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Clark's Nutcrackers

Eastern Newts

Goldenrod Galls

Opossums

Oldsquaws

Sapsicles

Planter of the Western Woods



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The Clark's nutcracker is a big part of the spirit of the western evergreen forest. Sometimes he is brash and loud, dipping out of the canopy with a nasal kra-a-a as the day's first light slashes through the spires of conifers. Sometimes he is sedate and stately, sculling crowlike over the alpine forest, sun flashing on the white patches on his black wings and tail. Around your camp he may be a beggar and a thief. On otherwise still winter days he raucously patrols south-facing slopes, recovering the pine seeds he tapped into the earth with his long, sharp bill during late summer and fall. There may be only 4 to 5 seeds per cache, but his total store may contain as many as 33,000, and he can tote 95 at a time in a special pouch under his tongue. Recent experiments have demonstrated that nutcrackers use forest features to help them remember the locations of their seed caches. If a feature--a log, for instance--is moved 10 feet north, a bird will look for its seeds 10 feet north of where they really are. Because Clark's nutcrackers never recover all their seeds, they help plant the forest that sustains them.

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Strange Changes

When the sun's passage is still low and brief, and snow lies high like a shaken quilt, male eastern newts begin their pre-spawning transformation. If their pond has black ice or no ice, you may see them sashaying along the bottom most anywhere in the eastern half of our nation. Their tails grow flat and eel-like; their vents swell; their hind legs enlarge; and black, horny appendages form on their inner thighs and the tips of their toes. The most useful words for anyone explaining this salamander's life history are but sometimes. Usually, larvae transform into a subadult terrestrial stage called red eft, but sometimes they transform directly into the aquatic adult stage. Usually, adults have lungs, but sometimes (when they skip the eft stage) they retain their larval gills. Because newts exude a toxin, fish almost always shun them--in fact, in one experiment, trout died when newts were pushed down their gullets--but sometimes wild brook trout glut themselves on newts.

The Gall of Goldenrod

If you are a fisherman seeking live bait (a scarce commodity in winter) or just a curious naturalist, get thee to a goldenrod field, especially in the northern half of the country. Bring kids. Look on the stems for galls, bulbous growths that are the plant's reaction to insect attack. Goldenrod hosts about 50 species of gall makers, but if you find spherical galls about three-quarters of an inch in diameter, chances are they were made by the larvae of the goldenrod gall fly. Before it pupates in spring, a larva will bore an exit hole to the edge. Split the gall with a jackknife, and you'll see the larva, hard and immobile but protected by its own antifreeze. Bring it inside your house, and in a few minutes it will start to wriggle. If you would like to watch the fly emerge in late spring, leave the gall outside through February, since the larva can't complete its life cycle without an extended period of cold.

Frostbitten Pioneer



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They look like rats, only bigger, fatter, toothier, and slower. Opossums invaded North America from the south about the same time Caucasians invaded it from the east, and both invasions are still in progress. Because opossums evolved in a mild climate, the ones waddling through your headlight beams in the snowbelt from Yankeeland to Colorado are apt to have frost-pruned ears and tails. The loss of ear tissue only makes the beasts look uglier (if possible), but because they store a lot of fat in their tails, the abbreviation of those appendages may curtail their northward expansion. The opossum is the continent's only marsupial. Females deliver bee-size young after only twelve and a half days of gestation.

Newborns, essentially mobile embryos, haul themselves up into a kangaroo-style pouch, where they either die or find a nipple that expands in

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their mouths, buttoning them into place. In one study, a researcher could fit only 21 beans into the brainpan of an opossum skull but needed 150 to fill the brainpan of a raccoon. The opossum's remarkable success proves what countless mid- and low-level business managers already know--that intelligence is no criterion for advancement.

Mighty Ducks

Long after other wildfowl have fled south--when frozen kelp crunches under your boots and spindrift glazes rocky headlands--our fastest, whitest sea duck finds winter refuge along the Atlantic and Pacific seaboard or on large, open lakes. Oldsquaws (so named because they talk so much and so loudly, but now being called long-tailed ducks by the politically correct) sound like a pack of hounds dancing around a treed bear.

In fact, the species' Latin name, *Clangula hyemalis*, means "noisy winter duck." Now the drakes--with the long, sharp tails--are starting their courtship displays, which include porpoising, head shaking, bill tossing, bill dipping, wing flapping, and neck stretching. Several drakes may circle a hen, gurgling, gabbling, and shouting ah, ah, ah or ow-owly, owly, owly. Oldsquaws can dive to 200 feet, deeper than any other duck, and they fly like hurricane-borne shingles. Hunters who have shot oldsquaws as they veered and twisted directly overhead have found pellet holes in their backs.

Winter's Candy

Sapsicles--those shards of frozen sap that hang from broken branches of hardwoods--seem made for consumption by kids and adults with kids' hearts. If you close your eyes and concentrate, you can taste the coming spring. Sapsicles are sweeter than liquid sap because the sugar has been concentrated by evaporation. Look for them on warm, late-winter days after night temperatures have dipped below freezing. According to some connoisseurs, black-birch sapsicles have a faint wintergreen flavor; butternut sapsicles are vaguely reminiscent of cider. While red maple and box elder sapsicles are superb, the best are produced by sugar maples, which grow from Canada to northern Georgia to eastern Kansas. Some of these trees are five feet in diameter and may still bear V-shaped scars made by the Indians who collected their sap to make sugar.