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DOMINATING

Coati version of spoiled brats

Youth rules among groups of ring-tailed coatis of Argentina. A biologist reports a social hierarchy that he says hasn't been previously documented in animals.

The ring-tailed coati belongs to the same family as raccoons. Although scientists named the species more than a hundred years ago, its ecology and behavior haven't been studied well, says Ben Hirsch of State University of New York at Stony Brook. To fill in the gap, he has been monitoring two groups of coatis in Iguazu National Park.

Small, young coatis often spring at their elders, he says. Instead of smacking the pretentious youngsters, elders usually back down. As Hirsch worked out the dominance hierarchies, he found the sole adult male at the pinnacle of the group, which wasn't a surprise. Next in rank, though, came youngsters less than a year old, who were lordling it over all the adult females. Below these adult females were the adolescent coatis, between 1 and 2 years old. Thus, when those high-living juveniles reach their first birthdays, they plunge from near the top of the hierarchy all the way to the bottom, says Hirsch. —S.M.



LIVE FAST A ring-tailed coati spends its first year intimidating adult females and its older half-sibs.

report results of a new approach. When they combined radio tracking and DNA testing, they revealed moderately high amounts of sexual infidelity among the voles.

In eight outdoor enclosures, each housing 12 prairie voles, Ophir and his colleagues monitored radio-collar signals to determine which voles shared a home range. The researchers also used DNA samples to test paternity in the 27 litters that came from the females of those pairings.

The genetic tests indicated that only one mother carried a litter fathered partly by one male and partly by another. With these data alone, Ophir might have concluded that only one female had mated outside her pair bond. However, the home range data further indicated that five of the other litters were sired entirely by a male other than the one living with the mom.

Ophir's Florida colleague Steven Phelps suggests that the so-called monogamy gene "might have been more aptly called the social-bonding gene." —S.M.

HARASSING

When a chipmunk teases a rattlesnake

Several of the Northeast's least ferocious forest creatures taunt rattlesnakes. In woodland-surveillance videos, scientists have watched chipmunks, gray squirrels, and a thrush lunge at and hop over the vipers.

Harassing of North American snakes had previously been reported along the West Coast (*SN*: 6/26/04, p. 403; 10/9/99, p. 237). California ground squirrels can survive snakebites as adults, but the pups can't. If adults find a snake lurking near a burrow, they snap their tails and rush, nip, and kick sand at it. The harassed snake often leaves the scene.

Now, Rulon Clark of Cornell University has documented similar snake taunting in East Coast critters. He had set out to study how timber rattlesnakes hunt. It was slow work since a foraging rattler generally sits still for a day or so until something strays into striking range. To collect data efficiently, Clark set up surveillance cameras to monitor the snakes.

Out of 88 snake-hunting bouts caught by his 2,000 hours of video, 6 featured dramatic episodes of harassment: 3 starred a gray squirrel; 2, a chipmunk, and 1, a pair of wood thrushes.

As far as he knows, Clark says, these animals don't have built-in resistance to snake venom. However, they can move fast and dodge out of harm's way. And their antics work: A snake treated to such a commotion was four times as likely as an undisturbed snake to abandon its hunting spot, Clark notes. —S.M.

SIGNALING

Hey, kids, it's time for drool

A former whale-acoustics analyst says that he has for the first time decoded a vibrational signal by paper wasps.

Biologists have known that a female paper wasp frequently presses her abdomen against cells in her nest and waggles, says Bernard Brennan of Cornell University. To study this phenomenon, he focused on a brand-new nest where the founding female was tending to her first 20 or so larvae. He removed one larva and put a tiny vibration sensor in its place. The resulting data indicate that the queen's vibrations spread throughout the nest.

To look for the intended receiver of the vibrational signals, Brennan painstakingly removed all larvae from their nursery cells. He found that a mother returning to an empty nest waggled at first, but quickly stopped. When Brennan eased the larvae back into place, the female began waggling again. These observations suggest that the vibrations are signals for larvae, he says.

Brennan suspected that the signals have something to do with feeding. In an extensive series of experiments, he considered whether the signal might be connected to the larvae feeding saliva to their mother.

In one set of tests, Brennan deprived the queen of her usual liquid diet, while hand feeding bits of ground-up caterpillar to the larvae every hour. The queen continued her occasional waggling. The tests suggested to Brennan that the vibrations indicate hunger of the adult, not of the larvae.

In another set of experiments, he mounted nests on a finely controlled mechanical shaker to mimic the queen's waggling. In response to a nest trembling, he measured saliva increasing in the mouths of the larvae. He concluded that a hungry wasp waggles to signal her youngsters to start drooling. —S.M.

MATING

Faithful voles have hidden infidelities

Prairie voles, the standard model for mammalian-monogamy studies, actually get around more than most scientists had expected.

Vole mating intrigues researchers because the various species of the hamster-size rodents show lifestyles ranging from nuclear families to single-mom-and-deadbeat-dad situations. Comparing species gives scientists a window on the biological basis of social bonds. Prairie vole moms and dads share home ranges and pup care, and earlier studies provided evidence of only low rates of extra-pair encounters. There's even been talk of a monogamy gene behind the prairie voles' fidelity (*SN*: 7/9/05, p. 30).

Now, Alex Ophir of the University of Florida in Gainesville and his colleagues