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New Species: Found Today, Lost Tomorrow

CALL IT THE “NOW YOU SEE THEM, soon you won’t” phenomenon. In a year that the United Nations declared the International Year of Biodiversity, scientists announced a bevy of newfound species that appeared to be already teetering on the brink of extinction.

In January a team from Israel’s University of Haifa at Oranim announced the discovery of *Cerbalus arvensis*, a spider with a leg span of more than five inches. Unfortunately, its sole habitat is a desert region in Israel called the Dunes of Samar, an area once covering about 7 square kilometers but reduced to a fraction of that size by agriculture and mining. Also in January, the nonprofit group Reptile & Amphibian Ecology International (RAEI) announced that an expedition to the rain forests of coastal Ecuador had found new

reptiles, insects, and amphibians whose habitat is threatened by climate change and deforestation. Paul Hamilton, leader of the RAEI Ecuadoran expedition, worries that some of these species may disappear before they are even formally described.

The Caquetá titi monkey of Colombia (a remarkable animal resembling a leprechaun, first described in August) is threatened, as are Borneo’s *Microhyla nepenthicola*, the Old World’s smallest frog (also announced in August), and Durrell’s vontsira, a mongooselike carnivore from Madagascar whose discovery was announced in October. And things aren’t looking much better for plants. A team of American and British scientists, publishing in the 2010 *Proceedings of the British Royal Society*, estimated that of all the plants on earth, some 60,000 species remain to be found. Disproportionately, the scientists say, recently discovered species live in fragmented, fragile habitats—and therefore they, too, may number among those that are most threatened.

REBECCA COFFEY

Clockwise from left: Colombia’s Caquetá titi monkey; Durrell’s vontsira, from Madagascar; and *Cerbalus arvensis*, a spider discovered in Israel.

75 Social Life Begins in the Womb

HUMANS ARE SO SOCIAL THAT NEW-born babies are able to imitate facial expressions of the people around them. In fact sociability begins even earlier, in the womb, according to Umberto Castiello and his team at the University of Padova. They used state-of-the-art ultrasound to monitor the movements of five pairs of fetal twins, between 14 and 18 weeks of gestation. The results, reported last October, show that even the youngest fetuses in the study recognized and responded to the other twin.

When reaching toward the co-twin—especially around the eyes and mouth—their motion was relatively slow and delicate. When the fetuses touched themselves, on the other hand, they were less cautious (although they approached their own eyes and mouth more gingerly than other parts of their body). They were roughest toward the uterine wall, kicking and shoving it with force. “In some very primitive form,” Castiello says, “it appears that the fetus by the second trimester already has a sense of ‘self’ that is different from ‘other.’”

Andrew Meltzoff, the psychologist who discovered infant facial imitation back in the 1970s, agrees. “If these findings are right,” he says, “the birth of sociality occurs before physical birth—a fascinating prospect.”

KATHLEEN MCAULIFFE



Ultrasound image of social twins in utero.