REPTILES & AMPHIBIANS

Brachyphalangy in a Tamenglong Horned Frog, *Xenophrys numhbumaeng* (Mahony, Kamei, Teeling, and Biju 2020) (Megophryidae), from Mizoram, India

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Reports of malformations in anurans were first reported by Gesner (1554). More recently, such reports have become alarmingly more frequent with many common anuran malformations resulting from over-exposure to environmental contaminants and radiation (Ankley et al. 2002; Blaustein and Johnson 2003; Lunde and Johnson 2012). Brachyphalangy is a specific form of brachydactyly, a deformation involving the reduction in length of the bony element of a digit (Henle et al. 2017a).

The Tamenglong Horned Frog (*Xenophrys numhbumaeng*) was first described from two localities in Tamenglong Distict, Manipur, in northeastern India (Mahony et al. 2020) and recently reported from the Reiek Community Reserve Forest, Mamit District, Mizoram, India (Lalmuansanga 2020). The species is known to inhabit streams in secondary forest consisting of bamboo and broadleaf trees and with herbaceous vegetation (Mahony et al. 2020).

In September 2015, while conducting a survey at Hmuifang Community Reserve Forest, Aizawl District (50 km south of the Mizoram state capital of Aizawl), we collected an adult female *Xenophrys* sp. (SVL 49.5 mm) with brachyphalangy from the forest floor near a stream (23°27'18.79"N; 92°45'12.67"E; elev. 1,450 m asl). The frog was later identified as *X. numhbumaeng* and catalogued in the Departmental Museum of Zoology, Mizoram University (MZMU 244).

The fourth digit of the left hindlimb was greatly reduced in length (Fig. 1), and this represents the first record of this type of malformation in *X. numhbumaeng* from Mizoram, India. Various workers have reported that increasing exposure to chemical contamination of water with pollutants, pesticides, herbicides, parasitic infections, microbial diseases, and ultraviolet radiation are known causes of such malformations in amphibians (see Ankley et al. 2002; Blaustein and Johnson 2003; Lunde and Johnson 2012; Hall and Henry 1992; Hayes et al. 2002; Henle et al. 2017b). The cause of this abnormality in this particular species and the extent of malformations among amphibians in the Hmuifang Community Reserve Forest are still unknown. Another case of brachydactyly in a Nagaland Montane Torrent Toad (*Duttaphrynus chandai*) (Siammawii et al., in press) and adactyly in a Mawphlang Odorous Frog (*Odorrana mawphlangensis*) (Siammawii et al. 2021) have been reported from the same locality. Thus, further investigation is needed in order to identify the possible causes of these and other malformations.

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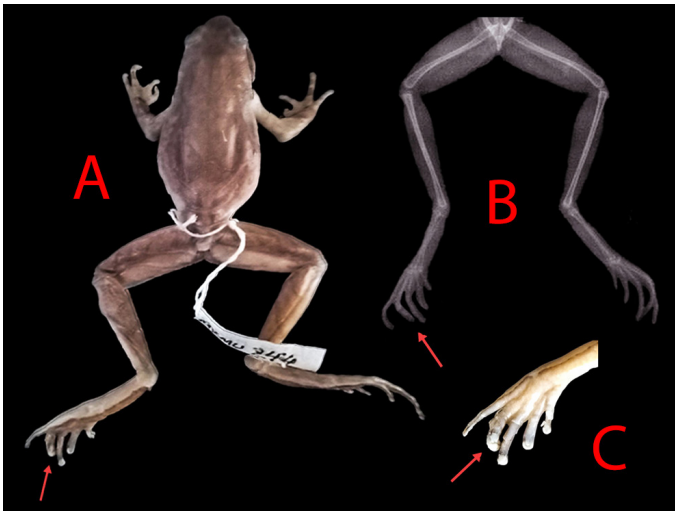

Fig. 1. Tamenglong Horned Frog (*Xenophrys numhbumaeng*) with brachyphalangy on the fourth digit of its left hindlimb (A); an X-ray of the affected pes; and a magnified image of the malformed digit. Photographs by Lal Muansanga.

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