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Phrynosoma cornutum (Texas horned lizard) Habitat

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FIG. 1. *Oplurus cuvieri cuvieri* climbed the tree while holding adult *Cinnyris sovimanga*.

an adult *Schetba rufa* (Rufous Vanga) intensively attacked an individual of *O. c. cuvieri* that came close to a nest of the *S. rufa*, and he inferred that *O. c. cuvieri* feeds on nestlings of *S. rufa*. Ito (2013. Herpetol. Rev. 44:678) reported a predation event of *O. c. cuvieri* on a fledgling of *Hypsipetes madagascariensis* (Madagascar Bulbul) that had fallen from its nest. Here, we report a case of active predation on an adult bird by *O. c. cuvieri*.

In Ampijoroa forest of Ankarafantsika National Park, Madagascar, at approximately 1150 h on 2 December 2012, we found a pair of *Cinnyris sovimanga* (Souimanga Sunbird) perching on a branch of a tree approximately 4 m high. An adult male *Oplurus cuvieri cuvieri* (SVL ca. 170 mm) approached the base of the tree and started to climb the trunk. The lizard intermittently climbed up to an approximately 3-m high branch in several minutes. At the branch, the lizard turned toward the birds and slowly came close to them. Then the lizard stepped on another branch and remained motionless for approximately 10 seconds at this position 20 cm behind the birds. At 1205 h, the lizard sprang at the male *C. sovimanga* from the branch and held the bird with its mouth. Although they fell down to the ground together from the branch, the lizard was still holding the bird with its mouth. Immediately after the landing, the lizard ran away to another tree approximately 5 m away and quickly climbed the tree while holding the bird (Fig. 1). Finally, the lizard began to eat the bird on a branch 4 m high. This is the first report on active hunting of adult birds by *O. c. cuvieri*.

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***PHRYNOSOMA CORNUTUM* (Texas Horned Lizard). HABITAT USE.** The combination of high temperatures and low humidity from lack of precipitation, as has happened frequently over the last few years in Oklahoma, USA, can create desiccation cracks in dry, bare clay soil (Morris et al. 1992. Can. Geotech. J. 29:263–277; Peron et al. 2009. Can. Geotech. J. 46:1177–1201; Burmeier et al. 2010. Plant and Soil 333:351–364). This phenomenon occurred on Core Reserve Area 3 (CRA3), a preserved area of tallgrass prairie and woodland on Tinker Air Force Base on the outskirts of Oklahoma City. One of the few remnant populations of *Phrynosoma cornutum* in central Oklahoma occurs on CRA3 (35.415780°N, 97.410975°W; WGS 84), and this population has been studied intensively with visual surveys and radio telemetry (Endriss et al. 2007. Herpetologica 63:320–331; Bogosian et al. 2012. Ecol. Model. 237/238:63–73; Wolf et al. 2013. Herpetologica 69:265–281). We directly observed 10 telemetered *P. cornutum* taking refuge in these drought-induced cracks on multiple occasions during the summer and autumn between 2010 and 2014 (Fig. 1). Several additional *P. cornutum* were suspected of being in cracks based on telemetry signals, but could not be visually confirmed. Various ages of *P. cornutum* were observed using these cracks, including hatchlings (SVL 23–26 mm) and adults of both sexes (SVL 52–72 mm). Cracks were generally only a few centimeters wide at ground level, and the width of the cracks decreased with increasing depth. *P. cornutum* were observed up to 150 mm below ground level. Individuals of all ages were also observed partially

FIG. 1. *Phrynosoma cornutum* utilizing an ephemeral desiccation crack as a refuge.

in or adjacent to cracks, and would seek refuge deeper in cracks upon approach by researchers. Pianka and Parker (1975. Copeia 1975:141–162) suggested that *Phrynosoma* engage in bimodal daily activity patterns during June, July, and August to avoid the heat of the day, which can often exceed 32°C at CRA3. Crack use may represent an escape from heat during summer. However, *P. cornutum* have also been observed using cracks in the autumn during temperatures of 16–21°C suggesting that cracks may also provide refuge from predators, as is indicated by *P. cornutum* seeking shelter in cracks when approached by researchers. To our knowledge, use of desiccation cracks in substrate has not been documented in the literature for *Phrynosoma*, but these refugia seem to represent a valuable, though ephemeral, microhabitat. Such cracks may be especially valuable, given that refugia provided by vegetative cover may be reduced during and soon after times of extreme high heat and low humidity.

