

vegetation. Together with previous work on acoustic communication, these data show that animals with very different sensory ecologies can face similar environmental constraints and adopt remarkably similar strategies to overcome those constraints.



ROBERT POWELL

Puerto Rican Crested Anoles (*Anolis cristatellus*) increase the speed of body movements used in territorial signaling to improve communication in visually “noisy” environments.



ROBERT POWELL

Populations of larger St. Vincent Dwarf Geckos (*Sphaerodactylus vincenti*) living in more mesic environments at higher elevations are less resistant to water loss.

Natural History of St. Vincent Dwarf Geckos

STEINBERG ET AL. (2007. *Journal of Herpetology* 41:326–332) documented population densities, microhabitat preferences, desiccation rates, and diets of *Sphaerodactylus vincenti* on St. Vincent, West Indies. The authors predicted and observed high densities (to 5,625/ha) in moist, shaded leaf-litter. Such microhabitats provide refuges, access to prey, and

protection against water loss, as *S. vincenti* is vulnerable to high desiccation rates. They found significant differences in mass-specific water-loss rates and body mass between conspecific populations at differing elevations, with larger geckos less resistant to water loss living in more mesic environments at higher elevations. Stomach content analysis suggests that *S. vincenti* is a dietary generalist that feeds on a variety of small arthropods primarily by day.

NEWS BRIEFS

Virgin births at the London Zoo

Four Komodo Dragons (*Varanus komodoensis*) hatched at the London Zoo were the result of parthenogenesis, the development of an egg without fertilization by a sperm. A clutch of dragon eggs laid in August 2005 fascinated reptile keepers. The female had arrived in London on loan from Thoiry Zoo in France in early 2005, and the clutch of eggs was laid more than two years after she had last lived with Thoiry’s male. Initially, keepers suspected sperm storage, but Curator of Herpetology, Richard Gibson, wasn’t entirely convinced and resolved to investigate further.

Genetic fingerprinting techniques at Liverpool University confirmed that the four dragons were actually the result of parthenogenesis. The female later mated with the London Zoo’s male and subsequently laid a second clutch of eggs from which a single, “normal” dragon hatched, demonstrating that Komodo Dragons

can switch reproductive strategies depending on the availability of a mate.

Richard Gibson said: “I am delighted that the mysterious parentage of our Komodo Dragon babies has been solved, and that we have discovered something new to science at the same time. Knowing that the world’s largest lizard can reproduce like this suggests that many other reptiles may also do this more often than we thought, and may lead to changes in the way we manage this and other species in breeding programs. This discovery also raises important questions about the natural history of dragons in the wild, and

will therefore help to safeguard the future of the species.”

Zoological Society of London
21 December 2006

Homing Behavior in Baby Snakes

We all know that children behave like their parents in many ways, especially as they grow older (even though many children deny it!) — and most of us suspect that the similarity is partly due to learning, and not just genetics.

Researchers from the University of Sydney have discovered that baby snakes also behave like their parents, and probably for similar reasons as in humans. For more than a decade, Drs. Greg Brown and Rick Shine have been studying the ecology of small non-venomous Keelback Snakes (*Tropidonophis mairii*) on the floodplain of the Adelaide River, on the outskirts of Kakadu National Park in the Northern Territory.



TROPIDONOPHIS MAIRII, NATIONAL ZOOLOGICAL PARK

Four Komodo Dragons (*Varanus komodoensis*) hatched at the London Zoo were the result of parthenogenesis, the development of an egg without fertilization by a sperm.

GREG CALVERT, © JAMES COOK UNIVERSITY



Female Australian Keelback Snakes (*Tropidonophis mairii*) return to the same area where they were hatched. So, many snakes probably lay their own eggs in the same nest from which they themselves hatched.

One of their latest findings (just published in the journal *Biology Letters*) is that once they grow to adulthood and are ready to reproduce, female snakes return to the same area where they were hatched. So, many snakes probably lay their own eggs in the same nest as that from which they hatched, at least one year previously.

