

## **Sexual size dimorphism and feeding of *Hydrophis spiralis* (Shaw 1802) occurring along the Vadamradchy coastline of Jaffna, Sri Lanka**

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There are no previous records on the sexual size dimorphism in the sea snake *Hydrophis spiralis* (Shaw 1802). However, there are reports that head shape differences in sea snakes are related to differences in consumed prey type or prey shape. The aim of the present study was to find out sexual dimorphism in external morphology and some aspects of feeding of *H. Spiralis* (Elapidae) in the waters of Vadamradchi division of the Jaffna Peninsula. Sea snakes were collected from fisheries by-catch once a week from December 2011 to July 2012. Out of a total of 75 specimens of *H. spiralis* collected, 31 were males and 44 were females. Various head and body measurements were taken (mm) and morphological differences between the male and female snakes were compared by *t*-test. The degree of size dimorphism between males and females of adults pertaining to head, body lengths and scale counts were quantified by the sexual size dimorphism index (SDI). To find out the feeding differences among sexes, the stomach of every snake was pressed gently to release the prey items. The number of fish present in the gut, status of feed and direction of prey were recorded. Chi-square test was employed to both sexes to find out the food intake pattern, proportion of having empty stomach and head size of the snake against the prey items. Seven out of 13 morphological characters were significantly different (*t*- test,  $P < 0.05$ ) between adult males and females (total length, head width, length between snout-eye, inter-orbital, eye-width, inter-nostril lengths and number of ventrals). Four out of 13 characters namely vent-tail length, inter-nostril, eye-width and sub-caudal count showed male-biased and the rest were female biased SDI value, and the mean degree of sexual size dimorphism of *H. spiralis* is 0.2953. Analysis of feeding revealed that the preys composed of two fish families namely Muranidae and Congridae. There were no significant differences between the proportion of males and females with empty stomach or the direction of food intake and head size with the prey type among sexes (Chi square test). Both sexes consume fishes with the same shape. In conclusion, this study reveals that adult females of *H. spiralis* are 29.53% times longer than adult males. Even though sexual size dimorphism is prominent in *H. spiralis*, no significant differences were observed in the feeding of male and female snakes.

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