# Earth Almanac: May/June 2008

By Ted Williams

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Joseph Scheer

# **Moon Flakes**

Nothing imparts more magic to a late-spring evening than the appearance of a luna moth. Perhaps it clings to your porch screen or dances fairylike around a streetlight, or maybe you catch its shadow as it flutters across its namesake's bright face, long tails tossing in unstable, seemingly impossible flight. Older insect guides report that these four-inch-wide moon flakes are fading from the American scene,

rare to the point of endangerment. But throughout most of their range, from the East Coast to the Dakotas and Texas, luna moths are now common. It's just that they are rarely seen because adults live only for about a week. As with other giant silk moths, their digestive tracts have disintegrated during pupation, so they don't eat. Basically, they're flying gametes. When darkness settles the female releases a pheromone detected at great distances by the male's antennae, more feathery than the female's. The females deposit eggs on such plants as walnut, butternut, sweet gum, paper birch, persimmon, alder, beech, and willow. Find one of the light-green, dark-headed, yellow-striped larvae on any of these host plants, and enclose it with netting to protect it from predators. Make sure to leave plenty of space for it to feed. Next spring check the cocoon regularly.

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Tom Vezo

# **Cuckoo Come Lately**

In late spring, when almost all other birds are incubating eggs or feeding hatchlings, yellow-billed cuckoos breeze in from Central and South America to set up housekeeping in old orchards, thickets, and shrublands in the eastern United States and isolated locales in the West. It's a hurried job, sometimes taking as little as 17 days from egg laying to fledging. One day the quill-covered nestlings look like porcupines, and flight seems out of the question. The next day feathers burst forth, and the birds take to the air. Occasionally, the process is so rushed that nest building is skipped and the female drops her eggs in another bird's clutch, though the surrogate parents are usually other yellow-billed cuckoos. Such behavior may be less Old World-cuckoo nest parasitism than "brood cooperative" egg dumping. Yellow-billed cuckoos eat fruit and all manner of insects, including hairy caterpillars that repulse other birds, and they are among the very few North American birds capable of preying on gypsy moth larvae. When their stomachs get so perforated with spines that digestion is impaired, they merely regurgitate the linings and grow new ones—"a process," noted early 20th century ornithologist Edward Forbush, "that would be beneficial to some unfeathered bipeds could they compass it."



Niall Benvie/Minden Pictures

### Herp-In-the-Box

Bitter is the heart that doesn't soar at the sight of a box turtle ambling through new meadow grass or leaf-shaded woods. Now, recovered from winter dormancy, these gentle, gaudy reptiles, which derive their name from the hinged plastron that allows them to completely shut themselves into their shells, are getting about the business of procreation. The male—distinguished by a long tail and long foreclaws —circles his prospective mate, head high. He nudges her and bites at her shell. If she's in the mood, he'll mount her from the rear, inserting his hind claws between her carapace and plastron and hooking his tail around and under hers. There are two species of box turtle in the United States: the eastern (which ranges from Texas throughout the southeast and north to Michigan and Massachusetts) and the western, found west of the Mississippi to New Mexico and Colorado. Where the two overlap they sometimes hybridize. Box turtles can live for a century, but they reach sexual maturity slowly, and are extremely vulnerable to depletion. No turtle, especially a box turtle, whose home range may not exceed five acres, should ever be moved to new and unfamiliar territory. But all turtles should be rescued from busy roads. Make sure you place them on the side they were headed for, so they won't immediately cross again.



Lynn Keddie/Getty Images

### **No Escape**

Where our southeastern coastal plain slouches into swamps, bogs, and wet prairies, otherworldly predators, sometimes a yard tall, are starting their eight-month hunting season. From southern Virginia to Florida and north to Mississippi, they sway in the wind like charmed cobras. They are yellow pitcher plants—carnivorous herbs that compensate for their nutrient-impoverished, usually acidic habitat by devouring insects. Now petals appear on leafless stalks, and glands pump out aroma attractive to pollinating insects but so reminiscent of cat urine that displays at flower shows have been moved to breezeways. Seeking nectar, victims venture down the pitcher's throat, where a waxy secretion makes them lose their footing and stiff, downward-pointing hairs guide them lower and lower until they fall into a digestive stew of enzymes, bacteria, and a hemlock-like toxin. Save for pollinators that stay high in the reproductive parts and a few large insects, such as wasps, that occasionally chew their way out, there is no escape.



