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PREDATION ON JUVENILE GREEN SEA TURTLES, *CHELONIA MYDAS*, BY A GROUPER, *PROMICROPS LANCEOLATUS* (PISCES; SERRANIDAE) IN THE KINGDOM OF TONGA, SOUTH PACIFIC

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Documented cases of predation on green sea turtles, *Chelonia mydas*, by fishes are scarce; major world-wide literature reviews and case summaries on the subject are by Hirth (1971) and Brongersma (1972). Predation by groupers (Serranidae) is believed by scientists to contribute to high mortality of green turtle hatchlings, although documented cases are nonexistent, and serranid predation on larger green turtles is limited to one case from Hawaii; Balazs (1979) reported a 52 cm subadult from a 205 kg *Epinephelus tauvina*. This note describes two cases of predation on juvenile green turtles observed during a marine resource survey conducted in the central Ha'apai Island Group of the Kingdom of Tonga from December 1975 to November 1977. In both cases the predators were large groupers, *Promicrops lanceolatus* (Bloch, 1790), recorded here for the first time as turtle predators.

Both groupers were speared at night in the vicinity of Limu Island, Ha'apai, Tonga. This relatively inaccessible island has an abundant variety of unexploited fishes and supports a small nesting population of green turtles. The surrounding reefs and grass flats provide excellent habitat for juvenile turtles, which are frequently seen sleeping at night under coral ledges. The first fish was speared in April 1976, and was 180.5 cm total length and weighed 74.8 kg gutted. The stomach contained six spiny lobsters (*Panulirus* sp.) ranging in size from approximately 0.75 kg to 2.5 kg, and an entire juvenile green turtle 38 cm curved carapace length (CCL). The lobsters and the turtle were fresh and were consumed by the fishermen. The second fish was speared in August 1977 but was butchered before I could measure and weigh it. From the pieces observed, I estimated the fish to be slightly larger than the first fish. The stomach contained two partially digested spiny lobsters approximately 1 kg each, two almost totally digested spiny lobsters of similar size, and an entire green turtle approximately 35 cm (CCL) also in an advanced stage of digestion.

The grouper, *Promicrops lanceolatus*, is a shallow reef dwelling species which frequently enters estuaries (Marshall, 1964), ranging in depth to 80 m (Fischer and Whitehead, 1974). This large species has a somewhat nefarious reputation throughout the Indo-Pacific region, reported to attack and devour native divers (Marshall, 1964; Munroe, 1967). Although occasionally seen during the day, this grouper is generally seen foraging on the reef shallows at night. The strong suction caused by the rapid expansion of the oral cavity, combined with an exceptionally large mouth, enable *P. lanceolatus* to easily ingest sleeping turtles from reef niches. Fishermen interviewed throughout the central Ha'apai area indicated that it was not uncommon to find either turtles or lobsters in the stomachs of these large groupers.

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