

species (Dyrkacz 1981. *Herpetol. Circ.* 11:1–31). While albino animals lack skin pigmentation and have red eyes (Brassaloti and Bertoluci 2009. *Herpetol. Bull.* 106:31–33), leucistic animals lack skin pigmentation but retain normal eye coloration (Hughes et al. 2019. *Herpetol. Rev.* 50:115). On 13 July 2021, while searching a meadow pond in the Russian Wilderness, Klamath Mountain Range, Siskiyou County, California, USA (41.37569°S, 122.95879°W; 1886 m elev.), we captured two leucistic *Rana cascadae* tadpoles (Gosner stages 37–40; Gosner 1960. *Herpetologica* 16:183–190; Fig. 1A) within a group of ca. 30 normally colored tadpoles. The eyes were pigmented, but they lacked the skin pigmentation observed in the standard *R. cascadae* larvae found in the same meadow pond (Fig. 1B). The larvae were transparent yellow in body color with light gold flecking throughout their bodies and tail tissues, while their caudal fin margins were a lighter shade of transparent yellow (Fig. 1A, B). Although albino *R. cascadae* larvae have been previously observed in the central Cascade Range of Oregon, USA (Altig and Brodie 1968. *Wasmann J. Biol.* 26:241), this is the first record of leucistic larvae for *R. cascadae*.

RYAN J. ABERG (e-mail: ryan.aberg@wildlife.ca.gov) and **JUSTIN M. GARWOOD**, California Department of Fish and Wildlife, 5341 Ericson Way, Arcata, California 95521, USA (e-mail: justin.garwood@wildlife.ca.gov).

RAORCHESTES SHILLONGENSIS (Shillong Bush Frog). POLYMORPHISM. *Raorchestes shillongensis* is a critically endangered species of bush frog (Dutta et al. 2004. IUCN Red List of Threatened Species 2004:e.T58902A11852580; Baruah et al. 2018. *Phyllomedusa* 17:3–20), which is endemic to Shillong and its suburbs in the state of Meghalaya, India. It is a small sized frog with a SVL ranging from 10.0–21.3 mm (BS, pers. obs.). The species was described based on eight specimens which were found hibernating in the soil (Pillai and Chanda 1973. *Proc. Indian Acad. Sci., Ser. B.* 78:30–36). One of the diagnostic characters in the species description is the presence of a light V-shaped mark on the dorsum near the occiput. However, this V-shaped mark is not a consistent distinguishing character of this species as over the years other workers have reported 'H'-shaped or 'Y'-shaped markings (Mathew and Sen 2003. *Cobra* 53:9–12; Ahmed et al. 2009. *Amphibians and Reptiles of Northeast India: A Photographic Guide.* Aranyak, Guwahati, India. 168 pp.) In addition, four color morphs of this species were reported recently (Baruah et al. 2018, *op. cit.*).

During a field study on the population diversity of *R. shillongensis* from April 2018 to March 2019, we have encountered several vibrant color morphs of this species, which we are reporting here. The following major morphological variations were observed during the course of our study; however, the white color on the supra-tympanic folds and the dark inter-orbital mark were consistent in all the morphs observed, though in some individuals, the latter was missing:

1. Grey dorsum with 'Y'-shaped or 'H'-shaped mark (Fig. 1A, C, E, H, I)
2. Dark brown dorsum with no distinct markings (Fig. 1B)
3. Black dorsum with no distinct markings (Fig. 1D)
4. Irregular dorsal markings (Fig. 1E, N)
5. Hour-glass marking on dorsum (Fig. 1G, K–M)
6. Grey or slaty dorsum with sharp '><' shaped mark (Fig. 1J, O)

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Fig. 1. Various color morphs of *Raorchestes shillongensis* from Shillong, Meghalaya, India: grey dorsum with 'Y'-shaped or 'H'-shaped mark (A, C, E, H, I); dark brown dorsum with no distinct markings (B); black dorsum with no distinct markings (D); irregular dorsal markings (E, N); hour-glass marking on dorsum (G, K–M); grey or slaty dorsum with sharp '><' shaped mark (J, O).

