

Science Briefs

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Short-lived chameleon may hold aging insights

Almost all of the roughly 28,000 species of four-legged vertebrates have life spans longer than a year. So the discovery that a desert chameleon in Madagascar lives just four or five months is unusual. But as Christopher J. Raxworthy of the American Museum of Natural History, Kristopher B. Karsten of Oklahoma State University and colleagues report in *The Proceedings of the National Academy of Sciences*, what makes the chameleon, *Furcifer labordi*, even stranger is that it spends more time in the egg -- about eight months. That makes its lifecycle more insect than animal. With *F. labordi*, the juveniles are on a fast track: growing to adult size in two months, reproducing at four and then dying off as the short rainy season ends. The species' survival is then dependent on its buried eggs. Whatever the reason for the evolution of such a life cycle, he added, *F. labordi* "may be really useful to get more insights into aging and cell death."

Coral trout thrive in protected part of reef

In 2004, Australia banned fishing in about a third of the Great Barrier Reef Marine Park by creating a patchwork of "no-take" reserves covering about 45,000 square miles. The move was opposed by many sport and commercial fishermen, fearful that their hobbies and livelihoods were threatened. They needn't have worried, according to a study by Garry R. Russ of James Cook University, Alistair J. Cheal of the Australian Institute of Marine Science, and others. Writing in *Current Biology*, they report that numbers of coral trout, the group of species most coveted by fishermen, increased rapidly after the reserves were created. The researchers say that the increased numbers of fish mean that more larvae will be produced. And because larvae can be transported by currents to unprotected areas, that bodes well for fishing in the rest of the barrier reef.

In sleep, we appear to be birds of a feather

Did you sleep like a baby last night? Actually, you slept like a bird. Or rather, a bird slept like you. One bird in particular: the zebra finch, which researchers say has a sleep structure very much like that of people and other mammals. Philip Steven Low of the Salk Institute for Biological Studies in San Diego and colleagues report in *The Proceedings of the National Academy of Sciences* that songbirds have episodes of rapid-eye-movement sleep and slow-wave sleep as well as transition stages and quick spikes, all reminiscent of mammalian sleep patterns. It's the first time that this complete group of sleep characteristics has been found outside mammals. It's a surprising finding, Low said, because birds lack a neocortex, the part of the mammalian brain thought necessary for such patterns. Indeed, although scientists have wanted to study sleep in songbirds because of evidence that sleep played a role in song learning, the lack of a neocortex has hampered efforts to do so; it has been difficult to pick up the proper electrical signals from bird brains. Low experimented with moving the EEG electrodes around the brain until he found a suitable spot. The zebra finch results show that a neocortex isn't required to have such structured sleep, he said.

-- *From wire reports*