

Biology, Riverside, California 92515, USA; (e-mail: lgrismer@lasierra.edu); **JEANETTE ARRELOLA**, Department of Biology, Whittier College, PO Box 634, Whittier, California 90608, USA (e-mail: jarreola@poets.whittier.edu).

HEMIDACTYLUS PLATYURUS (Flat-tailed House Gecko). PRE-DATION. *Hemidactylus platyurus* is a moderate-sized (43–58 mm SVL) gecko with a widespread distribution in Southeast Asia and in the Philippines (Brown and Alcala 1978. Philippine Lizards of the family Gekkonidae. Silliman University Press. Dumaguete, Philippines. 146 pp.). This note reports the observed predation of *H. platyurus* by a dragonfly, *Anax* cf. *panybeus* (Odonata: Aeshnidae).

At 1330 h on 8 September 2013, JA observed a female *Anax* cf. *panybeus* (60 mm right hindwing length), clutching a still struggling *Hemidactylus platyurus*, land on a branch of a tamarind tree (*Tamarindus indica*) in Pueblo de Panay, Barangay Dinginan, Roxas City, Capiz Province, Panay Island, Philippines (11.548572°N, 122.727822°E, WGS84; elev. 112 m). The dragonfly utilized its anterior legs to hold on to its prey while simultaneously chewing the left eye of the gecko for ca. four minutes. To our knowledge, this is the first recorded incident of a dragonfly preying on a lizard in the Philippines. Photographic vouchers were deposited at the Raffles Museum of Biodiversity Research, National University of Singapore (ZRC[IMG] 2.183a–c).

We thank R. J. Villanueva for identification of the dragonfly, Kelvin K. P. Lim for ZRC voucher numbers, and Cameron Siler for comments on this note.

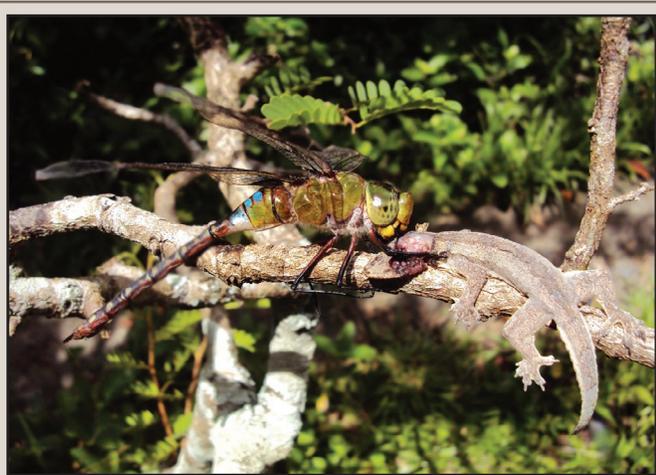


FIG. 1. A female *Anax* cf. *panybeus* preying upon a *Hemidactylus platyurus* in Panay Island, Philippines.

EMERSON Y. SY (e-mail:emersonsy@gmail.com) and **JOHN ALABAN** (e-mail:shekainahdalaban@gmail.com), Philippine Center for Terrestrial and Aquatic Research, 1198 Benavidez St., Unit 1202, Tondo, Manila, Philippines.

IGUANA DELICATISSIMA (Lesser Antillean Iguana). MORTALITY. The Lesser Antillean Iguana was originally found in the Lesser Antilles from Anguilla to Martinique, but is rapidly being lost from both large and small islands due to a range of factors (Breuil 2002. *Patr. Natur.* 54:1–339; Powell and Henderson 2005. *Iguana* 12:62–77). As populations continue to decline, life history information on the species remains very limited (Knapp 2007. *Iguana* 14:223–225; Pasachnik et al. 2006. *Cat. Amer. Amphib. Rept.* 811:1–14). The species is also found on St. Eustatius but in very

TABLE 1. Overview of documented death or endangerment of iguanas in St. Eustatius, April–December 2012.