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BHASKAR SAIKIA, Northeastern Regional Centre, Zoological Survey of India, Shillong 793 003, Meghalaya, India (e-mail: bhaskarsaikia7@gmail.com); **ILONA JACINTA KHARKONGOR**, Arunachal Pradesh Regional Centre, Zoological Survey of India, Itanagar 791113, Arunachal Pradesh, India (e-mail: ilona.kharkongor@ymail.com).

RHINELLA DORBIGNYI (Dorbigny's Toad). DEFENSIVE BEHAVIOR. *Rhinella dorbignyi* belongs to the *Rhinella granulosa* species group, which is composed of small to medium-sized species that present rough skin, well-developed and keratinized cranial crests, and small parotoid glands, and is distributed in open areas in southeastern Brazil, Uruguay, and northeastern Argentina, being a rather common species in grasslands of the Pampas region in Argentina (Pereyra et al. 2016. *Cladistics* 32:36–53). During fieldwork, we observed stiff-legged behavior in adult male and female *R. dorbignyi* from two different populations separated by ca. 400 km in the southeastern and

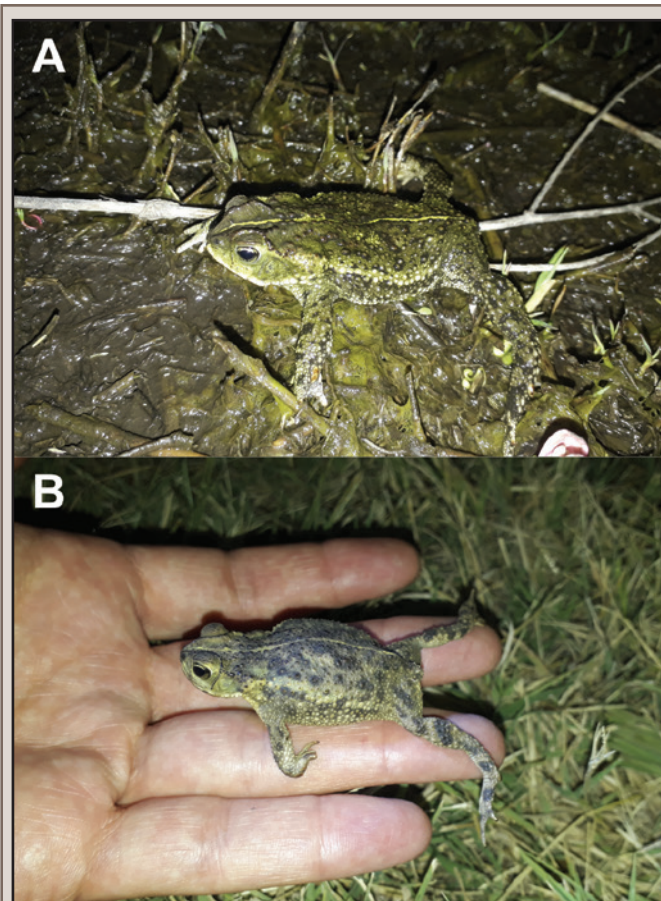


FIG. 1. Stiff-legged behavior in *Rhinella dorbignyi* in Buenos Aires Province, Argentina: A) adult female (77.5 mm SVL) with limbs stretched laterally and body ventrally flattened; B) adult female (56 mm SVL) with limbs stretched posteriorly with inflated lungs.

northwestern parts of Buenos Aires Province, Argentina. The first site was a flooded area located between Provincial Route 88 and agricultural crops in the district of Lobería, Buenos Aires, Argentina (38.4746°S, 58.5763°W; WGS 84; 28 m elev.). Between 2000 and 2200 h on 10 November 2020, we traversed the margins of a semi-permanent body of water and located two female (71.2, 77.5 mm SVL) and one male (58.1 mm SVL) *R. dorbignyi*. When holding them to take photographs, they stretched their limbs laterally and flattened the trunk of the body ventrally, maintaining a rigid posture (Fig. 1A). When the specimens were left on the ground, this stiff-legged behavior ceased almost immediately, or after a few seconds.