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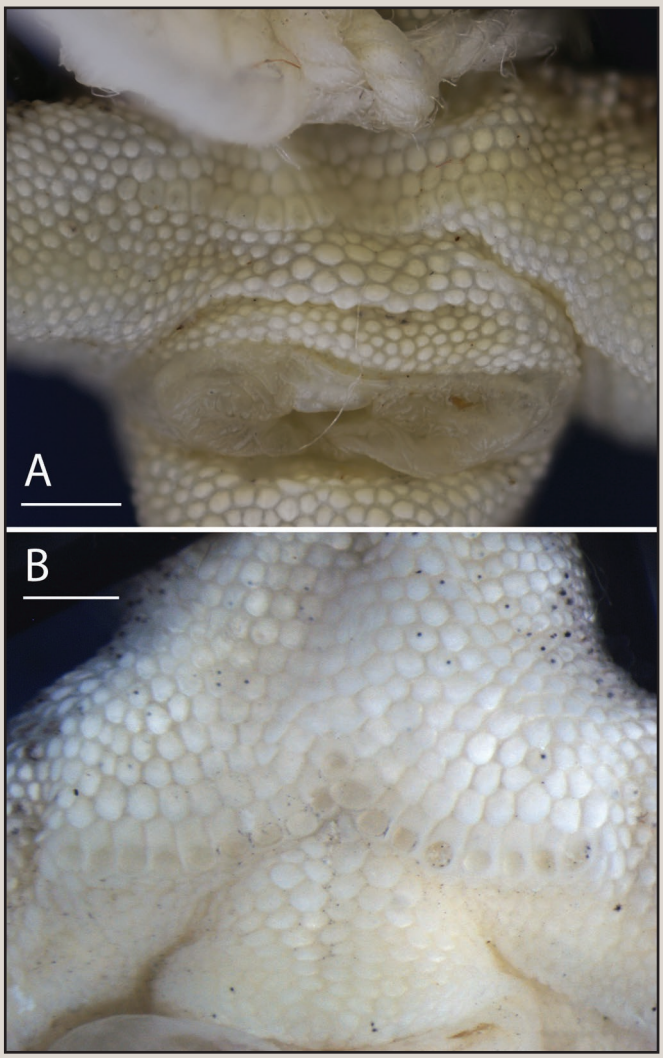
***PSEUDOGEKKO DITOY* (Leyte Diminutive False Gecko). MORPHOLOGY.** *Pseudogekko ditoy* is a recently described, secretive species of gecko known only from the islands of Leyte and Samar in east-central Philippines. Few specimens of this species have been encountered or collected, and as such, researchers have had limited ability to detect morphological variation among individuals. The examination of secondary sexual characteristics has been an important tool used to determine the sex of individuals in this genus. Many secondary sexual characteristics exist among lizards, but a widespread diagnostic character used to differentiate sexes is the presence of enlarged, precloacal or femoral pores. Typically, these pores are used to identify males of a species; however, the presence of precloacal pores in females has been documented in several families, including Lacertidae (Khanoon et al. 2013. Zool. Sci. 30:110–117), Liolaemidae (Valdecantos et al. 2014. Acta Herpetol. 9:147–158), and Gekkonidae. Within the family Gekkonidae, females with precloacal pores have been reported for multiple genera, including *Cyrtodactylus* (Bauer et al. 2010. Zootaxa 2570:41–50; Pauwels et al., 2014. Zootaxa 3755:584–594), *Hemiphyllodactylus* (Zug 2010. Smithson. Contr. Zool. 631:1–70), *Hoplodactylus* (Jewell 2006. Identifying Geckos in Otago. Science & Technical Publishing, Department of Conservation. Wellington, New Zealand. 60 pp.), and *Naultinus* (Jewell 2006, *op cit.*). Herein, we report on the first record of precloacal pores in female *Pseudogekko*.

During a recent biodiversity survey from 1 June to 9 July 2014 on Samar Island in the eastern Philippines, we collected two adult *P. ditoy* on leaf litter near stream systems: a single, gravid, adult female (KU 338507) in Municipality of San Jose de Buan, Western Samar Province, Samar Island, Philippines (12.05262°N, 125.03429°E, WGS 84; 209 m elev.), and a single adult male (KU 338508) in Barangay San Rafael, Municipality of Taft, Eastern Samar Province, Samar Island, Philippines (11.80255°N, 125.29276°E, WGS 84; 140 m elev.). The specimens have 18 (female) and 17 (male) small pores in continuous, precloacal series, which are moderately arched anteromedially. The posterior half of the body on the male specimen is damaged; however, comparisons with the pore series of a previously collected adult male (KU 326438, paratype) shows female pores to be smaller in size than male pores (Fig. 1). Recognizing that this character has been used to determine sex in systematic studies of this genus, with the presence of pores recognized to occur in males only (Siler et al. 2014. Herpetol. Monogr. 28:110–139), caution must be taken in future studies concerning the use of this character to determine sex, and gonadal inspection may be necessary for proper validation. Fieldwork was supported by NSF DEB 0743491 and EF-0334952 to RMB, and NSF DEB 0804115 and IOS 1353683 to CDS.



PHOTOS BY JESSA L. WATTERS

FIG. 1. Photographs of precloacal pore series in preserved specimens of *Pseudogekko ditoy* from the Philippines. A) Adult female (KU 338507; SVL = 49.7 mm) from northern Samar Island. B) Adult male (KU 326438; SVL = 49.4 mm) from southern Leyte Island. Scale bars = 2 mm.

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