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FIG. 1. *Phoneutria* sp. predating *Pseudopaludicola pocoto* in the Ceará, Brazil.

2005. *Phyllomedusa* 4:39–47). This is the first record of predation of *P. pocoto* by a spider in the genus *Phoneutria*, contributing information on the life history of *P. pocoto* and providing more evidence of predator–prey interactions between invertebrates and anurans.

We thank the Coordenação de Aperfeiçoamento de Pessoal de Nível Superior – Brasil (CAPES) for granting a scholarship to the authors (C.R.O. and W.M.), Financial Code 001.

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RANA DRAYTONII (California Red-legged Frog). DIET. Despite federal listing of *Rana draytonii* as threatened, a state listing as a California species of concern, and concerted effort to study this species by numerous biologists, information on prey selection remains relatively limited (U.S. Fish and Wildlife Service 1996. Fed. Regist. 61:25813–25833; Thomson et al. 2016. California Amphibian and Reptile Species of Special Concern. University of California Press, Berkeley, California. 408 pp.). In 1985, a single study suggested that *R. draytonii* might feed on a variety of vertebrates and invertebrates, including both terrestrial and aquatic prey items (Hayes and Tennant 1985. *Southwest. Nat.* 30:601–605). Thereafter, several authors reported novel prey, which included *Thamnophis sirtalis* (Common Gartersnake; Stitt and Seltenrich 2010. *Herpetol. Rev.* 41:206), rodents (Hayes et al. 2006. *Herpetol. Rev.* 37:449), and the larvae of *Anaxyrus boreas* (Western Toad; Davidson 2010. *Herpetol. Rev.* 41:66). In 2013, Alvarez (2013. *Herpetol. Rev.* 44:126–127) added cannibalism to the known diet of *R. draytonii*. Nearly thirty years after the work of Hayes and Tennant (1985, *op. cit.*) an additional, extensive study was conducted that supported the contention that *R. draytonii* relies heavily upon terrestrial prey (Bishop et al. 2014. *J. Herpetol.* 48:137–143). Any information that can be collected on declining species is critical to understanding and supporting management of these species. Herein, we report on an adult *R. draytonii* feeding upon a live *Aphonopelma steindachneri* (Steindachner's Ebony Tarantula: Theraphosidae).

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FIG. 1. *Rana draytonii* grasping the abdomen and attempting to consume an adult *Aphonopelma steindachneri* in the Bear Gulch Cave, Pinnacles National Park, San Benito County, California.

While conducting visual encounter surveys for *R. draytonii* in the Bear Gulch Creek region of Pinnacles National Park, California, USA (36.4906°N, 121.1825°W; WGS 84) we entered the Bear Gulch cave at ca. 1000 h on 3 October 2019. After walking 30–40 m into the cave system, several *R. draytonii* were encountered and observational data were collected. The third frog encountered, ca. 0.2 meters from the trail edge and sitting in water \leq 10 cm deep, appeared atypical. The *R. draytonii* had grasped an adult *A. steindachneri*, abdomen first, and was holding it firmly at the water surface. The *A. steindachneri* was partially submerged in water and was moving all eight limbs at the time of observation. The *R. draytonii* continued to apply pressure on and attempted to ingest the *A. steindachneri*, even while we photographed the incident. The *R. draytonii* slowly moved forward, likely due to the movement of the *A. steindachneri*'s legs in the water, until the *A. steindachneri* was pressed up against stones that lined the rocky pool. The *R. draytonii* moved its front limbs forward and inward to both corral the *A. steindachneri*'s legs and push it into the buccal cavity. We observed this interaction for ca. 20 min before moving on. During that time the *R. draytonii* gradually consumed much of the tarantula, abdomen first (Fig. 1). Based on the progress prior to our departure, we suspect that the entire *A. steindachneri* was consumed.

We speculate that the *A. steindachneri* had perhaps walked or inadvertently fell into the cave system, where it was detected and captured by the *R. draytonii*. It is unclear if the position of the *A. steindachneri* as grasped by the frog (i.e., posterior first), was selected or opportunistic. It was also unclear whether the *R. draytonii* could have consumed the *A. steindachneri* if it had captured it anterior end first.

Hayes and Tennant (1985, *op. cit.*) reported that *R. draytonii* consume spiders of the family Lycosidae (Wolf Spiders). Among the 48 identified prey items reported by Bishop et al. (2014, *op. cit.*), spiders (unknown species) were included as prey items. Although we do not know the circumstances under which this *R. draytonii* encountered the spider that we observed (i.e., on land or in the water), it is considered this a potential prey item. We believe this is the first report of *A. steindachneri* and the first report for the genus *Aphonopelma* being preyed upon by *R. draytonii*.

