

Assessment of population status of *Crocodylus porosus* and human-crocodile relationship in Bellanwila-Attidiya Area.

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Abstract

Saltwater crocodiles' (*Crocodylus porosus*) threat to humans has been increased during the past decade: mainly in the years of 2005-2012 (Samarasinghe D.J.S., 2014). The present study intended to assess the population status of saltwater crocodiles and human-crocodile relationship along the Bolgoda canal (1.88km) within the Bellanwila-Attidiya Sanctuary. For assessing the population status eye shine surveys were conducted on 3rd of October, 2015 from 2000h to 2200h, by walking along the bank. Habitats and micro-habitats of crocodiles were recorded. In addition, some major water quality parameters including pH, DO, TDS, salinity and conductivity were measured to assess the water quality of the canal. For assessing human-crocodile relationship a structured questionnaire survey was conducted. Ten crocodiles were recorded. The population density of crocodiles in the area was 5.32 individuals km⁻¹ (n=10). Average sightings per hour was 5. One hatchling (10%) and nine EO (Eyes Only) (90%) were recorded. Two (20%) were found in open waters; one (10%) was found in shallow water near bank; five (50%) were found among aquatic vegetation; two (20%) were found among aquatic vegetation near bank. Average water quality parameters of the canal are as follows. pH is 6.66 ; DO (mg/L) is 8.17; conductivity (μ S/cm) is 364.9; TDS (mg/L) is 175.5; salinity (ppt) is 0.17. All the measurements were taken within 30.3°C-32.9°C. According to the questionnaire survey, inhabitants (99%) were aware about crocodiles in the area and 62.23% had the general knowledge about crocodiles. 77.8% of inhabitants mentioned that there were no increase of recent attacks however, 66.7% of them have seen or heard of pets and livestock being attacked in the study area. It was found that the interactions of people with the water

body are minimum due to crocodiles and pollution of the canal. It is recommended to continue this study in different months of the year to have proper assessment of the crocodiles in the study area. This will help to build up a data base and thereby to identify the population trends of the species.

Keywords: Saltwater crocodiles, Bellanwila-Attidiya Sanctuary, population status, human-crocodile conflict, water quality.