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Feeding habits of silky shark (*Carcharhinus falciformis*) landed in Negombo fishery harbour and an account on fishing vessels and gears used to catch them

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Silky shark (*Carcharhinus falciformis*) is one of the most common shark species captured as a target fishery or as by-catch in various regions in the world. Information about the feeding habits and predatory behaviour of silky sharks is important, as it determines the survival and abundance of other marine species, and also helpful in ecosystem management and sustainable utilization of shark fishery. The present study investigates the feeding habits of silky sharks and evaluates some aspects of the silky shark fishery based on 32 silky sharks caught by single-day and multi-day boats, and landed at the Negombo fishery harbor from August to September 2020. The total length of each silky shark landed was measured to the nearest 0.1 cm, and the body weight was measured to the nearest 0.1 kg using a measuring tape and an electronic balance respectively. Stomach samples of each shark were analysed for stomach contents and the extent of stomach fullness. Stomach contents were identified to the lowest possible taxon and grouped into three categories. Data on the vessel size, gear type, bait type, etc. used were collected by interviewing the multi-day and single-day boat skippers. Forty-eight (48) fishing vessels were observed during the study period. The total length (TL) of the sampled silky sharks ranged between 50-285 cm and weight ranged between 3.5-75 kg. Stomach fullness was classified under five-categories; empty (40.6%), one-fourth filled (40.6%), half-filled (3.1%), three-fourth filled (6.3%) and full (9.4%). Occurrence of prey items in stomach contents were identified as fish remains (84.21%), arthropod remains (15.79%) and molluscan remains (5.26%). Milkfish (*Chanos chanos*), *Amblygaster* sp., *Sepia* sp., *Decapterus* sp., *Auxis* sp. and crab tissue segments. Of the 48 vessels inspected, 27.1% were single-day boats while 72.9% were multi-day boats. Higher percentage of silky sharks were caught by multi-day boats (77.6%) than by the single-day boats (22.4%). The boats were further identified as UN1, UN2A, UN3A and UN4 using standardized measurements. The fishing gears used by the boats were gillnet (45.8%) and longlines (54.2%). The number of silky sharks caught by longlines were higher (61.2%) than by gillnets (38.8%). The by-catch species caught in the fishing gear were identified as other shark varieties, billfishes and rays. The results of the present study also revealed that the diet of the silky shark mainly constitute of fish.

Keywords: Feeding habits, Longline, Percentage frequency of occurrence, Silky shark, Stomach contents