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**Feeding ecology, reproductive biology and aspects related to selected marine ornamental fish *Abudefduf vaigiensis***

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Sri Lanka is one of the pioneers in the collection and export trade of ornamental reef fish and this industry totally depend on wild populations. *Abudefduf vaigiensis* is one of the most popular aquarium reef fish in the world and they are exploited in large numbers from coastal waters of Sri Lanka. Present study is carried out to identify their feeding and reproductive biology in order to explore the possibilities to breed them in captivity. Morphological features of 25 *Abudefduf vaigiensis* collected from coastal waters of Dondra, Sri Lanka were studied and they were related to their food preferences. Its small terminal mouth correlates to their feeding in the middle of the water column. Incisiform teeth having saw-edged cutting surfaces on both upper and lower jaws indicate their involvement in cutting the food items during ingestion process. Closely packed filament like gill rakers on the first gill arch while others bear short and blunt gill rakers, indicates their planktoivorous feeding habit. Pharyngeal teeth on their pharyngeal pads are a character useful in crushing the food before they enter the esophagus. Increase of mean relative gut length with increasing body size indicates their change of food habits with increasing size. Decreasing gastro somatic index from developing stage to ripe stage indicates their low feeding rate at maturity. Stomach contents were analysed by occurrence method, number method, volume method and index of relative importance. Statistical differences in diet composition as a function of size, was assessed by chi-squared test. Food items found in the gut were mainly categorized into 5 groups: copepods, decapods, algae, unidentified fleshy parts and other items, & they confirm the omnivorous feeding habit of *Abudefduf vaigiensis*. Algal fragments and unidentified muscle parts were the most common food items. Copepods were dominant food item, when considering the numbers but low in volume. Decapods were found in the food of large size classes. Histological studies of the ovary revealed 6 oocyte developmental stages and villi-like structures on zona radiata of oocytes and latter indicates the sticky nature of eggs. Frequency distribution studies of oocytes at different diameters indicated that they are serial spawners.