forest floor. The same squirrel, high in a tree and seen from below by a pine marten, displays a light underside that merges with the bright sky, reducing its outline to the predator.

Seasonal dimorphism is a type of camouflage in which the animal actually changes the color of its pelage (mammals) or plumage (birds) to blend in with the seasonal surroundings. In Montana, weasels, snowshoe hares, white-tailed jackrabbits, and white-tailed ptarmigan change from various shades of brown and gray in summer to white (or mostly white) in winter by molting and growing new fur or feathers. During winter I regularly see snowshoe hare tracks along snowy forest edges. But trying to find this large-footed, long-eared creature is like looking for a ghost. On more than one occasion I've been startled by a snowshoe hare launching itself from the base of a nearby tree where it had remained hidden from my view.

Sometimes, dramatic seasonal changes in coloration can backfire. While hiking along the Rocky Mountain Front one day in late September, I spotted the carcass of a

CLOCKWISE FROM TOP LEFT: KRISTI PEMERDNE, NATHAN COOPER, JEREMIE HOLLMAN, NEAL & MI WISHLER, LARRY DEARS, MICHAEL HFRANCIS

white-tailed ptarmigan. Snow had yet to arrive, but the bird had already turned white and must have stood out like a neon sign announcing, “Food: Eat Here.” The pile of white feathers on the dark tundra indicated that a predator had taken advantage of the highly visible meal.

Some animals change colors to match their surroundings, the chameleon being the most famous. In Montana, grasshopper

meal. Over two to three days, the spider can slowly change from bright yellow to white with pink slashes. When a bee, fly, or butterfly alights on a petal, the spider pounces.

Many caddis fly species build protective cases made from tiny pebbles, tree needles, or other underwater materials. When tucked inside its case, the larva blends into the stream bottom instead of standing out as a menu item. The wings of some Montana but-

terflies such as anglewings (commas) are adorned with colorful upper surfaces but have muted gray and brown undersides. When closed, the wings match hues and designs found on dried leaves or tree trunks. Many moths have bark-colored wings that,

when held flat against a tree, project no shadows and perfectly mimic the background. The newly hatched larvae of swallowtail butterflies and some moth species appear to be bird droppings—convincing would-be predators to look elsewhere for supper.

Some animals disguise themselves by resembling a harmful species. When the non-poisonous bull snake rapidly vibrates its tail in dried grasses, the sound is similar to that of a prairie rattlesnake. The harmless viceroy butterfly dupes predators by looking like the inedible monarch butterfly. Some nonstinging insects such as the syrphid fly (hoverfly) are adorned with yellow and black stripes to resemble bees.

Most animals fool onlookers by using colors, patterns, or imitations of undesirable creatures or objects. For them, hiding in plain sight means survival and (ultimately) perpetuation of the species. So don't despair the next time you go looking for wildlife and don't see any. Plenty of camouflaged critters are right there, in plain sight, most likely watching you. 🐾

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nymphs change from spring-green to sun-bleached shades of golden brown each time they molt. The new colors match changing plant colors throughout the season. A crab spider changes color to mimic the petals of various flower species where it awaits its next

meal. Over two to three days, the spider can slowly change from bright yellow to white with pink slashes. When a bee, fly, or butterfly alights on a petal, the spider pounces.



COMMON NIGHTHAWK

Colored in gray, white, buff, and black, the nighthawk disappears when perched on trees, bark, and ground. As do owls, the bird squints to hide its large dark eyes when not flying.



CRAB SPIDER

The king of camo may be the crab spider, which can change color like a chameleon to mimic the petals of different flowers. There it awaits bees, flies, or butterflies looking for pollen but finding instead a colorful killer.

CLOCKWISE FROM TOP: LEFT: STEVEN GRAM; STEVE MITCHELL; DAVID ANDERSON; JESSE LEE VARNADO



BARK BIRDS Tanner in color than the mottled blue-gray male, the female dusky (blue) grouse blends in perfectly against the trunk of a ponderosa pine. Only their dark eyes give this pair away.