Joel Sartore

# **The Biggest Bears**

Whatever you learn about the taxonomy of brown bears is likely to be rebutted by your next source. To Americans and Canadians, "brown bear" means a coastal grizzly grown to enormous size on a diet of salmon and other rich protein sources such as whale and seal carcasses. Elsewhere in their range— Russia, France, Spain, Italy, Greece, India, Pakistan, Japan, Korea, China, Mongolia, Syria, Iraq, Iran, and Turkey—"brown bear" means *Ursus arctos,* of which the grizzly, having crossed from Eurasia on the Bering land bridge at least 50,000 years ago, is a subspecies. In North America there are only grizzlies, but the animals on Kodiak Island, called "Kodiak bears," have been isolated there for 12,000 years, just long enough to be recognized by most taxonomists as a grizzly subspecies. Kodiak bears, which can weigh 1,500 pounds, are the planet's largest land omnivores. Now, freshly undenned, they are prowling the beaches in search of carrion. Soon they'll be feasting on the first returning salmon. In sparse inland habitat, a grizzly may need 300 square miles to make a living. On Kodiak Island, which sustains a healthy population of about 3,500 animals, it needs less than two.



W. Perry Conway/Corbis

### **Fire Owls**

How fitting that the flammulated owl, our second smallest owl (after the elf owl), derives its name from *flammeolus*, the Latin word for flame. Although its face and wings are tinged with the orange tones of glowing wood embers, those who first described it were unaware that it depends on fire to renew the brushy, shade-intolerant undergrowth that sustains it in forested mountains from British Columbia to northern Mexico. Widespread fire suppression has destroyed some of this habitat. The bird is hard to see because it roosts close to tree trunks so that it resembles a branch. This—together with its unusual migratory behavior (stemming from a need to follow its insect and arachnid food supply south in winter) —had led ornithologists to believe that it was in steep decline. Improved census techniques, however, reveal that the species is quite common. "We now know it sings most consistently late at night," says ornithologist Kenn Kaufman. "And its soft voice doesn't carry; you can't just stop and listen along the road as you would for barred or saw-whet owls." Listen carefully for their song, a soft, low-pitched *boop*, repeated about once every two seconds. And though they're more often heard than seen, look for them at dawn and dusk as they pop in and out of old woodpecker holes.



Terry Eggers/Corbis

### **Colorful Blankets**

A smaller but even more spectacular version of the sunflower is now brightening plains and prairies from northern Canada south to California and New Mexico, and east to Quebec and New York. Under full sun and in sandy earth, the blanket flower can reach a height of two and a half feet. There is some debate about how this hardy annual (sometimes a perennial) got its name. Under prime conditions these plants "blanket" the earth; and the brown-centered blossoms glow with shades of red, orange, purple, and yellow, reminiscent of the rich color patterns of Indians' blankets. Cultivars, sometimes marketed as Gaillardia, Yellow Sun, and Red Plume, are widely available at nurseries and are easily propagated if you create prairielike conditions for them. Water well at first, but allow the earth to dry completely between waterings. The nectar will attract many species of butterfly, and in winter the seeds on ripe flower heads are relished by birds, especially goldfinches.



W. Perry Conway/Corbis

# **Pillar of the Forest**

In ponderosa pine forests of the southern Rockies and the Colorado Plateau, Abert's squirrels, also called tassel-eared squirrels for the jaunty ear tufts they sport in winter, are engaged in madcap games of tag that often last 11 hours. Several males race after a female, chasing her along branches, between trees, and up trunks. The darker-bellied Kaibab squirrel, isolated on the Kaibab Plateau north of the Grand Canyon and formerly thought to be a separate species, is now recognized as an Abert's subspecies. Abert's squirrels are used by the U.S. Forest Service as a health indicator for ponderosa pine because they have a complex and mostly symbiotic relationship with these trees. While Abert's squirrels weaken individual pines by severing needle-bearing shoots from the crowns to get at the nutritious phloem within, they also eat a species of false truffle (itself symbiotic with ponderosa pines) and, through their feces, distribute the spores throughout the forest. The fungi act as root extensions, drawing water and nutrients to the tree which, in turn, provides the fungi with carbohydrates.