

FIG. 1. High resolution computed tomography image of a mite of the suborder Oribatida consumed by a *Brachycephalus hermogenesi* in São Paulo, Brazil. Enlarged images of lateral and dorsal views of the mite are also shown. Scale bar = 0.5 mm.

Rio de Janeiro and São Paulo in southeastern Brazil at elevations ranging from 0–1090 m (Bornschein et al. 2019. Diversity 11:150). *Brachycephalus hermogenesi* is mostly found on the leaf litter from sea level in the sandy soil of secondary forests to primary forests at higher elevations (Giaretta and Sawaya 1998. Copeia 1998:985–987). The tomography of *B. hermogenesi* (ZUEC 23204), collected in the Municipality of Ubatuba, São Paulo, in southeastern Brazil, revealed a mite of the suborder Oribatida (Fig. 1; scale bar = 0.5 mm). Figure 1 shows the location of the mite inside the *B. hermogenesi*, in addition to enlarged images of lateral and ventral views of the mite. Apparently, there is no information on the diet of *B. hermogenesi*. The finding of a mite in the digestive tract of *B. hermogenesi* is not unexpected though, as mites of the suborder Oribatida are one of the most predominant prey types in the diet of leaf litter dwelling amphibians (Lopes et al. 2017. Biota Neotrop. 17:e20170323).

We are indebted to Luís F. T. R. Pereira, Michela Borges, and Karina R. Gomes for loaning us specimens under their care. We thank Wesley A. C. Godoy for reading the manuscript and greatly contributing to its clarity. Research was supported by grants to RTL, CFBH, and SFDR (FAPESP: 2017/17357-0).

CAIO M. S. F. DOS SANTOS (e-mail: caio_santos@id.uff.br) and **RICARDO T. LOPES**, Laboratório de Instrumentação Nuclear, Programa de Engenharia Nuclear, Universidade Federal do Rio de Janeiro/COPPE, Rio de Janeiro, 21941-972, Rio de Janeiro, Brazil (e-mail: rlopes@coppe.uff.br); **RUTE B. G. CLEMENTE-CARVALHO**, Hakai Institute/Tula Foundation, 1713 Hyacinthe Bay Rd, BC V0P 1H0, Canada (e-mail: rute.carvalho@hakai.org); **CÉLIO F. B. HADDAD**, Departamento de Biodiversidade e Centro de Aquicultura, Instituto de Biociências, Universidade Estadual Paulista Júlio de Mesquita Filho, Avenida 24-A, 1515, Rio Claro, 13506-900, São Paulo, Brazil (e-mail: haddad1000@gmail.com); **RODRIGO M. FEITOSA**, Departamento de Zoologia, Universidade Federal do Paraná, Curitiba, 81531-980, Paraná, Brazil (e-mail: rsmfeitosa@gmail.com); **GILBERTO JOSÉ DE MORAES**, Departamento de Entomologia e Acarologia, Universidade de São Paulo, Escola Superior de Agricultura Luiz de Queiroz, Piracicaba, 13418-900, São Paulo, Brazil (e-mail: moraesg@usp.br); **REINALDO JOSÉ DA SILVA**, Departamento de Parasitologia, UNESP, Botucatu, 18618-689, São Paulo, Brazil (e-mail: reinaldo.silva@unesp.br); **S. F. DOS REIS**, Departamento de Biologia Animal, Universidade Estadual de Campinas, Campinas, 13083-970, São Paulo, Brazil (e-mail: sfreis@unicamp.br).

BUFO BUFO (Common Toad). UNUSUAL SPAWN. On 2 March 2021, a single strand of *Bufo bufo* spawn was found in a garden pond in north London, England, which differed significantly from what is normal. Instead of being a cylindrical strand with the ova spaced evenly, this strand was a flattened gelatinous sheet with the ova positioned extremely close to one another (Fig. 1A). Less than 50% of the ova appeared to be normal, however, both the beginning and end of the strand were abnormal, in that the ova were not discrete, but instead present as a semi-continuous filament (Fig. 1B). On 24 March 2021, a small number of the developing embryos were released from the spawn and some slight twitching was observed. The remainder of the embryos were still contained within the spawn, continuing to develop. On 31 March

