#### Earth Almanac: July/August 2009

By Ted Williams

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Dennis Kunkel; Charles Lewallen

# **Chiggers Suck**

If you live anywhere from southern New England to California but not much north of the latitude of Nebraska, early summer is the time to look for chiggers. If you're lucky, you won't find them. Chiggers are the six-legged, parasitic larvae of eight-legged harvest mites—those scarlet, spiderlike creatures you see scurrying away when you turn over your garden. You'll perceive chiggers only by feel—they itch mightily—because they're no more than 1/120th of an inch long. What you will see are the red welts they leave in such sensitive areas as armpits, crotch, and backs of knees, and under tight-fitting garments like belts, bras, socks, and underpants. You're a second choice; they've settled for you only because they didn't find a quadruped mammal, reptile, bird, or amphibian. Bug repellents will discourage chiggers, and washing after exposure will remove most of them. We have it from all manner of sources that chiggers burrow into human flesh and drink blood and that, therefore, the best

way to kill them is to suffocate them by applying nail polish to the inflamed area. It's hokum, not that the truth is any nicer. A chigger injects digestive enzymes that liquefy your skin cells and at the same time harden the surrounding tissue into a strawlike feeding tube that helps it suck up its meal. When the chigger is fully engorged, after about four days, it drops off and transforms to a nymph, which, in turn, transforms to an adult harvest mite. In partial atonement for their misspent youths, the non-



parasitic nymphs and adults eat mosquito eggs.

Dan Suzio

# **Slip-sliding Away**

When summer sun heats the sandy washes and hardpan flats of the Sonoran, Colorado, and Mojave deserts to temperatures that could blister human feet, the petite sidewinder keeps its cool. Now this little rattlesnake, rarely more than 30 inches in length, hunts mostly by night, seeking refuge during the day in rodent burrows whose former occupants have likely provided it a repast. It ambushes small mammals and lizards by burying itself in soft sand. When it does venture into the heat of the day it "tiptoes" at high speeds, hurling its body sideways in lateral waves so that only two short sections touch the ground. Its tracks are distinctive—J-shaped loops with the hook of the J pointing in the direction of travel. The hornlike protuberances above each eye that give the sidewinder the alternate name of "horned rattlesnake" possibly provide protection for the eyes when the snake is negotiating underground burrows.



Tom Vezo/Minden Pictures

### **Teeny Terns**

On beaches along our three coasts and major river systems of the nation's midsection, least tern chicks are struggling out of their eggs. The robin-size parents feed them fish or, occasionally, insects skimmed from water surfaces. During periods of excessive heat adults may soak their bellies and cool their hatchlings by dripping water onto them. In the late 19th century extirpation by the millinery trade seemed certain until activists, led by noted poet Celia Thaxter, intervened. In her 1887 essay "Woman's Heartlessness," Thaxter offered this account of a lecture she'd given a plumage-topped woman: "It was merely a waste of breath, and she went her way, a charnel house of beaks and claws and bones and feathers and glass eyes upon her fatuous head." In one of the Endangered Species Act's many successes, California's least tern population has increased from about 225 nesting pairs in 1970 to several thousand pairs today. But habitat loss is still a problem there as well as in the nation's interior, where river manipulations have destroyed sandbars and fish habitat. What the least tern has going for it, however, is its wide distribution across North and Central America.



Paul Kusmin

## **Fueling Hummers**

July seems awfully early to start a fall migration, but now male rufous hummingbirds are setting out on the longest trek of any U.S. hummer-from southern Alaska to Oaxaca, Mexico. Females will follow soon. Instead of taking their spring route along the Pacific Coast, they move down the Rockies, sipping nectar from flowers throughout most of the West. Both sexes will aggressively defend feeding areas even when satiated. Males face their opponents, so they've evolved bright scarlet-orange throat patches. But because females often warn away competition by fanning and waving their tails, they've evolved distinctive tail patterns. When flowers are scarce rufous hummers will drink sap from holes drilled in trees by sapsuckers, and they will come readily to sugar-water feeders. Add one part sugar to four parts water, boil for at least 15 seconds, let cool, and do not add coloring. If the sugar water in the feeder turns opaque, change it and scrub the inside of the feeder. On a cold morning you may find a rufous hummer in such a state of torpor that you can pick it up. It will slowly revive in the heat of your hand, and you can refuel it by inserting its beak into an eyedropper of sugar water.



Blickwinkel/Alamy

## **Cows With Wings**

As the Atlantic warms, vast schools of cow-nosed rays, some of the females weighing as much as 35 pounds, waft northward from as far south as Brazil, entering bays all the way to Massachusetts and feasting on bivalves. They excavate their prey by fanning sand and sediment with their broad wings and simultaneously sucking it into their mouths and blowing it out. A school thus engaged will muddy a large area, and because they stir up other organisms, they're frequently attended by such fish as striped bass and cobia. To the consternation of watermen, cow-nosed ray populations have exploded possibly because sharks, among their few natural enemies, have been so grievously depleted. In 2006, for example, the rays devoured about 775,000 oysters planted by the U.S. Army Corps of Engineers in the Piankatank River as part of an effort to restore the Chesapeake Bay's dwindling shellfish. The cow-nosed ray is armed with a venomous tail spike, as Captain John Smith learned in 1608 when he stabbed one with his sword near the Rappahannock River. The ray stabbed back with a very palpable hit to Smith's shoulder, causing such intense pain that his crew dug a grave for him. By evening, however, Smith had improved enough to eat the ray for his supper. The scene of this duel is still known as Stingray Point.



Charles Lewallen

#### Lily of the Moonlight

When the earth is wet with day-old rain, and summer sunsets fade over Alabama, Arkansas, Kansas, Louisiana, Mississippi, New Mexico, Oklahoma, and Texas, rain lilies unfurl their blossoms, scenting the evening with sweet, spicy fragrance. On gangly, leafless, foot-high stems the six-petaled flowers nod in the night wind. They're white, sometimes with a splash of pink after a few days, a hue enhanced by moonlight and starshine. Like many members of the amaryllis family, these plants have adapted to arid conditions by storing water in their bulbs. A thousand or more flowers may open simultaneously across a rain-washed desert plain or along a roadside. But appreciate them while you can because their beauty is fleeting. Within two days they'll fade and wither. These bulbs will naturalize well in your lawn or amid low vegetation. If you live in a climate where the ground freezes, grow them in pots; after they bloom allow the flowers and stems to ripen and die. Then keep the bulbs in a warm place for half a year before watering. Or, after the danger of frost is past, you can plant them outside.