

habits. It is usually found on trunks, vines, and leaves, generally within a few meters of the ground (Vitt et al. 2008. Guide to the Frogs of Reserva Adolpho Ducke, Central Amazonia. Áttema Design Editorial, Manaus. 176 pp.). Here we report on observation of predation on *A. fuscoauratus* by a whipscorpion.

At 0215 h on 1 April 2012, a specimen of *Heterophrynus longicornis* (Amblypygi: Phryniidae) was observed preying on an adult *A. fuscoauratus* (Fig. 1) in an ombrophilous forest in the Amazonian Federal University (UFAM) Experimental Farm, located in Manaus city, Amazonas, Brazil (2.65885°S, 60.06603°W; WGS 84). The predation event occurred on a tree trunk approximately 1.6 m above ground. The lizard was a male (SVL = 44 mm, TL = 70 mm). The whipscorpion was holding the lizard by the head and thoracic region with its pedipalps (Fig. 1). Ingestion had begun on the lateral region of the lizard's head, and a large part of the head and neck there were already partially digested, probably due to the action of the whipscorpion's digestive enzymes.

Our record corroborates the hypothesis that whipscorpions remain oriented downward, with their pedipalps raised and outstretched, waiting for prey (Dias and Machado 2007. J. Arachnol. 34:540–544). When potential prey enters the field of view, it is caught and immobilized by the raptorial pedipalps and then consumed at the site in which it was captured. Our observation is the first record of *Heterophrynus* preying upon a vertebrate, and increases the list of invertebrates that can prey on *A. fuscoauratus*.

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**ANOLIS GEMMOSUS (Gem Anole). SLEEP-SITE FIDELITY.** Sleep-site choice can directly influence survival in many species due to their vulnerability to predation (Clark and Gillingham 1990. Anim. Behav. 39:1138–1148). Like many diurnal lizards, *Anolis* spp. are commonly observed sleeping at night on fern fronds and small tree branches, sites that would appear to expose them to the risk of predation (Singhal et al. 2007. Behaviour 144:1033–1052). To begin to understand why particular sleep-sites are chosen, we assessed sleep-site choice and fidelity in *Anolis gemmosus* in the Andes Mountains of Ecuador.

We conducted our observations at Reserva Las Galarias (RLG, Province of Pichincha) (2068 m elev.) and made repeated nightly observations on 20 anoles at 13 sleep-sites along two open-canopy trails (each trail approximately 250 m long). Average temperature during the sampling period was 19.4°C (± 0.05°C SE) with intermittent light rainfall. We sampled Road Trail, a rural roadside with limited automobile disturbance, from 2–7 May 2016, and Granny's Trail, a walking trail with limited human disturbance (foot traffic only), from 3–7 May 2016. We walked the trails each night during 2000–2300 h to observe anole sleeping behavior. To limit human interference, we did not mark individual lizards, but rather used photographs of each anole for individual animal identification. The unique skin coloration of

individuals allowed us to recognize previously sighted anoles.

Our results confirmed sleeping site fidelity in *A. gemmosus* with 17/20 anoles observed re-sighted at least once within 1 m of their initial sleeping site (mean ± SE 1.68 ± 0.30 re-sightings). A Wilcoxon rank sign test indicated that our two trails did not significantly differ in their number of re-sighted anoles ( $W = 79.50$ ,  $p = 0.16$ ).

During our survey, we found anoles utilizing several different types of sleeping perches, typically in an oblique position respective to the ground. Sleeping perches consisted of herbaceous plants, fern fronds, and thin branches of woody plants at heights ranging 1.6–4 m. Unexpectedly, seven of our sites contained multiple (2–3) anoles within a 5-m radius, which suggests there may be competition for sleeping sites, or reduction in individual predation risk via grouping behavior. Our results indicating that *A. gemmosus* exhibit sleep-site fidelity at both disturbed and undisturbed sites provides novel natural history information for the species as we are unaware of any other studies examining this behavior in the species.

Future investigations into *A. gemmosus* behavior should examine whether this species exhibits intraspecific competition for sleeping sites, and what habitat characteristics (such as perch diameter, elevation above land, anole density, etc.) may predict such behavior. If competition for sleeping sites does occur, this may influence an individual's fidelity to a particular site.

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**ANOLIS GUNDLACHI (Yellow-chinned Anole). CANNIBALISM.** *Anolis gundlachi* is an endemic Puerto Rican anole, classified as a forest-interior “trunk-ground” ecomorph (*sensu* Williams 1972. In Dobzhansky et al. [eds.], Evolutionary Biology, Volume 6, pp. 47–89. Meredith Corporation, New York, New York; Reagan 1996. In Reagan and Waide [eds.], The Food Web of a Tropical Rain Forest, pp. 321–345. University of Chicago Press, Chicago, Illinois). It is distributed throughout montane areas in Puerto Rico and has an adult mean snout–vent length range of 42–72 mm, (Reagan 1996, *op. cit.*). It has a generalist diet that includes a wide variety of invertebrates (mostly associated with the forest litter) and vertebrate prey that includes treefrogs (*Eleutherodactylus* sp., *E. wightmanae*) and other lizards (*A. stratulus*, *A. krugi*, *Sphaerodactylus klauberi*) (reviewed in Henderson and Powell 2009. Natural History of West Indian Reptiles and Amphibians. University Press of Florida. Gainesville, Florida. 528 pp.; Ríos-López et al. 2014. LEB 3:137–148). Cannibalism has been reported in 19 West Indian anoles, including *A. evermanni* and *A. cristatellus* from Puerto Rico (reviewed in Powell and Watkins 2014. IRCF Reptiles and Amphibians 21:136–137). Herein we document the first account of cannibalism in *A. gundlachi*, an event observed as part of a long-term survey of malarial parasites in anoles.