Source	Mortality	Rescue	Total
Dogs	10	1	11
Traffic	3	–	3
Cistern	1	4	5
Fencing	–	6	6
Hunting	2	–	2
Unknown	1	–	1
Total incidents			28

low numbers (Fogarty et al. 2004. *Iguana* 11:139–146). During a population assessment for this species from May to December 2012, we collected data on the causes of mortality and endangerment by interviewing 53 local inhabitants and compiling all cases known to staff and volunteers of the National Parks Foundation of St. Eustatius during 2012 (Table 1). Dogs kept in island gardens in areas used by iguanas were the largest source of documented mortality on St. Eustatius. Of the 19 estate owners spoken to during our survey, 10 (52%) kept dogs. This source of mortality could be limited by reducing the number of dogs and cats kept, by restricting their movement to smaller sections of the estates' gardens, and/or by placing suitable shelter bushes in the yard so that the iguanas have access to effective refugia. Hunting, which is illegal and carries maximum penalties up to US \$5000, was a minor problem, but remains unenforced in St. Eustatius. Aside from road-kill, which has been identified as problematic in Dominica (Knapp, *op. cit.*), entanglement and entrapment of iguanas in human materials and structures is documented here for the first time as a major endangerment to the species. This appears to be especially true of gravid females getting stuck in the harmonica wire fencing (7.6 cm mesh diam.), a material that is used extensively on the island. People should be encouraged to use standard livestock fencing rather than this harmful material. Abandoned cisterns are numerous on the island and prove to be quite dangerous to iguanas. These should be mapped and equipped with an iron rebar woven into wire mesh to allow for escape. Because of the small and declining iguana population present on the island and the fact that we certainly missed a large part of all mortality sources, our observations suggest that high mortality rates, ultimately ascribable to man, are a key factor limiting recovery of this critically endangered species on St. Eustatius.

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ADOLPHE O. DEBROT, Institute for Marine Research and Ecosystem Studies (IMARES), Wageningen UR, P.O. Box 57, 1780AB, Den Helder, The Netherlands (e-mail: Dolfi.debrot@wur.nl); **ERIK B. BOMAN**, Agriculture Department of St. Eustatius, Oranjestad, St. Eustatius (e-mail: erik.b.boman@gmail.com)

IGUANA DELICATISSIMA (Lesser Antillean Iguana). REPRODUCTION. During an eight-month study on the St. Eustatius population of *Iguana delicatissima*, we covered more than 64 km

TABLE 1. Data on documented iguana nesting locations on St. Eustatius.

Site & Location	Altitude (m)	Site type	Site origin	Shading	Orientation of clearing	Available area (m ²)	Number of holes	Date of last digging	Principal threat
1 - S Quill slopes	206	gully ridge	natural	low	E-W	60	9	U*	trampling**
2 - W Quill slopes	124	trail head	semi-natural	medium	E-W	100	1	22 Nov 2012	overgrowth
3 - W Quill slopes	243	trail cut	semi-natural	medium	E-W	18	6	U	overgrowth
4 - W Quill slopes	243	trail clearing	semi-natural	medium	E-W	30	3	1 Jan 2013	overgrowth
5 - Estates	171	fenced garden	man-made	low	NA***	4	1	20 Nov 2012	dog
6 - Estates	200	fenced garden	man-made	high	NA	3	1	10 Nov 2012	cat

