

## The Cuban Green Anole, Anolis porcatus (Squamata: Dactyloidae): Catering is the Best

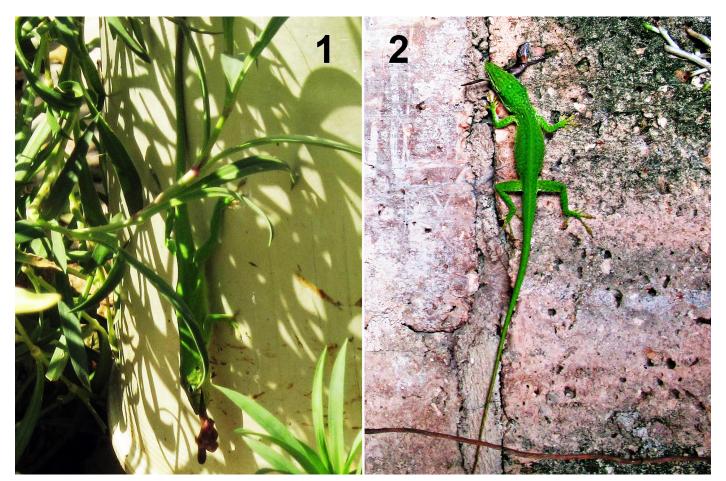
Luis F. de Armas and Manuel Iturriaga

Instituto de Ecología y Sistemática, Carretera de Varona No. 11835, entre Oriente y Lindero, Reparto Parajón, Municipio Boyeros, La Habana 19, C.P. 11900, Cuba (luisdearmas1945@gmail.com, manueliturriaga@ecologia.cu)

Photographs by the senior author.

The Cuban Green Anole, *Anolis porcatus* Gray 1841 is one of the three most frequently encountered Cuban anoles in cities, towns, and anthropic areas, where they are very common in backyards, gardens, and even in some residential buildings (Rodríguez-Schettino 1999; Henderson and Powell 2009).

The diet of these lizards consists mainly of insects such as ants, beetles, butterflies, cicadas, cockroaches, crickets, dragonflies, flies, grasshoppers, mosquitoes, thrips, and moths (Collette 1962; Schwartz and Henderson 1991; Armas 2008, 2011, 2014; Rodríguez-Schettino 1999, 2012) Additional records document predatory behaviors on scorpions (Armas



Figs. 1–2. Cuban Green Anoles (*Anolis porcatus*) on the terrace and in the backyard of an urban home in San Antonio de los Baños, Artemisa Province, Cuba: (1) an adult male eating an earthworm while perched on a metallic flower-pot 30 cm above the ground; and (2) an adult male predating a juvenile male Cuban Brown Anole (*Anolis sagrei*) on a wall 1.9 m above the ground.



Figs. 3–4. Cuban Green Anoles (*Anolis porcatus*) on the terrace and in the backyard of an urban home in San Antonio de los Baños, Artemisa Province, Cuba: (3) a male eating a ripe Barbados cherry (*Malpighia punicifolia*); and (4) a male feeding on slices of mango (*Mangifera indica*).

et al. 2000), spiders (Rodríguez-Schettino 1999, 2012), earthworms (unpublished data, Fig. 1), tadpoles of *Osteopilus septentrionalis* (L.V. Moreno *in* Rodríguez-Schettino 1999), and smaller anoles (J. Novo *in* Socarrás et al. 1988; Rodriguez-Schettino 1999; LFA, pers. obs., Fig. 2), and even conspecific hatchlings (G. Alayón-García *in* Socarrás et al. 1988). These are facultatively omnivorous lizards that will ingest nectar and/or pollen (Townsend 2003), as well as ripe fruits like guavas (*Psidium guajaba*), custard apples (*Annona squamosa*), and Barbados cherries (*Malpighia punicifolia*) (Otero 1950; Rodríguez-Schettino 1999; unpublished data, Fig. 3). Silva-Lee (1985) mentioned that *A. porcatus* sometimes licks tree sap, perhaps to hydrate itself or searching for organic substances such as amino acids.

Some synanthropic species of lizards tolerate human presence and consequently make good use of certain trophic resources that are obtainable only in human environments (Cajigas et al. 2015). However, for *A. porcatus*, the only known instance of such activity is in Silva-Lee (1985), who observed an adult female licking a piece of a chewy candy dissolved by natural sunlight. According to that author, this

seems to have been a learned behavior, suggesting the possibility of an increasingly wider feeding spectrum. Rodríguez-Schettino (1999) noted that *A. porcatus* "takes prepared foods such as meals for captive mammals and birds," but she did not mention which items (ripe fruits?) were involved (the mammals involved seemed to be Cuban Hutias [Capromyidae]).

Herein we provide new observations of *A. porcatus* feeding in and around an urban home in San Antonio de los Baños (22°53'36.49"N, 82°30'35.21"W; 75 m a.s.l.; *datum* Google Earth), Artemisa Province, Cuba. From June to November 2018, we frequently observed adult and subadult *A. porcatus* of both sexes feeding on leftovers of meals prepared for domestic animals. Preferred items were slices of ripe fruits, mainly mango (*Mangifera indica*), papaya (*Carica papaya*), and watermelon (*Citrullus vulgaris*), but cucumber (*Cucumis sativus*), avocado (*Persea americana*), and cooked foods (squash, *Cucurbita maxima*; rice, *Oriza sativa*; sweet potato, *Ipomea batata*) were readily eaten (Figs. 4–11). In some instances, more than one lizard (usually two) came to eat at the same time (Fig. 8), and generally the larger individual dominated the smaller one. On 25 August, near midday,



Figs. 5–6. Cuban Green Anoles (*Anolis porcatus*) on the terrace of an urban home in San Antonio de los Baños, Artemisa Porvince, Cuba: (5) feeding on slices of papaya (*Carica papaya*) and (6) avocado (*Persea americana*); arrows in the inset show bites in the avocado slice.