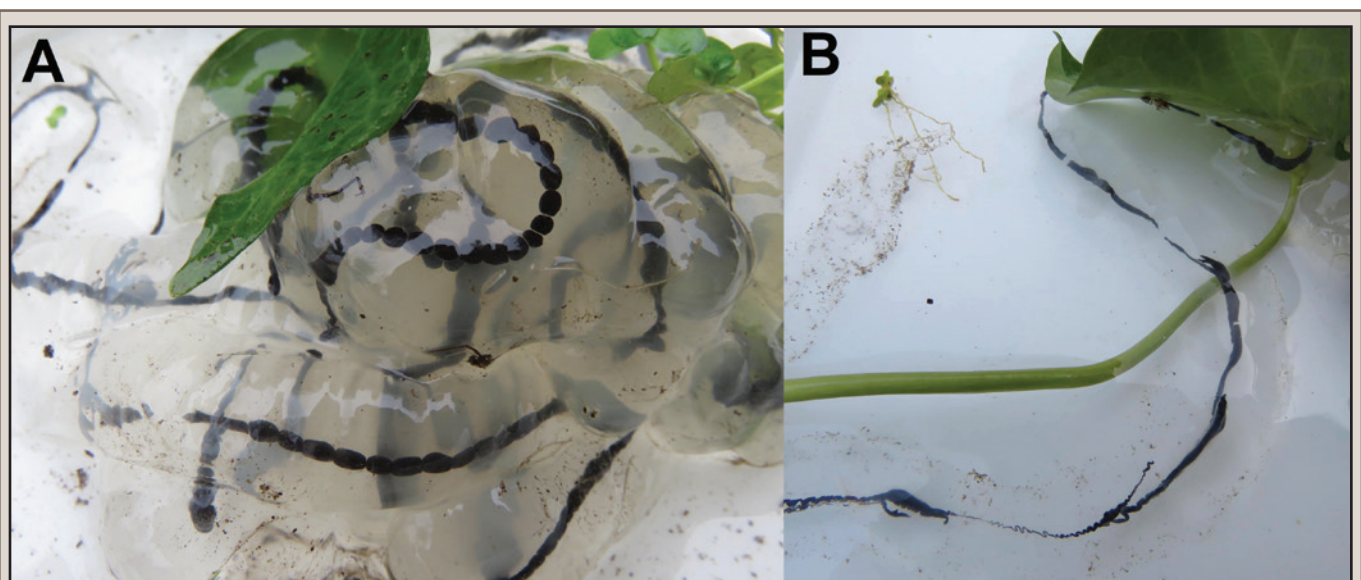


FIG. 1. Abnormal *Bufo bufo* spawn from London, England, with the ova abnormally close together (A) and not discrete, but present as a thin filament (B).

2021, the first tadpole was observed swimming in the pond. By the beginning of April, an estimated 10–20 had hatched and were free swimming. By mid-July, at least 10–15 had developed hind legs. The ends of the spawn where there were no distinct ova failed to develop. The pond (created in July 2019) containing the spawn is a small wildlife pond about 1.5 m² in size, with shallow margins and an abundance of native plant cover. There is a healthy *Rana temporaria* (Common Frog) population in both this and the surrounding gardens. The *B. bufo* spawn was found among several clumps of *R. temporaria* spawn, which had also been laid in the pond.

After it was discovered, the *B. bufo* spawn was moved into a shallow protected area in a new pond to reduce the risk of predation from the *R. temporaria* tadpoles or other predators such as birds. This is the first evidence of *B. bufo* using the pond as no *B. bufo* have previously been observed or heard in the garden. Normally in *B. bufo*, the ova receive their gelatinous envelope while in the oviducts (Rostand 1934. Toads and Toad Life. Methuen and Company Ltd., London, England. 192 pp.). The oviducts are very long, with thick walls roughened by longitudinal ridges. Within the grooves dividing these ridges there are tubular glands which secrete the envelope which encapsulates the ova. This thin envelope expands several times over when it comes in contact with water. Given that the envelope of the spawn described within was thicker than usual, and the ova were deformed, it is likely that the spawn spent too long within the oviducts before being laid. There is also the possibility that the *B. bufo* were predated upon during the act of amplexus, leading to the abnormal segmentation of the spawn (King 1909. Biol. Bull. 16:27–43). This is unlikely as no *B. bufo* remains were observed in the pond. This is the first time that this abnormality has been described from wild *B. bufo* spawn, although the cause of which is still yet to be determined. It was assumed that due to its deformation, none of the ova would develop. However, a small number of tadpoles did emerge, although their growth was stunted.

BARBARA SQUIRE (e-mail: bsquire@btinternet.com) and **STEVEN J. R. ALLAIN**, 11 Trafalgar Way, Braintree, Essex, United Kingdom (e-mail: steveallain@live.co.uk).

BUFOTES PEWZOWI (Xinjiang Toad). **HIBERNATION.** *Bufotes pewzowi* occurs in central Asia, including China, Kazakhstan,

Kyrgyzstan, Mongolia, and Uzbekistan (Stöck et al. 2015. The IUCN Red List of Threatened Species 2015:e.T161757A74503748). In China, *B. pewzowi* is widespread in Xinjiang, where it is found in dry steppes and semi-deserts (Amphibia China 2022. <http://www.amphibiachina.org/>; 20 Jan 2022).

