

National Park (16.3181°S, 46.8096°E; WGS84). It was perched on a tree, holding the head of a small male *F rhinoceratus* in its mouth. The *O. cuvieri* swung its head side to side and slammed the captured *F rhinoceratus*, which was still alive at this time, into the tree trunk. Upon being photographed, the *O. cuvieri* hid in a tree-hollow, and the *F rhinoceratus* was dropped in there, now dead, as I captured the *Oplurus*. The snout–vent length (SVL), mass, and head width of *O. cuvieri* were 160 mm, 118 g, and 30 mm, respectively. The SVL and mass of the *F rhinoceratus* were 100.8 mm and 19.4 g, respectively. Its head width was not measured because it was crushed. The *F rhinoceratus* was deposited at Université d’Antananarivo (UADBA, specimen number M15173) and *O. cuvieri* was released at the site of capture. To my knowledge, this is the first report of a predation attempt by *O. cuvieri* on a lizard.

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PHRYNOSOMA CORNUTUM (Texas Horned Lizard). MORTALITY. *Phrynosoma cornutum* has declined throughout much of its native range (Donaldson et al. 1994. Texas J. Sci. 46:97–113). Unnatural causes of mortality of *P. cornutum* include road kills and entrapment in mesh wire (Montgomery and Mackessy 2003. Southwest. Nat. 48:111–118; Lahti and O’Donnell 2008. Herpetol. Rev. 39:89). Herein, we report two novel causes of mortality in *P. cornutum* associated with anthropogenic materials.

At 0915 h on 18 June 2011, we found a dead adult (ca. SVL \geq 68 mm) *P. cornutum* entangled in a discarded plastic grate in an illegal dump site in Ciudad Juárez, Chihuahua, México (31.586342°N, 106.466428°W, WGS84; elev. 1211 m). The head was protruding out from one hole in the grate, and the lower extremities were absent. It seems that the lizard attempted to escape by climbing the grate and got caught in one hole and was unable to release itself.

Near the same site at 0930 h, we found a live adult (SVL \geq 68 mm) *P. cornutum* inside a tire. We decided to invest one hour

(survey 1) searching for lizards inside the tires in an area ca. 0.8 ha. We found a total of eight dead lizards (Fig. 1) and one live lizard. The mean SVL was 67.22 mm \pm 20.68 SD (N = 9). Because of these findings we started a second survey (survey 2) for lizards inside the tires in a 1-ha plot between 6 August 2011 and 26 August 2012. Survey 2 included a total of 28 days, with each survey spanning two hours per day (0900–1100 h). We recorded 11 individual *P. cornutum* (eight dead and three alive) associated with the inside of the tires.

Between the two surveys a total of 20 *P. cornutum* were encountered in the tires, including 16 adults (mean SVL = 84.12 mm) and four juveniles (mean SVL = 48.75 mm). Lizards were considered adults at SVL \geq 68 mm (Ballinger 1974. Herpetologica. 30:321–327). We suspect that the lizards climb the tires searching for refuge from the sun exposure, but experienced mortality as a result of these attempts. *Phrynosoma cornutum* are known to climb up to 2 m into low shrubs and trees to avoid elevated ground temperatures (Whitford and Bryant 1979. Ecology 60:686–694). Thus, the tires may have served as an ecological trap. Although the critical thermal maximum for *P. cornutum* is between 46.8–48°C (Lynne and Hutchinson 1970. Copeia 1970:219–229) and the select temperature T_{sel} is 38.5°C (Lara-Reséndiz et al. 2014. Rev. Mex. Biod. 86:275–278), the lizard is apparently not able to survive at higher temperatures. Although the mean temperature inside the tires was 39.5°C, the range was between 32°C and 50°C (N = 16).

Predation was the leading cause of death of *P. cornutum* (N = 23) followed by anthropogenic factors (N = 5) in a nine-year study (2003–2011) in Oklahoma (Wolf et al. 2013. Herpetologica 69:265–281). There appear to be no major threats listed for this species in Mexico (Hammerson 2007. The IUCN Red List of Threatened Species. www.iucnredlist.org). However, our observations have demonstrated mortality related to discarded tires, which could lead to local population declines.

