

Amplexus Takeover in the Asian Common Toad, *Duttaphrynus melanostictus*, in Dumka, Jharkhand, India

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Abstract

I report an instance of amplexus takeover in the Asian Common Toad, *Duttaphrynus melanostictus*, observed at Simardhuma village, Dumka District, Jharkhand, India, on 21 July 2025. Over an 18-minute sequence, a second male repeatedly interfered with an amplexant pair until the amplexant male released the female, after which the second male assumed amplexus. Although male replacement is known from this species elsewhere in its range, behavioural records from Jharkhand are scarce, and this note also documents conspicuous monsoon road mortality in the same landscape.

Keywords: amplexus, male replacement, Bufonidae, road mortality, Santhal Pargana, Jharkhand

Introduction

Amplexus is the characteristic mating posture of anurans, in which the male clasps the female to ensure external fertilization (Duellman and Trueb 1994; Wells 2007). In explosively breeding species, male–male competition frequently results in males attempting to displace amplexant rivals, and such takeovers have been documented in *Duttaphrynus melanostictus* (Schneider 1799) (Gramapurohit and Radder 2012; Köhler et al. 2022).

The Asian Common Toad, *D. melanostictus*, is among the most widely distributed anurans in South and Southeast Asia and is common in human-modified landscapes. Its breeding behaviour has been studied in India (Gramapurohit and Radder 2012), China (Fan et al. 2013), and Thailand (Köhler et al. 2022), but comparable field observations from eastern India, and from Jharkhand in particular, are largely absent from the published literature. Here I report an observation of axillary amplexus followed by male replacement from the Santhal Pargana uplands of Dumka District.

Habitat context

The observation site lay at the margin of a paddy field with patchy grass cover, where the soil had become moist following rainfall earlier in the evening. The nearest standing water body, a village pond, was approximately 300 m away, and the nearest human habitation was approximately 90 m from the site. The wider landscape is a mosaic of rainfed paddy cultivation, scattered settlements, and seasonal water bodies, and anuran breeding activity here is closely tied to monsoon rainfall.

Road mortality of anurans is conspicuous in this landscape during the monsoon. On 21 September 2026, between 1945 and 2115 h, I counted 65 road-killed *D. melanostictus* along a 6-km stretch of the Mayurnath–Danro road while travelling by motorcycle. Because counts were made from a moving vehicle, and small or heavily damaged individuals are easily overlooked, this figure should be treated as a minimum. Systematic road mortality surveys have not been carried out in this landscape.

Observation

On the evening of 21 July 2025 at 1952 h, I encountered *D. melanostictus* in axillary amplexus at Simardhuma village, Ramgarh Block, Dumka District, Jharkhand, India (24.27311°N, 87.25492°E, WGS84; ca. 142 m asl). Light rain was falling during the observation; air and substrate temperatures were not recorded.

A male was clasped in an axillary position on the dorsum of a larger individual, presumed to be a female, which remained largely stationary on loose moist soil (Fig. 1). A second individual, presumed to be a male, was present beside the pair. After the pair had remained undisturbed for approximately seven minutes, this individual began repeatedly pushing against the amplexant male in apparent attempts to displace it. The attempts intensified, the grip of the amplexant male became unstable, and it subsequently released the female and moved away. The second individual then assumed an axillary amplexus with the same female (Fig. 2).

The complete sequence was observed for 18 minutes, from 1952 h until I left the site to minimise disturbance; the timing of each phase was recorded in the field. Oviposition was not observed. No individuals were handled or measured; sex was inferred from relative body size and amplexant position rather than confirmed by examination of nuptial pads or vocalisation. Figure 1 shows the pair before replacement occurred. Observations were made by torchlight, and the photograph was taken with a mobile phone using flash.

Discussion

Male replacement of this kind is consistent with what is known of the mating system of the species. Gramapurohit and Radder (2012) reported size-assortative mating in an Indian population, with amplexant males larger than non-amplexant competitors, and Fan et al. (2013) confirmed size-assortative mating in eastern China. Köhler et al. (2022) found that at Thai sites with higher operational sex ratios, amplexant males were on average larger than non-amplexant males, and that larger males frequently took over amplexant females from smaller ones. The behaviour reported here is therefore not novel for the species.

Its value is regional. Behavioural records of even common anurans are scarce from Jharkhand, and the Santhal Pargana uplands remain poorly represented in Indian herpetological literature. Because no measurements were taken, this observation cannot test whether the replacing male was larger than the one it displaced, which would be the informative comparison. Future observations in this landscape should record snout–vent length of all participants, the duration of each phase, and

whether oviposition follows. Given the level of road mortality noted above, systematic monsoon road surveys in this landscape would also be worthwhile.

Acknowledgements

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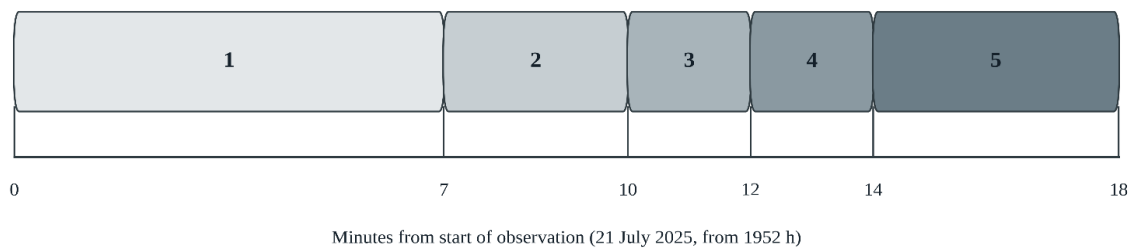
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Figures



Fig. 1. Axillary amplexus in *Duttaphrynus melanostictus*, photographed before male replacement, at Simardhuma village, Ramgarh Block, Dumka District, Jharkhand, India, 21 July 2025. Photograph by Kulesh Bhandari.



- 1. Stable amplexus (0–7 min): male in axillary amplexus with the female; no interference
- 2. Interference begins (7–10 min): second male pushes repeatedly against the amplexant male
- 3. Escalated interference (10–12 min): attempts intensify; grip of the amplexant male becomes unstable
- 4. Release (12–14 min): amplexant male releases the female and moves away
- 5. Takeover (14–18 min): second male assumes axillary amplexus with the same female

Fig. 2. Sequence of the observed interaction over 18 minutes, from stable amplexus through interference by a second male to release and takeover. The timing of each phase was recorded in the field.