

She's no help, but she's our mom

For the first time, researchers say, they've found evidence that baby animals recognize their mother even in a species where she has no direct interaction with them after birth.

Other studies have demonstrated that such species recognize siblings, but discerning Mom is something new, reports Jean Paul Léna of Pierre and Marie Curie University in Paris. He and his colleagues describe experiments with the common lizard, *Lacerta vivipara*, in the May BEHAVIORAL ECOLOGY AND SOCIOBIOLOGY.

The researchers reared young lizards from 264 females either without an adult around, with their real mother, or with a different female. Even with Mom nearby, the little lizards had to fend for themselves. After 2 days, researchers offered the youngsters a choice of shelters for the night. Youngsters chose the shelter with their mother's scent more often than a shelter with the scent of another female lizard. "Juveniles of both sexes recognized the odor of their mother, whether they were familiar with her or not," the scientists conclude.

Identifying their parent "is likely to have some biological relevance," the researchers say. They speculate that recognition may play a role in the way lizards disperse as they grow.—S.M.

Change one gene, plants get healthier

Souping up the *NPR1* gene can turn an average laboratory mustard plant into a lean, mean, disease-fighting machine that laughs off a broad range of menaces.

Plants that have been genetically engineered to produce additional amounts of *NPR1*'s protein show extra resistance to attack by both a fungus and a bacterium, say researchers at Duke University in Durham, N.C. Xinnian Dong and her colleagues report their findings in the May 26 PROCEEDINGS OF THE NATIONAL ACADEMY OF SCIENCES.

NPR1, a key regulator, seems to marshal an army of other

genes to fight pathogens. Even a moderate increase in *NPR1*'s protein boosted plant resistance dramatically, the researchers say. They noticed no harmful side effects from the increased concentrations of the protein. "Thus, for the first time, a single gene is shown to be a workable target for genetic engineering of nonspecific resistance in plants," the team writes.

The dream of a good-health gene glows particularly bright because scientists have already found genes similar to mustard *NPR1* in major commercial crops, including corn, wheat, canola, and tobacco. —S.M.

Why do guys carry eggs on their backs?

Males that tend many eggs seem to have that certain something, or so researchers had thought. In a number of fish species, the males watch over nests, and the females usually pick partners who already have a big egg pile.

Is the attraction the dutiful dad and his eggs or something about his real estate? With fish, it's hard to tell. However, a researcher at the University of Stockholm has turned to a creature with no nests to confuse the issue: golden egg bugs. The male bugs carry the next generation on their backs.

A day or so after a 20-hour mating, females lay one to three eggs on an available back. Sometimes it's another female's back, but more often it's a male's. A heap of eggs increases the chances that the male will become part of an omelet for a predator, yet males accept eggs they did not father. Even a male in the act of mating allows a passerby to contribute to his load.

Scientists have speculated that females would prefer loaded males. Not so, reports Arja Kaitala in the May 7 PROCEEDINGS OF THE ROYAL SOCIETY OF LONDON B. Offered a choice between loaded and unloaded males, females showed no significant preference. Moreover, removing eggs from a previously successful suitor did not affect subsequent mating rates. —S.M.

Don't let the bugs of El Niño get the best of you!

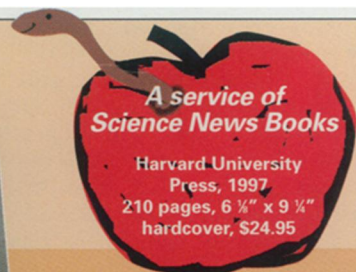
On our side, a vast arsenal of chemical pesticides. On their side? They don't have a side, the pests who must do nature's bidding. This is our war, and should we win it, ours would be a sorry planet. With disturbing news from the front, *Nature Wars* sounds the alarm against our dangerous tactics for controlling the pests that are an annoying but integral part of our world.

Thirty-five years after *Silent Spring* woke us to the devastation wrought by DDT, chemical pesticides are as pervasive as ever, deployed at a rate of 4 pounds a year for every man, woman, and child in this country. This ongoing commitment to pesticides, Mark Winston argues, reflects our sense of place in nature: embattled, beleaguered, driven to aggression. His book, as sensible as it is wise, seeks to change this mindset, to show how a more measured and discriminating approach to pests, one based on management rather than eradication, might serve us and the natural world far better than our ill-fated all-out war.

Winston backs up this approach with a full battery of case studies that take us from lawns and kitchens to farms and orchards, from insects and weeds to rats and coyotes. Here we see the complex political, biological, economic, social, and personal interactions that lie behind each pest management decision. Against this background, Winston considers diverse instances of past pest management that reveal a consistent pattern of mistakes and problems—and lead to realistic, workable proposals for reducing pesticide use.

—from Harvard University Press

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