A total of 26 photo vouchers are deposited at the Colección Científica de Vertebrados, Universidad Autónoma de Ciudad Juárez.

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PHYMATURUS PAYUNIAE. BLOOD PARASITE. Reptiles are commonly infected with blood parasites (Telford 1993. Syst. Parasitol. 25:109–117; Mihalca et al. 2008. Parasitol. Res. 102:1081–1083; Pereira et al. 2010. Parasite 17:307–318; Cook et al. 2010. J. Parasitol. 96:1168–1172). However, their prevalence and intensity remains poorly known, despite the adverse effects of parasitism on the host, including on population growth and regulation (Holmes 1995. Wildl. Res. 22:11–19; Hudson et al. 1998. Science 282:2256–2258), spatial distribution (van Riper et al. 1986. Ecol. Monogr. 56:327–344), reproductive success (Schall 1996. Adv. Parasitol. 37:255–333; Pacey et al. 1998. Ecology 79:1797–1806), and sexual selection (Hamilton and Zuk 1982. Science 218:384–387).

One group of parasites infecting blood cells of lizards as a definitive host is the genus *Schellackia* (Lankesterellidae, Apicomplexa) (Lainson et al. 2003. Mem. I. Oswaldo Cruz 98:1067–1070;



FIG. 1. A dead Texas Horned Lizard, *Phrynosoma cornutum*, in a tire.

PHOTO BY DANIEL AGUIRRE

TABLE 1. Values of leukocyte counts and morphological traits obtained for the five *Phymaturus payunia* (ID) captured at La Payunia Reserve. Values include: number of white blood cells (WBC), percentages of basophils (B), eosinophils (E), azurophilic (A), heterophilic (H), lymphocytes (L), and monocytes (M), the heterophil/lymphocyte ratio (H/L), weight in g (W); snout-vent length in mm (SVL); sex (S) as female (F) and male (M); and age class (AC) as adult (AD) and sub adult (SA). * Parasitized individual.

ID	WBC	B	E	A	H	L	M	H/L	W	S	SVL	AC
1	47	0.0	10.9	2.7	15.5	63.6	7.3	0.2	24	M	87	AD
2	72	0.0	4.9	4.1	28.7	59.0	3.3	0.5	31	F	85	AD
3	38	6.5	7.5	6.5	29.0	42.1	8.4	0.7	24	M	87	AD
4*	74	0.8	6.8	6.8	45.8	38.1	1.7	1.2	23	M	86	SA
5	42	1.5	15.8	3.8	32.3	42.1	4.5	0.8	21	M	85	SA

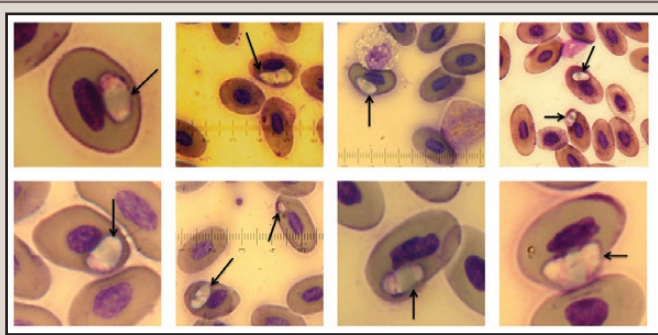


FIG. 1. Tinción 15-stained blood smear from a *Phymaturus payunia* infected with a blood parasite. Some erythrocytes contain sporozoites marked by arrows, that can be found anywhere in the host cells. The morphology of this blood stage is characteristic of the genus *Schellackia*.

Amo et al. 2005. Parasitol. Res. 96:378–381). *Phymaturus payunia* is endemic to La Payunia State Reserve, northern Patagonia, in Malargüe, Mendoza, Argentina. The most abundant populations are located at Payún Liso Volcano (Abdala et al. 2012. Cuad. Herpetol. 26:215–302). Castro et al. (2013) reported nematode parasites in the digestive tract of *Phymaturus* cf. *palluma* while analyzing this species' diet. However, no blood parasites affecting any species of *Phymaturus* have been discovered. Here we describe the first blood parasite known in *Phymaturus payunia*.

