

Body-wiping behaviour of black-eyed litter frog

Subject: Black-eyed litter frog, *Leptobrachium nigrops* (Amphibia: Anura: Megophryidae).

Subject identified by: Contributor.

Location, date and time: Singapore Island, Bukit Timah Nature Reserve; 19 September 2009; around 1950 hrs after a downpour in the afternoon.

Habitat: Tropical lowland dipterocarp forest.

Observer: Contributor.

Observation: The frog of about 4 cm snout-vent length was perched on a leaf near the forest floor, its body propped well off the surface of the leaf with its four slender limbs. It first lifted its left forelimb and used its left hand to wipe the left side of its head over its left eye. After that, it lifted its right forelimb and used its right hand to wipe the right side of its head over its right eye. During this wiping act, the eye on the side being wiped closed and sank into its socket as the fingers ran over it. The wiping action commenced from the side of the head in a forward motion, and ended at the snout (this sequence was not photographed). At the same position, the frog then lifted both its hind legs in the air. While maintaining this handstand with the body horizontal to the substrate, it proceeded to wipe the hind part of its torso with a circular motion of each hind limb. The hind limbs were folded, and each rotated not simultaneously, but one after the other. The rotating hind feet were used to wipe the dorsal and ventral surfaces of the body, as well as the thigh and shin of the same limb. The inner surface of the thigh was also rubbing against the side of the body during the act. The sequence is shown on figures 1-5. The handstand and wiping action with the hind feet lasted slightly over one minute. The number of rotations performed by each limb was not noted. After its hind limbs were placed back on the substrate, the frog started to call (fig. 6).

Remarks: The behaviour described herein has previously been observed on two frog species from Borneo – *Kalophrynus baluensis* (family Microhylidae) and the congener *Leptobrachium montanum* (Malkmus et al., 2002). This appears to be the first documentation of wiping action performed by *Leptobrachium nigrops*. It appears to serve a grooming function, and could either be an act of distributing glandular secretions over the skin to seal in moisture, or a way to clean off bits of dirt that adhere to the frog's skin, or perhaps a combination of both.

Reference: Malkmus, R., Manthey, U., Vogel, G., Hoffmann, P. & J. Kosuch, 2002. *Amphibians and Reptiles of Mount Kinabalu (North Borneo)*. A. R. G. Gantner Verlag, Kommanditgesellschaft, Germany. 424 pp.

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Fig. 1



Fig. 2



Fig. 3



Fig. 4



Fig. 5



Fig. 6

All photographs by Chan Kwok Wai.