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Notes on the Ecology and Behavior of *Anolis cuvieri* (Lacertilia: Iguanidae) in Puerto Rico

JONATHAN B. LOSOS, *Museum of Vertebrate Zoology and Department of Zoology, University of California, Berkeley, California 94720.*

MICHAEL R. GANNON, *Department of Biological Sciences and The Museum, Box 4149, Texas Tech University, Lubbock, Texas 79409.*

WILLIAM J. PFEIFFER AND ROBERT B. WAIDE, *Center for Energy and Environment Research, Terrestrial Ecology Division, G.P.O. Box 3682, San Juan, Puerto Rico 00936; also for W. J. P.: Department of Mathematics and Science, Chattanooga State University, 4501 Annicola Highway, Chattanooga, Tennessee 37406-1097.*

The lizard genus *Anolis*, comprising approximately 300 species, is among the largest vertebrate genera. A great deal of research has been conducted on the biology of these lizards, particularly in the West In-

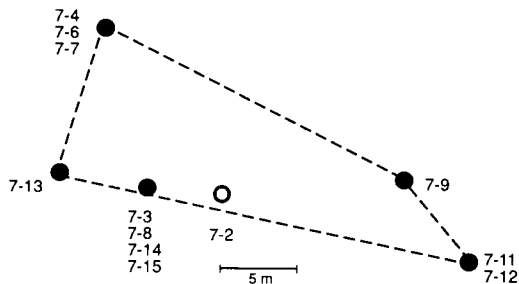


FIG. 1. Movement log of radio-tracked *A. cuvieri*. The open circle is the point of capture and release on July 2. Dates indicate where the lizard was located. Dashed line is the minimum convex polygon.

dies, but little is known about the larger species (> 100 mm snout-vent length [svl]; see, e.g., Scott et al., 1976; Trivers, 1976; Dalrymple, 1980). The Puerto Rican giant anole, *A. cuvieri* Merrem, is no exception; little is known other than information on diet and predatory behavior (Rand and Andrews, 1975; Perez-Rivera, 1985). Here we provide data, collected during the summer of 1988, on movement patterns, home range, and diet of the "lagarto verde" in the Luquillo Mountains, Puerto Rico.

In mid-afternoon of 28 June 1988, a male *A. cuvieri* (svl 130 mm, 45.5 g) was discovered at a height of 3 m on the sunlit crown shaft of a palm (*Prestoea montana* (Graham) Nicholson) in the Tabonuco rainforest near the El Verde Field Station (description of site in Odum and Pigeon, 1970). It was captured, fitted with a radio transmitter (Holohil Systems, Ltd., Ontario, Canada, model BD-2, 1.2 g), and released at the point of capture on the afternoon of 2 July. The transmitter was sewn to the dorsal crest with cotton thread and glued to the back with "Skin-bond cement (Pfizer Hospital Products Group, Inc., Largo, FL., U.S.A.). The transmitter's 15 cm long whip antenna was held in place along the dorsal crest with two additional stitches and glue. The lizard was located telemetrically 11 times prior to transmitter failure on 16 July. To minimize disturbance, it was never located more than once per day. On each occasion, the tree (or group of trees if they were closely clumped) which the lizard was occupying and the approximate height of the lizard were noted. Despite intensive visual search with binoculars, the lizard was never seen.

A log of movements for the lizard was constructed from the 11 capture points (Fig. 1). The data suggest that the lizard may have remained in one tree for several consecutive days (although the lizard may have been found in the same tree on consecutive days by coincidence). There were substantial movements from one day to the next; the longest occurred on 12-13 July, when the lizard moved a minimum of 25.9 m. On days when the lizard changed location, the mean distance moved was $18.1 \pm \text{SD } 7.5$ m. The canopies of the trees in the forest overlapped such that lizards would not need to descend to the ground, which adult *A. cuvieri* usually do not do (Perez-Rivera, 1985), to travel from one tree to the next. The lizard

was located twice at a height of approximately 6 m, once at 15 m, and the other eight times in the canopy (15-25 m).

The simplest way to assess home range is the minimum convex polygon method, which draws the smallest possible convex polygon around the outermost capture points (Jennrich and Turner, 1969; Schoener, 1981). The minimum convex polygon encompassing the data for *A. cuvieri* was 325.8 m². This is the first home range estimate for a giant anole, and is more than twice the home range of any other *Anolis* that has been studied, based on the summary of Schoener and Schoener (1982). Of 10 species, only *A. carolinensis* Voigt (32-65 m²) and *A. polylepis* Peters (157 m² when calculated using the method of Jennrich and Turner (1969), but 34 m² when calculated using the minimum convex polygon method) had home ranges >25 m². Generally, home range sizes are positively correlated with body size among lizards (Turner et al., 1969; Christian and Waldschmidt, 1984). *Anolis cuvieri* is considerably larger (4-20 fold greater in mass, 2-3 fold greater in length) than any other *Anolis* studied; consequently, its vastly larger home range is not unexpected.

Previous studies (Wolcott, 1923; Schmidt, 1928; Rand and Andrews, 1975; Perez-Rivers, 1985) have revealed that *A. cuvieri* has a catholic diet including butterflies, orthopterans, coleopterans, millipedes, annelids, snails, lizards, bird nestlings, and fruit. We examined fecal samples from three recently-captured individuals. Our records also indicate a generalized diet which includes 11 fruit seeds and a variety of insects (anthribid, buprestid, and curculionid beetles [*Diaprepes abbreviatus* L.], an homopteran, >30 formicine ants [1 *Camponotus ustus* Forel and >30 *Iridomyrmex melleus* Wheeler], and a cryptostigmatid mite). Rand and Andrews (1975) noted the virtual absence of ants in an examination of 14 stomachs, in contrast to the large quantity of ants eaten by one of the individuals we examined. Seeds of the same fruit, which could not be identified to species, have also been observed in the stomach contents of another anole from the Luquillo Mtns., *Anolis gundlachi* Peters (Alejo Estrado Pinto, pers. comm.).

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A Range Extension for *Mabuya mabouya* Lacépède (Reptilia: Lacertilia) to Desecheo Island, Puerto Rico

ALBERT J. MEIER AND ROBERT E. NOBLE, *School of Forestry, Wildlife, and Fisheries, Louisiana Agricultural Experiment Station, Louisiana State University Agricultural Center, Baton Rouge, Louisiana 70803.*

Mabuya mabouya Lacépède is primarily a resident of tropical, dry-scrub and arid regions of the Turks and Caicos Islands, Hispaniola, Jamaica, Puerto Rico, and the Virgin Islands (Rivero, 1978). *Mabuya mabouya*