Professor Shine said: “One of the reasons that we behave like our parents is that our behavior is strongly molded by our early experiences — and we have found that the same thing happens in snakes as well. We have known for many years that baby salmon somehow recognize the characteristics of water from the streams where they hatch, and return to the same stream many years later to breed. We’ve found exactly the same thing in snakes. Even though a Keelback Snake wanders widely during the first year or two of her life, she returns to her original birthplace when it’s time to lay her own eggs.”

Why do snakes return to lay their eggs at the same place that their mothers did, years before? The answer is probably that the nest was a good one — otherwise no babies would survive to return. So, evolution has favored snakes that are able to remember where they hatched, and return there when the time comes to produce their own offspring.

These results have strong implications for conservation, because if successive generations of snakes use the same “traditional sites” for nesting, any disturbance to those sites could be a major problem. The research also tells us that these small creatures, with brains about the size of a pea, can remember the exact location of their birth site for many months or years, and find their way back when it’s time to reproduce. Also, the dis-

covery of “traditional knowledge” in snakes casts yet more doubt on the belief that culture belongs only to humans.

The University of Sydney
20 February 2007

Dogs Sterilized To Save Endangered Turtles

Stray dogs are being sterilized to protect many thousands of endangered Olive Ridley Sea Turtles (*Lepidochelys olivacea*) that nest on beaches in Orissa (India) every winter. Dogs destroy nests and kill many baby turtles each year. At least 22 dogs were sterilized over the weekend at the Devi River mouth, one of the three sites where the turtles come. Amala Akkineni, of the Hyderabad-based environmental group Blue Cross said: “One pair of dogs gives rise to 2,000 in their lifetime. The operation will reduce the number of dogs in these areas, reducing the future destruction of turtle nests.”

Blue Cross is conducting the sterilization program in collaboration with the Department of Fisheries and Animal Resources Development and some NGOs. Said Amala: “We will sterilize at least 2,500 dogs in the next six months in all three nesting sites to save turtle eggs and hatchlings. We will also provide training to 15 veterinary doctors to carry out the task.”

Until five years ago, the sea surrounded two tiny islands, where turtles come for mass nesting. As a result, no animal could reach the islands to destroy the eggs. At least half a million turtles lay eggs on these two islands. Since 2002, however, the islands have become accessible from the neighboring Wheeler Island due to erosion.

Animalconcerns.org
30 January 2007

MARVA ANIKESORIAN, MEXCOLA.COM.BR
BANCODIRAGENET.BR

Stray dogs are being sterilized to protect many thousands of endangered Olive Ridley Sea Turtles (*Lepidochelys olivacea*) that nest on beaches in Orissa, India.

Snake Found in Hawaii

A worker at Hilo Harbor found and killed a Chequered Keelback Snake (*Xenochrophis piscator*), a species that is widely distributed in Asia and the East Indies. These non-venomous aquatic snakes are not usually considered to be pets. The carcass was flown to Oahu, where a specialist from the Bishop Museum identified the snake. Snakes are illegal in Hawaii, where no natural means of control occur and many native species are potentially vulnerable to introduced predators. Officials are concerned that invasive species can significantly hurt Hawaiian ecosystems.

TheHawaiiChannel.com
30 January 2007



A Chequered Keelback Snake (*Xenochrophis piscator*), a species that is widely distributed in Asia and the East Indies, was found and killed in Hilo Harbor.

American Crocodile Downlisted by U.S. Government Reclassified from Endangered to Threatened

The U.S. Fish and Wildlife Service announced Tuesday that recovery efforts are making it possible to reclassify the American Crocodile (*Crocodylus acutus*) in Florida from endangered to threatened under the Endangered Species Act. “American Crocodiles were a part of Florida’s history for hundreds of years until human activities such as urban development, agricultural conversion and overhunting decimated their populations,” said Sam D. Hamilton, the service’s southeast regional director. “However, in the past 30 years, we have made great strides in protecting this species and conserving its habitat. Today we can celebrate their comeback as a result of the recovery efforts by numerous dedicated professionals who are helping sustain a vital part of Florida’s natural and cultural history.”



ALICE WASILEWSKI/ORBIS PICTURES

The American Crocodile (*Crocodylus acutus*) in Florida is being reclassified from endangered to threatened under the Endangered Species Act.

