Earth Almanac: January/February 2005

By Ted Williams

Bird Brains
Winter Snakes
Upside-Down Birds
Soft, Cold Cash
Brilliant Provider
Comeback Trail

Bird Brains

People who think they've never seen a raven probably have—they've just assumed that it was a big crow. Ravens, one of earth's most widely distributed birds, are common in the West, Northeast, and Great Lakes states as well as in the Appalachian and Adirondack mountains. They are much larger than crows, with wedge-shape tails and thicker beaks, and they croak more than caw. In winter watch for their spectacular courtship displays—looping, diving, chasing, and soaring, sometimes in formations so tight they brush wingtips. The raven's remarkable intelligence has made it prominent in human lore and literature—from Native American legends, where it plays a major hand in creation stories, to the wretched verse of Poe. When ravens find an ungulate carcass they will call in wolves, which serve as their watchdogs and can openers. Sometimes a raven will waddle up and tweak a wolf's tail while another snatches a morsel as the wolf whirls around. Eskimo hunters adamantly assert that ravens find moose for them, hovering and vocalizing in the knowledge that they'll soon have a gut pile. Raven researcher Bernd Heinrich attached a piece of meat to a string and hung it from a horizontal perch. His pet crows flew at the meat, pecked at the string, and gave up. But one of his ravens, having surveyed the situation for six hours, solved the problem by pulling up the meat with its beak and, with each hoist, placing its foot on the string to keep it from falling back.

Winter Snakes

On warm winter mornings almost anywhere in the contiguous United States—even in snow country—you may meet a common garter snake sunning itself. Races of the garter, which come in as many sizes and color patterns as their namesake, are more widely distributed and cold-tolerant, and range farther north (even into Alaska) than any other North American snake. They'll hibernate in quarries, mammal burrows, old buildings, or any other refuge that generally remains above 32 degrees Fahrenheit. For reasons not fully understood, garters can even withstand short periods of subfreezing temperatures. The farther north, the greater the hibernating aggregations. In Manitoba, for example, as many as 50,000 snakes will congregate at four hibernacula at the Narcisse Wildlife Management Area (see "The Greatest Show on Earth (http://magazine.audubon.org/features0410/attraction.html)," Audubon, September-October 2004). This strategy slows heat loss and makes it easier to find mates in spring. There are two excellent reasons for not picking up a garter snake at any time of year. One, it is easily damaged, and two, it may saturate you with a vile-smelling musk exuded from a gland near its tail.

Upside-Down Birds

Now, when temperate woods across the contiguous United States fall white and silent, come the redbreasted nuthatches—sociable sprites with short legs, stubby tails, big heads, and upturned bills. Uttering soft, nasal contact notes, they creep mouselike along branches, then descend trees headfirst to glean insects missed by woodpeckers and chickadees. Unlike other species of North American nuthatch, this one migrates. In winter you'll have more sightings when there has been poor cone production in north-country and high-country conifers. Red-breasted nuthatches come readily to suet or seeds, some of which they'll cache in tree cavities or under bark. The name *nuthatch* (from the Middle English *hache*) apparently derives from the birds' habit of wedging nuts in crevices and "hacking" at them. Red-breasted nuthatches are as trusting of humans as chickadees, and when they are conditioned to come to the hand for food, they will sometimes wedge it between your fingers.

Soft, Cold Cash

Collecting pennies is good luck as well as a terrific excuse to get friends and family off the couch and outside for a winter outing. The pennies you're after are flat, soft, barnaclelike creatures that cling to the slimy bottoms of rocks in cold, fast streams most anywhere in the nation. If you find them, you'll know the stream is pristine. (Dishwashing gloves help keep your fingers working.) "Water pennies"—the larvae of short-lived beetles—are intolerant of even moderate pollution and therefore are among the macroinvertebrates used by stream surveyors to assess water quality. During a water penny's two-year aquatic stage, it grazes on fungi, protozoa, bacteria, and algae. Its suction-cup shape prevents food from washing away when dislodged by its paint-scraper-like jaws. If you pluck a water penny and flip it on its back, you'll see six legs.

Brilliant Provider

After red osier dogwood sheds its leaves, the twigs ("osiers") turn fiery red, a vision made all the more striking when set off against the bleakness of drifted snow and/or the starkness of naked hardwoods. From Alaska to Newfoundland and south to Virginia, Kansas, and California, look for this midsize shrub in bottomland forests, low meadows, and wetland borders. Few plants are more important to wildlife. Birds, rodents, and bears feed on its white berries; ungulates, rabbits, and beavers browse on its bark and twigs; and all manner of creatures find cover in its dense groves. Indians and early settlers made baskets from the pliable branches and got a mild high from smoking the bark and leaves.



Photography by Michael Quinton/Minden Pictures

Comeback Trail

They are still grievously depressed in Nova Scotia, Newfoundland, and the eastern United States, but pine martens are slowly recovering in boreal forests throughout most of their range. Maybe you've seen one and not known what it was—that catlike, cat-size creature with the sharp face and rounded ears that wrapped its long body and bushy tail behind a spruce or fir bough and fixed you with big eyes. Martens don't hibernate but deal with extreme cold by tunneling into snow, where temperatures can't get much below freezing. The best chance of encountering these cousins of the otter, fisher, and mink, or at least of seeing where they have been, is in winter, when other animal activity wanes in the north woods and when the marten's passage is written on new snow. Tracks reveal a bounding, 20-inch stride with five-toed footprints between 1.5 and 2.5 inches wide and 3 to 4 inches long. Our lust for the glossy brown fur of the species almost did it in. By the mid-19th century the Hudson's Bay Company was trading about 180,000 marten pelts a year, and by the 1940s a pelt was fetching as much as \$100.