The second site was a semi-natural area located in the Municipal Park of Alberti, Buenos Aires, Argentina (35.0274°S, 60.2842°W; WGS 84; 72 m elev.). Between 2100 h and 2300 h on 23 December 2020, we located three female *R. dorbignyi* (64.4, 56, and 62.4 mm SVL) feeding in an open grassy area. Before capturing them, we disturbed them first with gentle touches and later with more intense touches. The animals tried to escape, but in no case did they display the stiff-legged posture during the disturbance, rather this posture was only observed when we grabbed the animals. One of the females stretched her hind legs posteriorly and inflated her lungs, increasing her body volume notably (Fig. 1B). As before, this rigid posture ceased within seconds after releasing the animals.

Stiff-legged behavior was originally described in two unrelated frog species (*Stereocyclops parkeri* and *Proceratophrys*

appendiculata) that live in the leaf-litter of coastal rainforests in southeastern Brazil (Sazima 1978. *Biotropica* 10:158). This behavior has been previously reported in other leaf-litter species (de Mira-Mendes et al. 2016. *Herpetol. Notes* 9:91–94). It is suggested that by displaying this behavior frogs could mimic fallen leaves, confusing visually oriented predators (Sazima 1978, *op. cit.*). Nevertheless, *R. dorbignyi* inhabits open grasslands, an environment where resembling a fallen leaf is likely to provide little advantage. In addition, adults spend most of the time underground or are frequently observed on the margins of temporary ponds. The stiff-legged behavior has been reported in other species that inhabit open phytophysiognomies, including *R. granulosa* (Mângia and Santana 2013. *Herpetol. Notes* 6:45–46), *R. pygmaea* (Figueiredo-De-Andrade and Da Silveira 2018. *Herpetol. Notes* 11:205–207), *Odontophrynus americanus* (Maffei and Ubaid 2016. *Neotrop. Biol. Conserv.* 11:195–197), and *Pleurodema bibroni* (Kolenc et al. 2009. *Zootaxa* 1969:1–35, reported as death feigning), suggesting that more studies are necessary to better understand the adaptive role of this postural defense in anurans.

LUCAS DAVID JUNGBLUT (e-mail: lucasjungblut@yahoo.com.ar) and **ANDREA GABRIELA POZZI**, Universidad de Buenos Aires, Facultad de Ciencias Exactas y Naturales, Dpto. de Biodiversidad y Biología Experimental, and Instituto de Biodiversidad y Biología Experimental y Aplicada (IBBEA) CONICET-UBA, Intendente Güiraldes 2160, Ciudad Universitaria, (1428) CABA, Argentina.

RHINELLA HORRIBILIS (Mesoamerican Cane Toad). DIET.

Rhinella horribilis is naturally distributed throughout the Neotropics, except the arid Andean areas and the Austral Temperate Forest region (Pereyra et al. 2021. *Bull. Am. Mus. Nat. Hist.* 447:1–155). The diet of this opportunistic toad in its native range is composed of a wide variety of terrestrial insects, chilopods, diplopods, crustaceans, arachnids, mollusks, annelids, and other anurans (Zug and Zug 1979. *Smithson. Contr. Zool.* 284:1–57; Carrasco-Fuentes 1989. B.S. Thesis, Escuela Nacional de Estudios Profesionales “Iztacala”, UNAM, México. 51 pp.; Cabrera Peña et al. 1997. *Rev. Biol. Trop.* 44/45:702–703; Torres-Quintero et al. 2008. *Entomol. Mex.* 7:136–141; Sampeiro-Marí et al. 2011. *Caldasia* 33:495–505). However, some of the above-referenced studies have not identified the food items to genus or species



FIG. 1. *Rhinella horribilis* carcass from Puerto Vallarta, Jalisco, Mexico and stomach contents consisting of 147 undigested third instar maggots of *Lucilia* sp. Scale bar = 10 mm.