The service's final reclassification decision comes after the completion of its five-year review required under the ESA for all endangered and threatened species. An endangered species is defined as being in danger of extinction within the foreseeable future. A threatened classification means a species could become endangered. Reclassifying a species from endangered to the less-critical threatened designation is often reflective of recovery efforts reducing imminent threats and allowing populations to increase.

The American Crocodile is being reclassified in southern Florida, its only habitat within the U.S. This crocodylian will remain endangered in other countries, including Belize, Colombia, Costa Rica, Cuba, Dominican Republic, Ecuador, El Salvador, Guatemala, Haiti, Honduras, Jamaica, Nicaragua, Mexico, Panama, Peru, and Venezuela. The American Crocodile in Florida was originally listed as an endangered species in 1975. Their numbers in Florida have grown to an estimated 1,400–2,000, not including hatchlings.

The species is one of two native crocodylians, the other being the American Alligator (*Alligator mississippiensis*), that are known to frequent the U.S. It can be distinguished from the American Alligator by a relatively narrow, more pointed snout and by an indentation in the upper jaw that leaves the fourth tooth of the lower jaw exposed when the mouth is closed. In order to reclassify the American Crocodile from endangered to threatened, the recovery plan requires a sustained breeding popu-

lation of 60 females. About 95 percent of the remaining American Crocodile habitat in southern Florida has been acquired by federal, state, and county agencies. These protected areas should allow the population to expand and could provide additional nesting opportunities.

Miami, Florida

Herpetologists Honored for Contributions to Conservation

The Florida Chapter of The Wildlife Society (FLTWS) announced the winners of the first annual Paul Moler Herpetological Conservation Award. The recipients, Mark Bailey, Kurt Buhlmann, Jeff Holmes, and Joe Mitchell, were selected for producing the new Partners for Amphibian and Reptile Conservation publication, "Habitat Management Guidelines for Amphibians and Reptiles of the Southeastern United States." Featuring detailed, yet easy-to-understand ideas and methods to help landowners improve the conservation value of their land, the book has received excellent reviews from land managers and conservation professionals across the region. The Guidelines effectively cover the wide variety of habitats and the diverse herpetofauna of the southeastern United States, both with text and exquisite photography. The book is available to the public and can be ordered at www.parcplace.org.

The conservation award was presented during this year's annual meeting of the FLTWS, 11–13 April 2007, in St. Petersburg, Florida. The award was established in honor of one of Florida's preeminent herpetologists, Paul Moler, who retired in 2006 after 29 years of service with the Florida Fish and Wildlife Conservation Commission. "I am especially gratified to see this first Herpetological Conservation Award go to the authors of PARC's outstanding southeastern Habitat Management Guidelines," Moler said upon hearing the announcement. The FLTWS is made up of over 300 wildlife professionals dedicated to sustainable management of wildlife resources and their habitats in

Florida. For more information about the society, visit www.fltw.org.

Dinosaurs and Birds

A few years ago, Michael Crichton wrote a highly successful and purely speculative book titled *Jurassic Park* about extracting DNA from dinosaurs. Both the book and the subsequent movie were huge successes. Now, Crichton's imagination has become reality (although, thankfully, not the recreation of living animals using frog-DNA splices).

Scientists have long considered birds to be the closest living relatives of dinosaurs. This was based on bone characteristics, because no soft tissue had survived to confirm the link. Now, protein extracted from a 68-million-year-old *Tyrannosaurus rex* has provided convincing data. "It's the first molecular evidence of this link between birds and dinosaurs," said John Asara, a Harvard Medical School researcher, whose results were published in the journal *Science*.

In 2005, Mary Higby Schweitzer of North Carolina State University found blood vessels and cells in a *T. rex* bone from the fossil-rich Hell Creek Formation in Montana. In another *Science* article, Schweitzer reported that extracts of that bone reacted with antibodies to chicken collagen, suggesting the presence of birdlike proteins in dinosaurs.



PALAIS DE LA DECOUVERTE, PARIS

The paleontologist Robert T. Bakker once referred to *Tyrannosaurus rex* as a "thunderchicken from hell." New evidence provides strong support for his once controversial ideas.