*(U) = unknown, **due to goats, *** (NA) = not applicable

of transects and trails, and interviewed more than 53 local island inhabitants to gain insight into reproduction of this critically endangered species (Knapp 2007. Iguana 14:223–225; Powell and Henderson 2005. Iguana 12:62–77). Notwithstanding considerable effort, we only documented six nest sites in use (Table 1). The largest (and only entirely natural) nest site was found was a barren patch of about 5 × 12 m on a ridge between two densely forested gullies on the lower southern flank of the Quill. The area was bare, well-drained, with mull gravel and sand, and had nine holes in all. A dry shell of a successfully hatched egg was found at the site. Overgrowth with shading, higher humidity, and soil compaction were the main threats to the remaining (semi-natural) sites, whereas domestic predators were the main threat to nests deposited in local estate gardens (Table 1). Iguanas were even found to make use of small and narrow forest clearings as long as these were oriented favorably with respect to the sun. Other animals that commonly dig burrows on St. Eustatius include the lizard *Ameiva erythrocephala* and land crab *Gecarcinus ruricola*. These species dig burrows largely for shelter and consequently select moister and more shaded sites. Their burrows also differ importantly in shape and size from iguana nest-related digging. Measurements of four entrances of iguana nesting cavities were as follows (heights/width in cm): site 3: 13/18, 14/15; site 4: 10/14, 14/18. *I. delicatissima* is known for its protracted nesting season but for St. Eustatius this was unknown. Our results show that on St. Eustatius nesting occurs minimally from November through January. Two natural nest sites documented for the period Jan–Aug 2008 by Nicole Esteban (with egg shells seen) on the wind-swept ridges of Gilboa Hill, were visited (by AOD and a National Parks intern) on 26 Nov 2012. Two hours of intensive searching of the area by two persons yielded no signs of any iguana nest-digging activity. Historical anecdotes that “formerly the people swam with iguanas at Venus Bay” suggested that this site was an important iguana locality at one time. However, a field visit to Venus Bay on 24 November 2012 did not yield evidence of any nesting activity. On several islands, female iguanas are forced to migrate (often) long distances to coastal beaches for nesting due to lack of suitable sites elsewhere (Bock and McCracken 1988. J. Herpetol. 22:316–322; Breuil 2002. Patrim. Nat. 54:1–339). Our results and observations suggest likewise that on St. Eustatius, the interaction of vegetation and geology also limit nest site availability to the iguana. Our results further indicate that the sites presently used are vulnerable to humans and their non-native pets, livestock, and invasive weeds (particularly the Mexican Creeper Vine, *Antigonon leptopus*). Mapping, artificial creation and adequate protection of nest sites are recommended as key necessities for recovery of this endangered species on St. Eustatius.

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ADOLPHE O. DEBROT, Institute for Marine Research and Ecosystem Studies (IMARES), Wageningen UR, P.O. Box 57, 1780AB, Den Helder, The Netherlands (e-mail: Dolfi.debrot@wur.nl); **ERIK B. BOMAN**, Agriculture Department of St. Eustatius, Oranjestad, St. Eustatius (e-mail: erik.b.boman@gmail.com); **STEVE PIONTEK** (e-mail: manager@statiapark.org); **HANNAH MADDEN**, St. Eustatius National Parks Foundation, Gallows Bay, St. Eustatius (e-mail: hannah.madden.stenapa@gmail.com).

LEIOLEPIS GUTTATA (Spotted Butterfly Lizard). REPRODUCTION. *Leiolepis guttata* is currently known from only Vietnam (Van Sang et al. 2009. Herpetofauna of Vietnam. Edition Chimaira, Frankfurt am Main. 768 pp.). In this note we report the first information on reproduction in *L. guttata*.

One female (SVL = 116 mm) collected at Bin Chau (105.83°N, 10.85°E), Bà Rịa-Vung Tàu Province, Vietnam, in June 2009 and deposited in the herpetology collection of La Sierra University (LSUHC), Riverside, California (as LSUHC 9239) was examined.

A cut was made in the lower abdominal cavity and the ovaries were examined. A total of three oviductal eggs were present, two in the left oviduct and one in the right oviduct. This is the first egg clutch reported for *L. guttata*.

STEPHEN R. GOLDBERG, Natural History Museum of Los Angeles County, Herpetology Section, Los Angeles, California 90007, USA (e-mail: sgoldberg@whittier.edu); **L. LEE GRISMER**, La Sierra University, Department of Biology, Riverside, California 92515, USA (e-mail: lgrismer@lasierra.edu).

LIOLAEMUS BELLII (Dusky Lizard). PREDATION. *Abrothrix andinus* is a small South American field mouse (Rodentia: Cricetidae) with a body length of 10–13 cm, tail length of 4–5 cm, and body mass of 18–31 g (Iriarte 2008. Mamíferos de Chile. Lynx Ediciones, Barcelona, España. 420 pp.). The species is widely distributed and can be found in Peru, Argentina, and Chile. In the Chilean Andes it has been documented from 2500 to 4500 m above sea level in five different regions (Chile’s first-level administrative divisions): I to IV and in the Región Metropolitana (Iriarte 2008, *op. cit.*). The species is considered to be omnivorous. In a study conducted during March 2000 at la Quebrada de Cruzaderos (29.783°S, 70.000°W; 3470–3650 m elev.) in the cordillera Doña Ana, north-central Chile, 30 fresh feces (6 per individual, N = 5) were analyzed and the majority of the items consumed were seeds, plant fibers, and insects (López-Cortés et al. 2007. Rev. Chil. Hist. Nat. 80:3–12). In another study where dietary samples were analyzed from Farellones at 2300 m elev.,