

NATURAL HISTORY RESEARCH REPORTS

Physiology and Sociality: Why Banded Geckos Band

Aggregation may have important reproductive, ecological, and fitness implications. Although studies of aggregating behavior have been conducted for many species, few have measured the benefits of lizard aggregation. LANCASTER ET AL. (2006. *Animal Behaviour* 72:199–207) conducted a study to determine the benefit of aggregation in the desert-dwelling Banded Gecko (*Coleonyx variegatus*). Geckos from Borrego Springs, San Diego County, California were housed in groups of five and offered a surplus of retreats in an effort to test the hypothesis that geckos benefit from grouping by lowering rates of evaporative water loss. The authors also tested effects of humidity and scents of conspecifics and predators. Geckos avoided predator-scented areas, supporting past work on other species, but did not band together to avoid predators. Nor did lizards use conspecific scents to choose retreat sites, and no social or mating benefits were found. Instead, the study showed that Banded Geckos benefit from aggregation by lowering rates of evaporative water loss. Thus, aggregation provides physiological but no evident social benefits for *Coleonyx variegatus*.

Foraging Ecology of Tokay Geckos

Although individuals exhibited varied foraging behavior, AOWPHOL ET AL. (2006. *Amphibia-Reptilia* 27:491–503)



Tokay Geckos (*Gekko gecko*) are native to southeastern Asia, but have been widely introduced in tropical and subtropical areas. A study in Thailand indicated that adults of both sexes and juveniles were active at comparable times, used essentially similar foraging strategies, and ate the same types of prey.

found no significant differences in foraging parameters (foraging period, time spent moving, foraging attempts, foraging success, prey size consumed, and foraging distance) among male, female, or juvenile Tokay Geckos (*Gekko gecko*) in Thailand. Foraging occurred from 1800–0900 h, peak emergence was from 1800–2000 h, and peak retreat time from 0400–0700 h. Food items were insects, most in the orders Lepidoptera, Orthoptera, and Coleoptera. The lack of size differences in prey taken by geckos of different sizes reflected no prey selection, possibly attributable to low insect availability. Geckos mostly used a sit-and-wait strategy, but foraged more widely when prey was relatively abundant.

Are Snakes with Narrow Distributions More Specialized?

The Italian Aesculapian Snake (*Zamenis lineatus*) has a narrow distribution in southern Italy and on Sicily. CAPULA ET AL. (2006. *Amphibia-Reptilia* 27:531–537) examined the diet of this snake to test the hypothesis that species with narrow distributions will be more ecologically specialized than wide-ranging relatives. The diet of adult *Z. lineatus* consisted of small mammals and birds, whereas that of juveniles was composed mainly of lizards. Diets of males and females did not differ. The authors concluded that the feeding ecology of *Z. lineatus* was very similar to that of the widespread ecological generalist, *Z. longissimus*, indicating that the assump-



Desert-dwelling Banded Geckos (*Coleonyx variegatus*) benefit from aggregating in groups because that lowers rates of evaporative water loss.



The feeding ecology of the Italian Aesculapian Snake (*Zamenis lineatus*) was very similar to that of the widespread ecological generalist, *Z. longissimus*, indicating that narrowly distributed Mediterranean snakes are not more specialized than their widely distributed counterparts.

tion that narrowly distributed Mediterranean snakes are more specialized than their widely distributed counterparts does not apply to the dietary ecology of these snakes.

Jump Dispersal in Introduced Mediterranean Geckos

From 1962–1997, Mediterranean Geckos (*Hemidactylus turcicus*) were intentionally introduced multiple times into a science building at the University



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Slow rates of diffusion dispersal in introduced Mediterranean Geckos (*Hemidactylus turcicus*) suggest that the wide distribution of this species across the southern United States is a consequence of multiple jump dispersal events.

of Central Oklahoma in Edmond. In 2005, LOCEY AND STONE (2006. *Journal of Herpetology* 40:526–530) recorded 365 captures of 305 individuals and estimated the population size to be 1005 geckos with at density of 478 lizards/ha. The population had dispersed a maximum of 200 m from the point of introduction, a diffusion dispersal rate of 20 m/yr. The wide distribution of this species across the southern United States since their introduction in Key West, Florida was recorded in 1910 suggests that expansion of the species' range occurred as a consequence of multiple jump dispersal events instead of slow diffusion dispersal.

Population Structure and Density of Leopard Tortoises

Leopard Tortoises (*Geochelone pardalis*) are the largest tortoises in southern Africa, where they are widely distributed in a variety of habitats. MCMASTER AND DOWNS (2006. *Journal of Herpetology* 40: 495–502) studied Leopard Tortoises in semi-arid farmland in Nama-Karoo, central South Africa. The sex ratio of 92 tor-



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The population density of Leopard Tortoises (*Geochelone pardalis*) was lower in dry South African habitat than in more mesic situations, but adults were larger.

toises did not differ significantly from 1:1. Adult females were larger than adult males, and adults were larger than conspecifics studied in more mesic habitats. A population estimate of 57.6 ± 4.0 tortoises translated to a very low density of 0.017 tortoises/ha, much lower than in more mesic situations.

NEWS BRIEFS

Butler's Garter Snake Will Remain on Protected List

A legislative committee in Wisconsin that this summer had threatened to remove Butler's Garter Snake (*Thamnophis butleri*) from a protected list that stops developers from killing it, reversed course and decided to allow the snake to remain on a list of threatened species. The decision was praised by state Department of Natural Resources executive assistant Mary Schlaefter, who said protecting the endangered snake was vital to the overall health of the environment. Critical steps need to be taken when there is a species like this snake that is in danger of disappearing, she said.

With their habitat shrinking, the reptiles were placed on the threatened list in 1997 by the DNR, meaning that in most cases the snakes cannot be killed. The protected area encompasses about 405,000 acres in southeastern Wisconsin. Known for its colorful yellow stripes, the 1- to 2-foot-long snake is generally found

in marshes, prairies and fields, as well as in roadside grassy areas and in vacant lots. In addition to southeastern Wisconsin, it can be found in Ohio, Indiana, Michigan, and in southern Canada.

The Republican-controlled Joint Committee for Review of Administrative Rules decided in July to remove the snake from the DNR's threatened list if the agency didn't soften its regulations.



GARY CASPER

A legislative committee in Wisconsin that this summer had threatened to remove Butler's Garter Snake (*Thamnophis butleri*) from a protected list that stops developers from killing it, reversed course and decided to allow the snake to remain on a list of threatened species.

The agency on Tuesday outlined a number of changes it had made and was in the process of implementing, including reducing the time of review of proposed projects from 27 to seven days and coming up with more funding to reduce costs for homeowners to get needed surveys. Those surveys can cost up to \$10,000, said Andy Galvin, a consultation specialist in the DNR's bureau of endangered resources. The agency also reduced the number of acres in the protected area by 500. It is working to identify as many as 65 protected sites for the snake. Once those are established and stabilized, regulations on private landowners can be ended more quickly, Schlaefter said. "Our goal is to manage based on science, but in a way that minimizes impact on homeowners," she said.

The committee voted 7-2 not to take the snake off the protected list. One of the two no votes, state Rep. Debi Towns, R-Janesville, said she was concerned that the DNR was not setting a