

O14.7**Unravelling the predator-prey relationships between blacktip reef sharks and Sea turtle hatchlings: A stable isotope approach**

Maizah Abdullah, Zalina Bashir, Mohd Uzair Rusli

Universiti Malaysia Terengganu, Malaysia

Abstract

The declining health of the world's coral reefs and tropical seas is adding pressure to vulnerable marine fauna. To guide mitigation efforts, understanding the complex dynamics of marine communities has become a top priority, particularly interactions involving threatened or endangered species. In a unique case study at one of Malaysia's most productive turtle nesting sites (Chagar Hutang Turtle Sanctuary (CHTS), Redang Island) we investigated the predator-prey relationships between the near-threatened blacktip reef shark, *Carcharhinus melanopterus*, and hatchlings of the globally endangered green sea turtle, *Chelonia mydas* using stable isotopes of $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$. Being slower and more conspicuous swimmers than most reef fishes, hatchlings would presumably be a more accessible food source for sharks. We hypothesized that sharks would opportunistically feed on hatchlings during the turtle nesting season and, when available, sharks may favour turtle hatchlings over alternative prey. Our preliminary data shows that, there are high variations in the stable isotope values of the green turtle hatchlings collected from different nests ($\delta^{13}\text{C}$ values ranged from -19.5 to -15.9 ‰ and $\delta^{15}\text{N}$ values ranged from 6.9 to 7.4 ‰). The $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$ for sharks ranged from -14.4 to -12.6 ‰ and 7.3 to 12.1 ‰ respectively. Meanwhile, stable isotopes for the other components of marine food webs were also monitored. It is expected that the blacktip reef sharks as many other predators, are generalists and do not depend on one prey species alone. In CHB, despite the discovery that some juvenile *C. melanopterus* may feed exclusively on turtle hatchlings when these are available, the sharks are not explicitly dependent on the hatchlings for their survival.

Keywords

Trophodynamics, ecosystem function, turtle conservation, ecological resilience