

Biodiversity Record: A cluster of Wagler's pit-viper neonates

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Subjects: Wagler's pit-viper, *Tropidolaemus wagleri* (Reptilia: Squamata: Viperidae).

Subjects identified by: Emmanuel Goh.

Location, date and time: Singapore Island, north-western edge of the Central Catchment Nature Reserve; 1 March 2024; 2130 hrs.

Habitat: Mature secondary forest.

Observers: Emmanuel Goh and Bryan Seah.

Observation: Two large (each about 60 cm total length) female vipers and 14 neonate vipers, each around 15 cm total length, were observed among vegetation in an area of about 50 square metres. From their distinctive colour patterns, four neonates were identified as males (Fig. 1) and seven neonates were identified as females (Fig. 2). The remaining three neonates were partially concealed by overhanging leaves or too high up such that their colour pattern could not be clearly seen. One male neonate was noted about 10 m away from the other neonates. Most of the female neonates were found within immediate vicinity (not more than 5 m) of each other. The adult females were perched at a height of about 8 and 10 m (Fig. 3).



Fig. 1. Lateral view of a male neonate, about 15 cm total length, identified by two rows of red and white dots along the back. Fig. 2. Lateral view of one of the female neonates, about 15 cm total length, identified by a series of narrow red and yellow cross-bars (Photographs by: Bryan Seah).

Remarks: Wagler's pit-vipers are known for their sexual dimorphism. As adults, the two genders are easily told apart by size and colour pattern. While less distinct at the neonate stage, males can be identified by having two rows of red and white spots along the back (see Fig. 1), while females sport narrow cross-bars of red and varied yellow (see Fig. 2) (Vogel et al., 2007). The species is ovoviviparous, and the young are born fully formed in clutches or litters consisting of 15 to as many as 41 neonates (Das, 2018). For a female Wagler's pit-viper from Singapore, McCleary et al. (2015) reported a clutch size of 15, although 1 neonate was stillborn and 2 ova were not fully developed.

The close proximity of the neonates in the present observation suggests that the birth event took place recently. The 14 neonates observed within the area may not represent the actual clutch size, as the single male neonate observed 10 m away from the other neonates suggests that there could be others that have dispersed by the time of the observation. It is also not clear if the neonates originated from one or both of the adult females in the vicinity. Nevertheless, it seems more

likely that they were from a single clutch, and the adult female significantly closer to the neonates and perched above most of them (Fig. 3) was presumed to be the mother.



Fig. 3. Ventral view of the adult female viper perching above the neonates. She is presumed to be the mother (Photograph by: Emmanuel Goh).

Literature cited:

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