were on the move, and stretched straight out behind the body when undisturbed. The flattened tail with lateral projections superficially resembles the pinna of a compound leaf, similar to those on some of the vegetation the geckos were found on. Only two individuals were spotted on rocks—one in the early evening (ca. 1930 h), which emerged from a crevice into which it rapidly took cover when disturbed, and the other inside a rock crevice at ca. 2200 h (when the air temperature had dropped below 20°C and few geckos of any species were active), leading us to believe the second animal had moved back to its daytime retreat.

Similar behavior has been reported for *Pseudothecadactylus lindneri* (Bauer 1990. Bonn Zool. Monogr. 30:1–220), with daytime retreats in crevices in granite boulders, and nocturnal foraging on vegetation. Sympatric geckos encountered included the primarily diurnal *Rhoptropus boultonii* and *Rhoptropus* sp. and the nocturnal *Pachydactylus* cf. *oreophilus* and *Afroedura* cf. *bogertii*. *Afroedura* cf. *bogertii* was exclusively found associated with rock crevices, *Rhoptropus* spp. used many areas of the rocky habitat, and *Pachydactylus* cf. *oreophilus* were on the ground or below ca. 2 m. We also encountered nocturnal *Pachydactylus* cf. *punctatus* at the sandy base of rocky outcrops. Six specimens are deposited in collection of the California Academy of Sciences (accession numbers pending, field numbers AMB10396–98, AMB10400, AMB10468–69).

ISHAN AGARWAL (e-mail: ishan.agarwal@gmail.com), **LUIS M. P. CERÍACO**, **AARON M. BAUER**, Department of Biology, Villanova University, 800 Lancaster Avenue, Villanova, Pennsylvania 19085, USA; **SUZANA BANDEIRA** Instituto Nacional da Biodiversidade e Áreas de Conservação, Ministério do Ambiente de Angola, Centralidade do Kilamba, Rua 26 de Fevereiro, quarteirão Nimi ya Lukemi, edifício Q11, 3º andar, Angola.

***LIOLAEMUS CUYANUS, LIOLAEMUS DARWINI* (Darwin's Tree Iguana), *LIOLAEMUS OLONGASTA, LIOLAEMUS RIOJANUS*. ECTOPARASITES.** With nearly 256 species described, the South American lizards of the genus *Liolaemus* are the second most diverse among vertebrates (Avila et al. 2009. Zootaxa 2234:39–55; Abdala et al. 2012. Cuad. Herpetol. 26:215–248). However, relationships between mites and these lizards have received limited attention. *Liolaemus cuyanus*, *L. darwini*, *L. olongasta*, and *L. riojanus* inhabit the Talampaya National Park (TNP), located in an extensive plain of the Monte region (29.8°S, 67.833°W, WGS 84; 1300 m elev.) in the center-west of La Rioja Province (Argentina), which was designated as an UNESCO World Heritage Site in 2000. Here we report novel associations of mites with these lizard species.

During herpetological surveys conducted in March and April of 2016, we recorded several lizards parasitized by mites (*Eutrombicula alfreddugesi*), which were attached to the eyelids and joint region of hind limbs (Fig. 1). Lizards were caught using Y-shaped drift fence pitfall traps, each with one central bucket. Mite specimens were extracted by gently rubbing a cotton swab with ether on the lizards' skin, preserved in an eppendorf tube with 70% ethanol solution, and transported to the laboratory for identification. In the laboratory they were mounted with a drop of paraffin on a glass microscope slide and analyzed under a stereoscopic microscope for further taxonomic identification (Lane and Crosskey 1993. Medical Insects and Arachnids. Chapman & Hall. London, UK. 723 pp.; García-De La Peña et al. 2004. Acta Zool. Mex. 20:159–165; Fajfer 2012. Acarina 20:108–129).

Most mites were found in *L. cuyanus* (N = 5), but these were the most abundant lizards on the site. In the other species, an average of 2 to 3 mites were found. In total 90 lizards were examined:

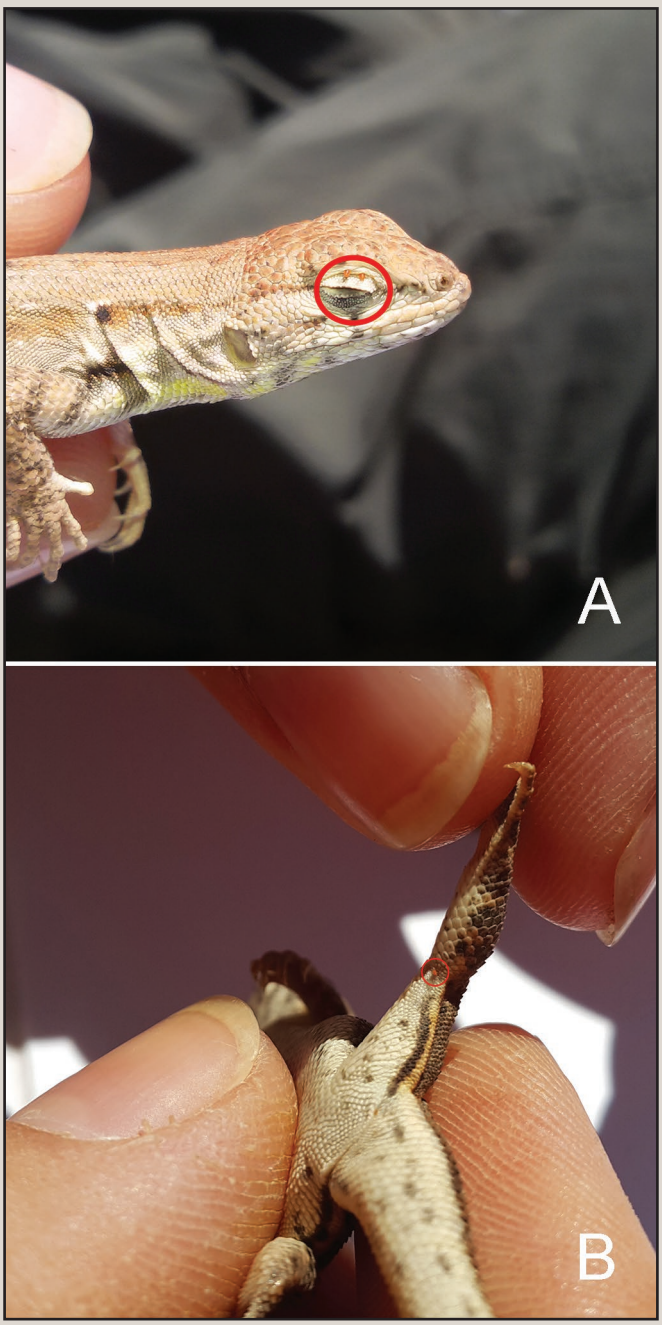

FIG. 1. A) Close-up of *Liolaemus laurenti* with mites attached to the eyelid. B) *Liolaemus darwini* with a mite attached to the joint of the posterior left leg.

L. cuyanus (N = 68, 15 infected), *L. riojanus* (N = 5, 1 infected), *L. olongasta* (N = 16, 3 infected), and *L. darwini* (N = 1, 1 infected).

These ectoparasites have been reported to infest a variety of reptiles, birds, small mammals, and even humans (Wall and Shearer 2001. Veterinary Ectoparasites: Biology, Pathology and Control. Blackwell Science Ltd. Oxford, UK. 261 pp.). Ours is the first report of *E. alfreddugesi* in these lizard species in Argentina and the first report for lizards' ectoparasites in TNP.

We thank APN, Talampaya National Park, and the forest rangers. We also acknowledge the volunteers that helped in the surveys and Jorge D. Williams for his help. This research was funded by IAMRA- UNdeC.

CAMILA A. KASS, Universidad Nacional de Chilecito, La Rioja, CONICET, Sección Herpetología- FCNyM-UNLP, Calle 122 y 60, La Plata, Buenos Aires, Argentina (e-mail: camilakass@gmail.com); **MATIAS RUSCONI**, Centro de Estudios Parasitológicos y de Vectores, CEPAVE, Calle 122 y 60, La Plata, Argentina (CONICET- UNLP), Facultad de Ciencias Naturales y Museo, UNLP, Buenos Aires, Argentina; **NICOLAS A. KASS**, Sección Herpetología-FCNyM-UNLP, Calle 122 y 60, La Plata, Buenos Aires, Argentina; **FEDERICO KACOLIRIS**, CONICET, Sección Herpetología- FCNyM-UNLP, Calle 122 y 60, La Plata, Buenos Aires, Argentina.

***LIOLAEMUS NITIDUS* (Shining Tree Iguana). OCULAR SINUS BLEEDING.** Squirting blood from the eye as a means of antipredator defense against canids is well-known in the genus *Phrynosoma*, present in at least seven species (Sherbrooke and Middendorf 2001. Copeia 2001:1114–1142). The blood is squirted from ruptured membranes in the ocular sinus below the eye and contains a substance noxious to canids (Sherbrooke and Mason 2005. Southwest. Nat. 50:216–222). The squirted blood can reach distances up to 1.2 m. As far as is known, however, this unusual form of defense is found in no other vertebrate species, although autohemorrhaging from the orbital sinus has been observed in two other lizard species (Mahrt 1996. Herpetol. Rev. 27:21–22; Sherbrooke 2000. Herpetol. Rev. 31:243).

