

[seaturtle.org](http://seaturtle.org) : [MTN](#) : [ARCHIVES](#) : [INDEX](#)

Marine Turtle Newsletter 45:5-6, © 1989

# Marine Turtle Newsletter

## Loggerhead Sea Turtle Nesting: Kiparissia Bay, Greece

Dimitris Margaritoulis

Sea Turtle Protection Society, P.O. Box 51154, GR-145 10 Kifissia, Greece

Three species of marine turtles are found in the Mediterranean; the loggerhead turtle (*Caretta caretta*), the green turtle (*Chelonia mydas*), and the leatherback turtle (*Dermochelys coriacea*). Of these, only the loggerhead turtle is known to nest on the Greek shoreline. Extremely important nesting areas for *Caretta* were discovered in 1977 on the Greek island of Zakynthos (Margaritoulis, 1982), where the primary research and conservation effort is concentrated. Nevertheless, regular nesting by *Caretta* occurs in other areas, too. One of them is the coast of Kiparissia Bay on the western Peloponnesus. This area is characterized by extensive sandy beaches and very low housing and tourist development.

During 1987, 44 km of sandy beach along the Bay were surveyed regularly using All Terrain Cycles (ATCs). Nesting started on 10 June and ceased on 24 August. During this period, 1,534 turtle emergences, including 598 successful nestings, were recorded. Nesting was concentrated in the southern part of the Bay where density reached 86.8 nests/km. The most heavily used sector (3 km in length) was patrolled on foot during the night by two tagging teams. Turtles were allowed to nest and were then tagged; if the turtle was already tagged, the tag number(s) were recorded. Tags were applied to the trailing edge of the fore or hind flippers. Prior to tagging, the flippers were examined at the standard tagging sites for scars or callouses attributed to lost tags. Three types of tags were used; monel No. 49, monel No. 681, and plastic "rototags".

Seventy four nesting turtles were encountered during the season. Of these, 27 individuals were seen again during the same season (mean inter-nesting interval=15.2 days). Prior to (or following) tagging, four carapace dimensions were measured. Mean curved carapace length was 83.1 cm (sd=4.7, n=72), corroborating earlier evidence that loggerheads nesting in Greece are smaller than loggerheads nesting in other parts of the world (Margaritoulis, 1982).

All nests laid in a 1.6 km sample beach sector were monitored during the season to determine their fate. From 91 nests excavated in this sector, 44 (48.4%) had been disturbed by predators (but only three were totally destroyed) and 27 (29.7%) had been inundated at least once by seawater. The primary nest predators were the red fox (*Vulpes vulpes*) and stray dogs. Excavation of undisturbed nests (after hatchling emergence) showed that the percentage of emerged hatchlings was 54.9%. Most of the depredated and/or inundated nests also produced hatchlings, but their hatch rate was lower. Clutch size was determined by nest excavation after hatchling emergence. Mean clutch size was 117.7 eggs (sd=22.7, n=52 clutches). Incubation period, i.e., the elapsed time in days from oviposition until the appearance of the first hatchling on the surface, was 55.5 days (sd=6.2, n=50). An experimental beach hatchery was established on the high beach where 10 nests (1,079 eggs) were transplanted within 12 hours of oviposition. The overall hatch rate in the hatchery was 63.7%, 8.8% higher than the mean hatch rate for nests incubated *in situ*. Taking into account the losses due to nest predation and inundation, the difference becomes even more significant.

Margaritoulis, D. 1982. Observations on loggerhead sea turtle *Caretta caretta* activity during three nesting seasons (1977-1979) in Zakynthos, Greece. Biol. Cons. 24:193-204.