Algal fouling is the accumulation and growth of algae on aquatic surfaces including bodies of moving organisms. Among aquatic reptiles, algal fouling has been reported to occur on freshwater turtles (Neil and Allen 1954), sea turtles (Báez et al. 2002) and marine aquatic snakes (Acrochordus granulatus and 11 species of sea snakes; see Shine et al. 2010 for details). The occurrence of algal fouling on the semi-aquatic Cerberus, or on any other homalopsid snakes has not been previously documented. Herein, we report the first observation of algal fouling on C. rynchops from Sonadia Island, Bangladesh.

The homalopsid genus Cerberus include medium sized, rear-fanged, aquatic snakes that inhabit a wide range of coastal, low-lying habitats, such as mangroves, mudflats, tidal rivers and rice fields (Das 2010). Cerberus snakes are widely distributed in the coastal, low-lying areas of South and Southeast Asia to Northern Australia. Among the five recognized species of Cerberus, C. rynchops is known to occur in the coastal areas of India, Sri Lanka, Bangladesh, and Myanmar (Murphy et al. 2012). We conducted a population survey of homalopsid snakes in the intertidal zones of Sonadia Island, Bangladesh, in the summer of 2012. Sonadia Island is roughly a 49 km² barrier island located in the far southeastern corner of Bangladesh. It is located about 14 km northwest of Cox’s Bazaar, the nearest large city. The island supports some of the last remaining patches of natural mangroves forest found in the southeastern Bangladesh (Chowdhury et al. 2011).

A total of 17 days were spent in the field surveying homalopsid snakes between July and August 2012. Active searches were conducted during low tides, both day and night. During the search, 2-3 surveyors walked slowly in the intertidal zones looking for snakes. Snakes were searched for in different microhabitat types available in the study area: creeks, open mudflats, mangrove mudflats, salty marsh and intertidal mixed-grassy vegetation zone(s). The depth of mud in this site ranges from 1-40 cm. When seen, snakes were hand-captured, placed into a bucket and then taken back to the base camp for detailed data recording. All snakes were released at the site of capture within 24 hours. A total of 531 Cerberus rynchops were collected during the study period. Five specimens (approximately 1%) appeared to have dense algal fouling on the dorsal surface of their body (figure 1 A). Three of them were adult females, and two were adult males; mean SVL: 57.3 cm, mean mass: 126 g.

Jayne, Voris and Heang (1988) and Karns et al. (2002) have conducted mark-recapture studies of Cerberus in Singapore and Malaysia. The authors reported over 400 individuals of Cerberus, with no records of algal fouling. Shine et al. (2010) have shown that algal fouling on sea snakes can have a negative impact on its activity and performance in the wild, and thus can ultimately affect the snakes’ survival. However, the ecological consequences of algal fouling on Cerberus are not clear. Individuals with algal growths appeared healthy and it was not determined whether the algae would be lost completely at ecdysis or if the attached algae would disrupt the normal shedding cycle. Thus, more research on Cerberus at Sonadia Island is needed.

Acknowledgements. We thank Rupa Dutta, Wahid Islam, Kanai Das, Animesh Ghose, Abdur Razzaque, Shuvo Shams and Shakik Faisal for their help in capturing and processing a large number of snakes. We are grateful to the villagers of Sonadia Island for their hospitality and logistical support.
Figure 1. *Cerberus rynchops*: A) An adult with extensive algal fouling on body B) Different adult with no algal fouling. Photo credit: Shahriar Caesar Rahman.

References:


Accepted by Zoltán Nagy