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RANA DRAYTONII (California Red-legged Frog). HABITAT USE.

Rana draytonii are known for using a range of habitats from coastal dunes, at an elevation of 1 m, to mountain meadows, at an elevation of 2100 m (Fellers and Kleeman 2007. J. Herpetol. 41:276–286; Peralta-Garcia et al. 2016. Herpetol. Cons. Bio. 11:168–180). They utilize ephemeral and perennial ponds and creeks, as well as the surrounding uplands, for all aspects of their biology (Storer 1926. Univ. California Publ. Zool. 27:1–342; Jennings and Hayes 1994. Amphibian and Reptile Species of Concern in California. California Department of Fish and Game, Rancho Cordova, California. 255 pp.; Thompson et al. 2016. California Amphibians and Reptile Species of Special Concern, University of California Press, Berkeley, California. 408 pp.). Due to this species being considered threatened by the U.S. Fish and Wildlife Service, considerable effort is directed at visual encounter surveys for monitoring presence/absence of *R. draytonii*. Some researchers have detected behaviors in upland habitat use that have aided in detecting this species when it was otherwise cryptic (Bulger et al. 2003. Biol. Conserv. 110:85–95; Alvarez 2004. Herpetol. Rev. 35:162–163; Fellers and Kleeman 2006. J. Wildl. Manag. 70:1805–1808; Alvarez et al. 2013 Herpetol. Rev. 44:127–128). Cryptic use of habitats and microhabitats or using habitats in a manner that would not meet expectations may mean that the species goes undetected when it is present. Alvarez and Wilcox (*in press*) detected *R. draytonii* climbing steep cliff faces and tall vegetation that was associated with a creek system and suggested that these frogs may be undetected by the unaware surveyor. Here, we report on *R. draytonii* using aquatic breeding habitat that we believe would be considered atypical for the species.

On the afternoon of 22 September 2020, while monitoring *R. draytonii* at two small ponds on Sonoma Mountain, Petaluma, California, USA the senior author noted numerous *R. draytonii* during a casual hike along Pierce Creek (38.32682°N, 122.57064°W; WGS 84; 700 m elev.), a first-order stream feeding Carriger Creek in the Sonoma Creek Drainage, Sonoma County, California. We entered the creek drainage after dark (ca. 2130 h) and noted that the drainage ranged from a steep to gentle gradient, had a substrate that ranged from silt to scoured bedrock, and was composed of step-pools and riffles that were from 0.3–1.0 m wide (Fig. 1). The majority of the spring fed creek was 0.05–0.10 m deep and was lined by slopes that ranged from 32–87° banks (Abney level, Dietzgen Company, Chicago, Illinois). Much of the creek included a tree canopy cover composed



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FIG. 1. General condition of Pierce Creek in late September, Sonoma County, California, USA. The blue arrow marks the location of the individual *Rana draytonii* in Figure 2.

primarily of *Umbellularia californica* (California Bay), with *Quercus garryana* (Garry Oak), *Q. agrifolia* (Coast Live Oak), and *Acer macrophyllum* (Big Leaf Maple). We used a spherical densiometer (Forestry Suppliers, Inc.) to determine that the canopy cover ranged from 85–100% in the stream section that held *R. draytonii*.

We detected one adult and nine post-metamorphic *R. draytonii* along the accessible portion of the creek. The majority (ca. 90%) of individual *R. draytonii* were 1–2 m above the water line and found stationary within small recesses in the steep slopes, above pools and runs in the creek (Fig. 2). Alvarez and Wilcox (*in press*) noted this behavior along a creek in Contra Costa County, California, and reported on the climbing ability of adult *R. draytonii*. They suggested that many *R. draytonii* in these situations may go undetected if the surveyors focus on the waterline rather than searching at eye level along steep banks.

The habitat within which we found these *R. draytonii* appeared to be more like that described for the sympatric *R. boylii* (Foothill Yellow-legged Frog; see Zweifel 1955. Univ. Calif. Publ. Zool. 54:207–292). The steep sides, lack of deep pools, lack of emergent vegetation, and steep stream gradients are not typical habitat described for either adult or post-metamorphic *R. draytonii* (Jennings and Hayes 1994, *op. cit.*; Thompson et al. 2016,