In general, *B. pewzowi* in Xinjiang hibernate when the temperature drops below 10°C (end of October), and the peak activity is during the breeding season, from April to June (Wang 2017. For. Humankind 4:98–101). However, there is no data regarding the hibernation habitat of this species. On 1 January 2022, we observed seven *B. pewzowi* individuals in a small pond without a full ice cover (Fig. 1A) in Tuoli, Xinjiang, China (45.9907°N, 83.6698°E; WGS 84; 988 m elev.). The air temperature was ca. -14°C. On 12 January 2022, we found the small pond to have totally frozen over, with two individuals dead within the ice (Fig. 1B) and the other individuals still alive under the ice cover.

Some amphibian species may hibernate under water to breed earlier in the season when compared to species breeding in terrestrial habitats. This record shows that this may be the strategy followed by *B. pewzowi*. To our knowledge, this is the first documentation of *B. pewzowi* hibernation behavior in the wild.

TAO LIANG, College of Forestry, Nanjing Forestry University, Nanjing, Jiangsu 210037, China (e-mail: liangtrep@126.com); **AMAËL BORZÉE**, Laboratory of Animal Behaviour and Conservation, College of Biology and the Environment, Nanjing Forestry University, Nanjing, Jiangsu 210037, China (e-mail: amaelborzee@gmail.com); **XUANLONG LIN**, Institute of Forest Ecology, Xinjiang Academy of Forestry, Urumqi 830063, China; **DIANXUE CHANG**, Xinjiang Bird Watching Society, Urumqi 830011, Xinjiang, China.

DENDROBATES LEUCOMELAS (Yellow-banded Poison Frog). **COMMUNAL AESTIVATION.** On 15 March 2007, at 2137 h within a small ravine a short distance from Puerto Ayacucho, Amazonas, Venezuela (5.58151°N, 67.49423°W; WGS 84; 80 m elev.), 12 adult *Dendrobates leucomelas* were found within a granite crevice measuring ca. 10 mm in height and 30 mm in width. The individuals were removed, counted, and released back into the crevice. The depth of the crevice was not measured. Communal aestivation of a “dozen or more individuals” has been documented for this species during the dry months of January to February, and aestivation sites have been found under boulders and fallen logs (Löters et al. 2007. Poison Frogs: Biology, Species and Captive Husbandry.

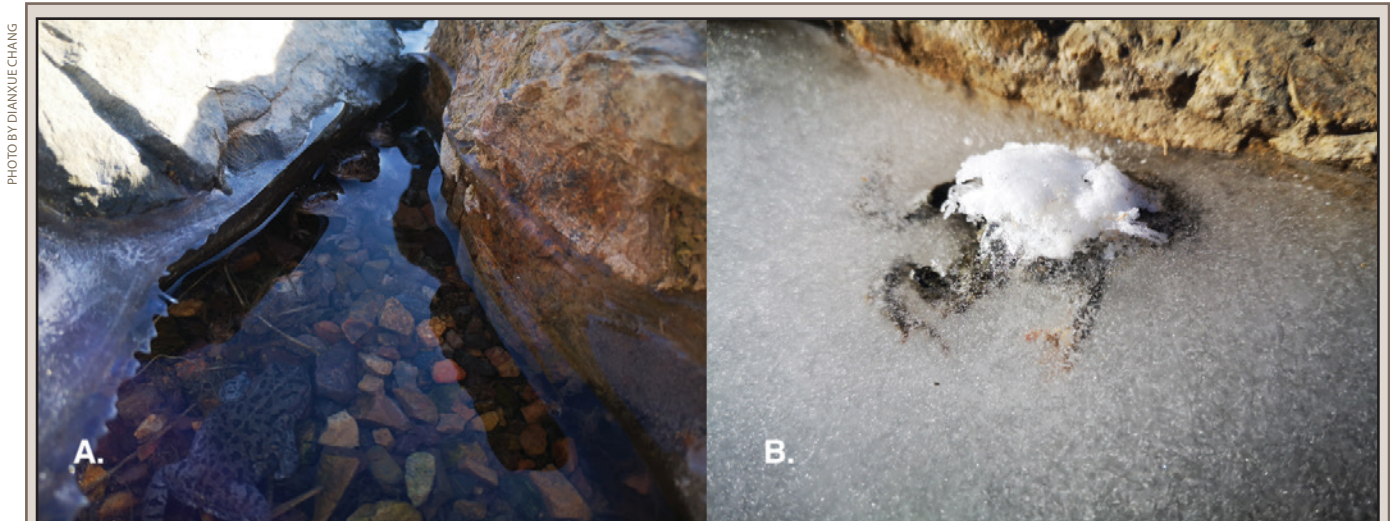


FIG. 1. A) *Bufotes pewzowi* individuals found in a patch of unfrozen water in Tuoli, Xinjiang, China; B) one dead individual after the water froze.