On 13 January 2017, in El Verde Field Station, Luquillo Experimental Forest in northeastern Puerto Rico (18.3213°N, 65.8194°W, WGS 84; 357.9 m elev.), we observed and collected a male *A. gundlachi* (mass = 7.2 g; SVL = 65 mm) that consumed a juvenile *A. gundlachi* (mass = 1.0 g; SVL 35 mm), head first. Three quarters of the tail of the prey was visible protruding from the mouth of the predator; it regurgitated the prey when we approached. Both individuals were identified as *A. gundlachi* by a combination of characters: blue-eye coloration and the distinctive yellow-colored chin. This is, to our knowledge, the first report of cannibalism by *A. gundlachi*.

Cannibalism in reptiles is believed to be an opportunistic response to high conspecific densities or starvation (Polis and Myers 1985. *J. Herpetol.* 19:99–107). At El Verde, population density of *A. gundlachi* reaches 2000 individuals ha<sup>-1</sup>, with relative abundance fluctuation from a mean 86.5% ( $\pm$  2.6% SD, N = 4 census transects) sighting at ground level during the wet season (May to end of year) to a mean 64.0% ( $\pm$  7.0% SD, N = 4 census transects) sighting during the dry season (January to April) (Reagan 1996, *op. cit.*). Abundance of invertebrate prey available to *A. gundlachi* also varies seasonally, increasing during the wet season and decreasing during the dry season (reviewed in Reagan and Waide 1996. *The Food Web of a Tropical Rain Forest*. University of Chicago Press, Chicago, Illinois. 616 pp.). Although less food resources due to the winter dry season and the generalist diet of *A. gundlachi* may be hypotheses that explain our observation, we cannot discard the possibility that this may have been an uncommon behavior in the species.

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**ARISTELLIGER GEORGEENSIS** (Saint George Island Gecko). **DIET.** At 0054 h on 14 December 2015, while conducting fieldwork in Cozumel Island, Quintana Roo, Mexico, we collected an adult male *A. georgeensis* at ca. 0054 h near Puerto de Abrigo, a marina on the northwest coast of the island (20.52878°N, 86.93867°W, WGS 84; 7 m elev.). The gecko was located on a chacah tree, *Bursera simaruba*, in an unkept botanical garden with both introduced and local flora (Téllez Valdez et al. 1989. *Las Plantas de Cozumel* [Guía Botánico-Turística de la Isla de Cozumel, Quintana Roo]. Instituto de Biología, Universidad Nacional Autónoma de México, México, D.F. 75 pp.). The specimen's stomach contents were later removed and identified by Rachael Alfaro and Kelly B. Miller to the order Scorpiones (Fig. 1). The gecko was deposited in the Museo de Zoología "Alfonso L. Herrera," Facultad de Ciencias, Universidad Nacional Autónoma de México, México (MZFC-HE 30638).

Geckos of the genus *Aristelliger* are known to have a broad diet that includes a variety of arthropods, hatchling geckos and eggs, *Anolis* lizards, berries, and flowers (Cloud 2013. *Cryptic Diversity, Evolution, and Biogeography of Caribbean Croaking Geckos* (Genus: *Aristelliger*). Master of Science thesis, The Pennsylvania State University, University Park, Pennsylvania. 44 pp.). The diet of *Aristelliger* includes Arachnida, with previous studies indicating the orders Araneae and Pseudoscorpiones, but reports of the order Scorpiones are absent from the literature (Gifford et al. 2000. *Caribb. J. Sci.* 36:3–4). Ours is the first record of predation on Scorpiones by *A. georgeensis*.



FIG. 1. Stomach contents of *Aristelliger georgeensis* (MZFC-HE 30638).

Fieldwork was conducted under the authority of collecting permit FAUT 0243 issued to Uri O. García-Vázquez by the Secretaría de Medio Ambiente y Recursos Naturales.

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**ASPIDOSCELIS INORNATA** (Trans-Pecos Striped Whiptail). **PREDATION.** *Aspidoscelis inornata* is a diurnal, active foraging teiid lizard native to the southwestern United States and north central Mexico (Jones and Lovich 2009. *Lizards of the American Southwest: A Photographic Field Guide*. Rio Nuevo Publishing, Tucson, Arizona. 567 pp.). Until recently, information on the predators of *A. inornata* was absent from the literature. However, in recent years we have documented predation on this species by