Blood samples were taken from caudal vein using sterile needles (23G). Each smear was analyzed under 1,000x microscope magnification with oil immersion to find blood parasites *sensu* Merino (1999. Etología 17:21–30). Leukocyte counts were also conducted following D'Amico (2010. J. Wildl. Dis. 46:644–648) and heterophil to lymphocyte ratios (H/L) as a physiologic index of stress were obtained. The parasite was identified as an unknown *Schellackia* sp. and the intensity was 1.3% (26/2000 cells infected erythrocytes) (Fig. 1). The parasite was identified as *Schellackia* due to its location displayed in erythrocytes and the presence of large retractile bodies that match with the characteristics of this genus. Compared to the other lizards caught, the infected individual showed higher counts of white blood cells, azurophilic, and heterophilic and a lower count of lymphocytes (Table 1). As a consequence of higher heterophilic and lower lymphocytes, the H/L ratio was also higher in the infected individual (Table 1).

In the phrynosomatid lizard *Sceloporus occidentalis*, malarial virulence has negative hematological and physiological effects on the hosts that could be detrimental for the species (Schall 1990. Parasitology 100: Suppl:S35–52). Reports of blood parasites in lizards include mostly agamids, geckos and iguanids for

a broad range of habitats (i.e. arboreal, saxicolous and ground-dwelling species). *Schellackia* haemococcidiosis seem to be cosmopolitan parasites since they have been reported for lizards in several sites worldwide, including North America, Central America, Europe, Australia and Asia (Jordan and Friend 1971. J. Protozool. 18:485–487; Telford 1993. Syst. Parasitol. 25:109–117; Bonnorris and Ball 2007. J. Eukaryot. Microbiol. 2:31–34; Dessler 2007. J. Eukaryot. Microbiol. 44:162–167; Godfrey et al. 2007. Parasitol. Res. 100:107–109; Halla et al. 2014. Parasitol. Res. DOI: 10.1007/s00436-014-4149-5). Thus, haemococcidiosis may represent a concern for conservation management worldwide, especially if it affects health parameters of threatened fauna like *Phymaturus*. However, ours is the first record for this parasite in northern Patagonia, Argentina and is also the first report of the presence of intracellular parasites in the genus *Phymaturus*.

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PLESTIODON SKILTONIANUS INTERPARIETALIS (Coronado Skink). **AVIAN PREDATION.** Western Bluebirds (*Sialia mexicana*) are known to feed primarily on insects and small fruits, such as berries. They nest in tree hollows and backyard nestboxes, allowing for easy observation (Wetmore 1964. Song and Garden Birds of North America. National Geographic Society, Washington, D.C. 398 pp.). It has been noted that fledgling Western Bluebirds assist adult birds in feeding nestlings (Dickinson et al. 1996. Behav. Ecol. 7:168–177).

On 16 June 2013, we were observing a family of Western Bluebirds interacting around a nestbox in Poway, California, USA (32.968°N, 117.048°W; datum WGS84). The family consisted of two adult birds, two fledglings, and three nestlings. At 1142 h and 1143 h, respectively, the two adult bluebirds each brought one *Plestiodon skiltonianus interparietalis* to the nestbox to feed to the nestlings. On 19 June 2013, at 1441 h, one of the fledgling bluebirds was observed bringing a juvenile *P. s. interparietalis* to the nestbox (Fig. 1). This observation was cataloged as a photo voucher at the San Diego Natural History Museum (SDSNH HerpPC 05222). In addition, on 16 June 2013 at 1215 h, one of the adult bluebirds also brought a juvenile *P. gilberti rubricaudatus* (Western Red-tailed Skink) to the nestbox. The bright pink tail of the skink distinguished it from *P. s. interparietalis*; however, we were unable to photograph the event.