

It pays to have a big mouth: Mushroom corals ingesting salps at northwest Borneo

Abstract

During daytime dives in July 2011 on the reefs of Kota Kinabalu (Sabah, Malaysia), large quantities of slow-moving salps (Tunicata: Thaliacea: Salpida) were observed. Some of these were seen to be caught and ingested by various mushroom corals (Fungiidae) and an anchor coral (Euphylliidae). The predators had complete salps (2-6 cm long) or partly digested salp remnants stuck inside their wide-open mouths. Salps that were observed landing on top of mushroom corals did not escape. They became captured by tentacles and were transported towards the opening coral mouths. To our knowledge, the present in situ observation is the first record of numerous salps being consumed by corals. All the observed predating coral species, either belonging to monostomatous or polystomatous species, possessed large mouths. The presence of multiple mouths enables mushroom corals to become larger than those with single mouths. Because a large polyp size facilitates the capture of food, it is advantageous for them to be polystomatous, especially when they possess a large mouth.