In the course of a larger study, at 1015 h on 25 February 2016, one of us (SFF) noosed an adult male *Liolaemus nitidus* from a site in the Andes of central Chile (Curva 31 along road to Farellones; 33.3559°S, 70.3229°W, WGS 84; 2160 m elev.) and upon taking it from the noose, noticed that it had expelled copious blood from both eyes (Fig. 1). This had never before been observed in the capture of hundreds of *L. nitidus* from this and previous studies at and near this site. The estimated amount of expelled blood was 0.05 ml. The blood pooled around both eyes and drained along the sides of the face and onto SFF's hands. Unfortunately, some of the blood was blotted and dried before photographs were taken. No blood was seen to be squirted. The male subject (74 mm SVL, 131.5 mm tail length, 13 g), was basking on a rock in the open when it was noosed. Weather was sunny with no wind. Air temperature was 32°C; lizard cloacal body temperature was 27.6°C. The subject was noosed no differently than any other lizard. After photographing and measuring the subject, it was released at the point of capture. In less than an hour later, ESB captured another adult male *L. nitidus* nearby at the same site and it exhibited puffy eyes engorged with blood, but did not release any blood.

FIG. 1. View of dried blood on the eyes and face of *Liolaemus nitidus* shortly after pooled blood was swabbed after the captured lizard displayed ocular sinus bleeding in the field.

The release of blood from the first subject is consistent with antipredator defense, especially if there is a noxious substance in the blood as in *P. cornutum*. The fact that the described autohemorrhaging response in *L. nitidus* is so rare does not necessarily speak against its putative antipredator function. In *P. cornutum*, only 5.9% of subjects squirted blood in response to human handling, including rough handling, whereas 70–100% of subjects confronted with dog, coyote, or kit fox predators squirted blood (Sherbrooke and Middendorf 2001, *op. cit.*). A noxious substance in the squirted blood of *P. cornutum* is especially effective against attacking canids, who show subsequent discomfort behavior. In this area of Chile and at the elevation of the study site, there are abundant foxes (*Lycalopex culpaeus*) that probably on occasion hunt and consume lizards (Rubio et al. 2013. Stud. Neotrop. Fauna E 48:89–94). This antipredator defense might be focused against these potential predators; however, no foxes or any other canids were observed at the time lizards were noosed. This is only the third non-*Phrynosoma* lizard species to show ocular sinus bleeding (Mahrt 1996, *op. cit.*; Sherbrooke 2000, *op. cit.*). We thank the National Geographic Society, Delta Foundation, Phoenix Zoo, Explorers Club, and Elías Arze for financial aid for the larger project that made this observation possible.

STANLEY F. FOX (e-mail: stanley.fox@okstate.edu) and **ENRIQUE SANTOYO-BRITO**, Department of Integrative Biology, 501 LSW, Oklahoma State University, Stillwater, Oklahoma, 74074, USA (e-mail: enrique.s.brito@okstate.edu); **HERMAN NÚÑEZ**, Museo Nacional de Historia Natural de Chile, Santiago, Chile (e-mail: hnunez@mnhn.cl).

***LIOLAEMUS RUIBALI* (Ruibal's Tree Iguana). ENDOPARASITES.** A total of 158 species of the genus *Liolaemus* occur in Argentina (Abdala and Quinteros 2014. Cuad. Herpetol. 28:55–82). In Argentina, *Liolaemus ruibali* is distributed across Mendoza and San Juan provinces (Abdala et al. 2012. Cuad. Herpetol. 26:215–248). This small species is predominantly insectivorous (Villavicencio et al. 2005. Multequina 14:47–52), and has a bimodal activity pattern (Castillo et al. 2015.Multequina 24:19–31).

The first record of the nematode *Parapharyngodon riojensis* from Argentina was discovered in the lizard *Phymaturus punae* from the province of La Rioja (Ramallo et al. 2002. J. Parasitol. 88:979–982), and was later recorded in *P. palluma* and *Liolaemus buergeri* from Mendoza and Neuquén (Goldberg et al. 2004. Comp. Parasitol. 71:208–214), and recently in *P. extrilidus* from the province of San Juan (Ramallo et al. 2017. Herpetol. Rev. 49:198). The purpose of our note is to provide, for the first time, a record of *Parapharyngodon riojensis* in *Liolaemus ruibali*.

Three specimens of *L. ruibali* were collected (by noosing) in April 2009 from Quebrada de Vallecito, San Juan Province, Argentina. Phytogeographically, the area is included in the Provincia Altoandina (Cabrera and Willink 1973. Biogeografía de América Latina. Secretaría General de la Organización de los Estados Americanos, Washington, DC. 120 pp). For each specimen, the body cavity was opened with a mid-ventral incision, the digestive tract was removed, and its contents examined for helminths using a dissecting microscope. Eleven nematodes (10 females, 1 male) were isolated from the large intestines and identified as *Parapharyngodon riojensis*. The specimens possessed the characteristic diagnosis: presence of seven caudal papillae, ovaries that do not coil around the esophagus, oval eggs with a punctuated thick shell, and an echinate anal lip in males. Infection