**Figs.** 7–9. Cuban Green Anoles (*Anolis porcatus*) on the terrace of an urban home in San Antonio de los Baños, Cuba: (7) eating cucumber (*Cucumis sativus*), (8) cooked squash (*Cucurbita maxima*), and (9) a small lump of rice.

an adult male ate spaghetti remains in a dog's food dish. At 1205 h on 10 October, another adult male fell on the floor of the terrace about 30 minutes after eating cooked rice (Fig. 9).

Immobile food rich in proteins and carbohydrates would seem like an ideal scenario for lizards, especially if they live in association with humans in urban areas (Cajigas et al. 2015). The numerous observations of *A. porcatus* exploiting such items during a six-month period serves to reinforce the conclusion that these anoles are opportunistic and quite capable





Figs. 10–11. Cuban Green Anoles (*Anolis porcatus*) on the terrace of an urban home in San Antonio de los Baños, Cuba eating cooked sweet potato (*Ipomea batata*).

of benefiting from leftovers resulting from human activities. Such behavioral adaptations allow lizards to acquire considerable energy with little effort and might compensate for the paucity of certain foods or prey in urban environments. These observations also document the consumption of cooked foods by a Cuban anole for the first time. Also, our observations of frugivory by *A. porcatus* during the course of several years and those by Otero (1950) confirm that this can occur frequently throughout the year.

## Acknowledgements

We are indebted to Sonia Seuc and Leonardo Chichizola of MEGO NETWORKS S.A.C, from Lima, Peru and to Lázaro W. Vinola, Montana State University, Bozeman for critical reviews of this manuscript. Seriocha Amaro from the Institute of Ecology and Systematics, Havana, Cuba kindly provided some literature.

## Literature Cited

Armas, L.F. de. 2008. Notas sobre la historia natural y el ciclo de vida de *Leucocera poeyi* (Chevrolat, 1838) (Coleoptera: Chrysomelidae). *Boletín de la Sociedad Entomológica Aragonesa* 43: 315–318.

Armas, L.F. de. 2011. Depredación de chicharras (Hemiptera: Auchenorhincha: Cicadidae) por *Anolis* spp. (Reptilia: Polychrotidae) en Cuba. *Boletín de la* 

- Sociedad Entomológica Aragonesa 49: 222.
- Armas, L.F. de. 2014. Gynacantha nervosa Rambur, 1842 (Odonata: Aeschnidae) depredada por el lagarto Anolis porcatus (Squamata: Polychrotidae). Boletín de la Sociedad Entomológica Aragonesa 54: 410.
- Armas, L.F. de, A. Fong, and F. Rodríguez. 2000 ("1999"). Depredación del alacrán Centruroides anchorellus (Scorpiones: Buthidae) por la lagartija Anolis porcatus (Iguania: Polycridae). Cocuyo 9: 14.
- Cajigas, A.G., J. Torres, and O.J. Torres. 2015. A new trophic resource in the diet of the Saw-tailed Curlytail, *Leiocephalus carinatus* (Squamata: Leiocephalidae), in Cuba. *Reptiles & Amphibians* 22: 150–152.
- Collette, B.B. 1961. Correlations between ecology and morphology in anoline lizards from Havana, Cuba and southern Florida. Bulletin of the Museum of Comparative Zoology 125: 137–162.
- Henderson, R.W. and R. Powell. 2009. *Natural History of West Indian Reptiles and Amphibians*. University Press of Florida, Gainesville.
- Otero, A.R. 1950. Sobre la alimentación de *Anolis porcatus. Boletín de Historia Natural Felipe Poey* 1: 185–186.

- Rodríguez-Schettino, L. 1999. Systematic accounts of the species, pp. 104–380. In: L. Rodríguez-Schettino (ed.), The Iguanid Lizards of Cuba. University Press of Florida, Gainesville.
- Rodríguez-S[chettino]., L. 2012. *Anolis porcatus* Gray, 1840, en el pueblo de Guanajay, provincia de Artemisa, Cuba. *Revista Colombiana de Ciencia Animal* 4: 320–332.
- Rodríguez-Schettino, L., A. Torres-Barboza, and A. Hernández-Marrero. 2003. Trepadores excelentes, pp. 110–127. In: L. Rodríguez-Schettino (ed.), Anfibios y Reptiles de Cuba. UPC Print, Vaasa, Finland.
- Schwartz, A. and R.W. Henderson. 1991. *Amphibians and Reptiles of the West Indies: Descriptions, Distributions, and Natural History.* University of Florida Press, Gainesville.
- Silva-Lee, A. 1985. *Chipojos, Bayoyas y Camaleones*. Científico-Técnica, La Habana, Cuba.
- Socarrás, A., A.J. de la Cruz, G. Gárces, and A. Ruiz. 1988. Saurofagia en *Anolis* (Sauria: Iguanidae). *Miscelánea Zoológica* 38: 4.
- Townsend, J.H. 2003. *Anolis porcatus* (Cuban Green Anole). Nectivory. *Herpetological Review* 34: 141–142.