

Blue Malayan coral snake preying on a pink-headed reed snake

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Subjects: Blue Malayan coral snake, *Calliophis bivirgatus* (Reptilia: Squamata: Elapidae);
Pink-headed reed snake, *Calamaria schlegeli* (Reptilia: Squamata: Calamariidae).

Subjects identified by: Koh Ke Han.

Location, date and time: Singapore Island, Thomson Nature Park; 11 December 2020; around 1000 hrs.

Habitat: Secondary forest.

Observer: Koh Ke Han.

Observation: A blue Malayan coral snake of about 150 cm total length was encountered stretched across the width of a foot path (Fig. 1). It was biting and holding on to the tail of a pink-headed reed snake of about 30 cm (Fig. 2 & 3). The reed snake tried to escape by burrowing into crevices and squeezing under rocks. Although all escape attempts ended in failure, the reed snake did not try to defend itself by biting the coral snake back. After a while the reed snake stuck its head into a crevice in the ground, and both snakes lay motionless for a long time. More than two hours later, the coral snake pulled the reed snake out of the crevice, let go of its tail, and turned its attention to the prey's head. As the coral snake bit down on the head of the reed snake (Fig. 4), it caused the latter to flail about, and then became motionless. It was assumed that the reed snake had by then, died. With its jaws, the coral snake adjusted the position of the reed snake's head into its mouth (Fig. 5) and then proceeded to swallow it whole (Fig. 6). After the meal, the coral snake slid away into the undergrowth.



Fig. 1. Blue Malayan coral snake on the concretized footpath, with its head on the lower left corner of the picture, biting and holding on to a pink-headed reed snake. Photograph by Koh Ke Han



Fig. 2. Blue Malayan coral snake in the background, firmly biting the tail of the pink-headed reed snake whose anterior part is in the foreground.



Fig. 3.

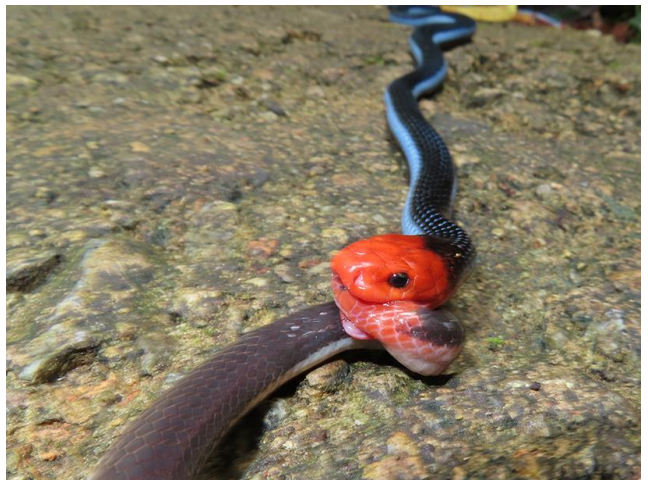


Fig. 4.



Fig. 5.



Fig. 6.

Photographs by Koh Ke Han

Remarks: The blue Malayan coral snake is ophiophagus and said to specialize in feeding on fast moving venomous snakes. Although poorly studied, the venom is believed to be highly toxic and has been shown to produce spastic paralysis. This suggests that the venom has the capability to quickly subdue prey that not only has a high chance of escape, but also pose a significant danger to the predator itself (Yang et al., 2016).

However, the featured observation does not show the venom to be fast acting. The coral snake had bitten and held on to the tail of the reed snake, without killing it, for at least two hours. It is presumed that venom was injected into the prey, but the reed snake did not die quickly. The same bite-and-hold-on behaviour is seen in two other *Calliophis bivirgatus* predation events involving a barred kukri snake, *Oligodon signatus* (see Xu & Teo, 2013) and an orange-bellied ringneck, *Gongylosoma baliodeirum* (see Meija, 2014). All three prey species are not known to be venomous (see Baker & Lim, 2012), and none of them had retaliated in biting back.

An act of cannibalism involving blue Malayan coral snakes was recorded at Sime Road on 17 January 1988. A large individual about 4.5 feet long was observed 'fighting with' a smaller conspecific about 3 feet in length. 'Both snakes were grabbing at each other's throat; the smaller one was eventually subdued, and dragged to the other side of the road to be swallowed' (Anonymous, 1988: 4 as *Maticora bivirgata*). This shows that blue Malayan coral snakes do bite and hold on even if their prey is an equally venomous species. It is not clear if the smaller snake had succumbed to the venom of the larger individual or if it was somehow over-powered or perhaps asphyxiated during the tussle. That the larger snake was also bitten suggest that they could be immune to the venom of conspecifics. Similarly, the featured observation seems to imply that the pink-headed reed snake, being slow to succumb, could be somewhat resistant to the venom of the blue Malayan coral snake.

References:

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