Interspecific amplexus between male *Rhacophorus prominanus* and female *Polypedates leucomystax* from Peninsular Malaysia

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Polypedates leucomystax, the four-lined tree frog, is a common species of frog, which can be characterised by having a distinct tympanum, a supratympanic fold extending from eye to shoulder, and often possessing four longitudinal dorsal stripes (Berry, 1975). It is a moderate to large-sized species of Rhacophorid, having a snout-vent length (SVL) between 37-50 mm for males and 57-75 mm for females (Grismer, 2011). Distributed throughout Bangladesh, Brunei, Cambodia, China, India, Indonesia, Laos, Malaysia, Myanmar, Nepal, Philippines, Singapore, Thailand and Vietnam (IUCN, 2015). *Rhacophorus prominanus* is a medium-sized tree frog, with a snout-vent length of males and females reaching up to 62 and 75 mm respectively (Amphibia My, 2009). Commonly, *R. prominanus* inhabits primary rainforest or clearings near primary forest (Berry, 1975), while *P. leucomystax* can be encountered in lowland or disturbed forests (Ibrahim et al., 2008; Grismer, 2011), and also around human habitations (Berry, 1975; Ibrahim et al., 2008; IUCN, 2015). Both species spawn their eggs in the moisture of foam nests (IUCN, 2015; Ibrahim et al., 2008). Typically *R. prominanus* breeds in small forest pools and puddles, including the beds of intermittent streams (IUCN, 2015). The latter species breeds around water tanks, rain water puddles or on vegetation overhanging the small pools of water (Berry, 1975).

Reports of interspecific amplexus have been documented in various frog species worldwide (Rangel, 2013; Stynoski et al., 2013; Vivek et al., 2014; Sodre et al., 2014) but none for frogs from Peninsular Malaysia. In this paper, interspecific amplexus between a male *R. prominanus* and female *P. leucomystax* is reported for the first time.

On 6 December 2014, between 2100-2200 hours, the amplexed pair of male *R. prominanus* and female *P. leucomystax* were observed at Sungai Sedim Receational Forest, Kedah, Malaysia (5° 25'N, 100° 46'E; elevation < 200 m asl) (Fig. 1). The frogs were sitting on dead leaves, approximately 1.5 meter from a rock pool. The moderate-sized rock pool is about 4-5 m length, 2-3 m width and 5-50 cm depth, and exposed directly to the sunlight. Low vegetation (< 1 m tall) and creeping plants bordered the pool. The bed of the pool was composed of sand and gravel and covered by leaf litter and twigs. Air temperature and humidity at the site was 23ºC and 76% respectively.

This amplexed pair exhibited axillary amplexus.

Figure 1. Interspecific amplexus between male *R. prominanus* and female *P. leucomystax.*

The chin and belly of *R. prominanus* were flattened and touched the dorsal part of *P. leucomystax*. The female *P. leucomystax* was in normal posture but its belly was slightly in contact with the substrate. The cloaca of the male frog was positioned on top of the female cloaca and the eyes of both species were fully opened. After approximately one minute in motionless posture, the amplexed pair moved away to the nearest rock pool. We captured the frogs and measured their snout-vent length (SVL) (RP=47 mm, PL=60 mm) and mass (W) (RP=8 g, PL=15 g) using digital calliper and electronic balance.

During courtship, the male frogs emitted advertisement calls, which are species-specific to attract conspecific females (Duellman & Trueb, 1986; Wells, 2007; Kuramoto & Dubois, 2009). Differences in anuran advertisement calls can reduce interspecific mating (Wells, 2007), however the advertisement call of a male can be interrupted by a noisy environment or interfered with by the calls of other species, which may lead to the interspecific amplexus. Other factors, including overlapping in reproduction activities (Hobel 2005), smaller number of females (Wogel et al, 2005), confusion of chemical signal (Mollov et al, 2010), low selectivity toward females (Machado & Bernarde, 2011), long-term absence of conspecific females (Vivek et al, 2014) and explosive breeding (Machado & Bernarde, 2011; Vivek et al, 2014) may also contribute.

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