

THE AVERAGE EGG COUNT FOR NESTING SEA TURTLES ON REKAWA BEACH IN SRI LANKA.

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Sea turtles spend their entire lives in marine or estuarine habitats and only for nesting (rarely for basking) they comes to land. Physiological, anatomical and behavioural adaptations of sea turtles have evolved largely in response to selection in the aquatic environment. Sea turtles are unevenly distributed throughout the tropical and subtropical seas depending on their food and habitat requirements (Marquez, 1994; Miller, 1997; 1983; Hirth, 1997). Generally female sea turtles do not reproduce every year. The duration between two reproductive seasons is defined as the remigration interval, and it varies between sea turtle species. The range of the remigration interval is from one to nine years, or more (Hirth, 1980; Miller, 1997).

The eggs are laid individually or in groups of two, three or occasionally four. Marine turtles lay two types of eggs: normal and odd shape eggs. Normal eggs are white, spherical cleidoic eggs with (1) flexible calcareous shell (3% of total weight), (2) a capsule of albumen (48.5%) & (3) yolk (48.5%)(Miller, 1997 & 1999). Odd shape eggs may be very large multi yolked or very small yolkless. The diameter, shape and the weight of the eggs laid in one clutch slightly varies within the clutches laid by the same female, which vary considerably within and between species (Hirth, 1980; Miller, 1997). A clutch is defined as the number of eggs laid into the nest, excluding the yolkless eggs. The mean number of eggs in a clutch varies among the species. The number of eggs in a clutch can be determined when the turtle is laying the eggs, or it can be counted if the eggs are to be moved and reburied (Miller, 1997 & 1999). Sea turtles lay several clutches of eggs during a nesting season, with a gap of approximately two weeks between each clutch. The number of eggs was counted at the time of laying.

Table 1. The average egg count for the five species of turtles nested at Rekawa beach from September 1996 to September 1999.

Species	Average egg count
Green turtle	112.1 (x = 1985)
Olive Ridley	105.1 (x = 30)
Leatherback turtle	100.5 (x = 30)
Hawksbill turtle	115.2 (x = 6)
Loggerhead turtle	105.2 (x = 5)

(x = number of nests observed)

The average egg count for green turtles nesting on Rekawa beach is 112.1 (range 10-195) and according to Miller (1997) it is 112.8 for 24 green turtle populations around the world. Therefore, the green turtles in Sri Lanka also laid similar size clutch, which agrees with Millers (1997) observations. In contrast green turtle laid average of 147 eggs in Europa Island and in the Galapagoes Islands green turtles laid the average of only 81 eggs (Hirth, 1980). Therefore, we can say that green turtles in Sri Lanka lay a middle size clutch. The average egg count for Olive ridley turtles is 105.1 eggs (range 57-161) on Rekawa beach and it is 116 in Gahirmatha, in India (Dash and Kar, 1990). The average clutch size for 11 olive ridley populations around the world was 109.9 (Miller, 1997). Therefore, olive ridleys in Sri Lanka lay smaller clutch comparing to the other places and the olive ridleys in Playa Naranjo, Costa Rica also laid same size of (105) clutch (Hirth, 1980). Average egg

count for leatherback is 100.5 (range 29-140) while it is 115.2 (range 61-154) for hawksbills and 105.2 (range 90-119) for loggerheads on Rekawa beach. The average egg count for 12 population of leatherback is 81.5, 17 populations of hawksbill is 130 and 19 population of loggerhead is 112.4 (Miller, 1997). The leatherbacks in Matina, Costa Rica laid about 80 eggs per clutch and in Tongaland, South Africa it was 103.7 (Hirth, 1980). According to this data the leatherbacks in Sri Lanka laid larger number of eggs and it is closer to the South African population. The hawksbills in Cousin Island, Seychelles laid average of 182 eggs and Seil Ada Kebir Island, Sudan laid average of 73.2 eggs (Hirth, 1980). Therefore, the hawksbills in Sri Lanka laid middle size of clutch comparing to other populations in the world. The loggerheads in Cape Romanian, South Carolina laid average of 126 eggs and Masirah Island, Oman laid 101 eggs. Hence, in Sri Lanka also loggerheads lay smaller size of clutch.

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