

THREE SPECIMENS OF THE GREEN SEA TURTLE *CHELONIA MYDAS* (L.) RECORDED IN GREECE

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Introduction

The green sea turtle, *Chelonia mydas* (L.), is a circumglobal species nesting mainly in tropical and subtropical regions. Nesting of the green turtle occurs also in the Mediterranean, namely in Cyprus (DEMETROPOULOS, 1981), in Israel (SELLA, 1982) and in the southern coast of Turkey (GELDIAY et al., 1982). Green turtles have been occasionally reported in other parts of the Mediterranean (DESPOTT, 1931; KNOEPFFLER, 1961; RIEDL, 1963 and others) and even as north as in the Black Sea (BESKOV and BERON, 1964).

In Greece, *Chelonia mydas* is included in its herpetofauna (ONDRIAS, 1968) but, as far as can be ascertained, there are no specific records in the literature. We report here three individual green turtles which were captured or found, recently, in Greek territorial waters.

Results

Individual I

It was observed alive at the Aquarium of the Hydrobiological Station at Rhodos island. It was photographed and measured on 26 March 1983 (Table 1).

The carapace was basically brown-green with distinct copper streaks. The keel along the midline was still present. Between the first and the second vertebral scales there was an extra scale about 2 cm in diameter. All flippers were brown-green above with a narrow yellow-white strip along the trailing edges. The scales on the head were dark brown with occasional copper patches and they were separated from each other by conspicuous creamy lines. The neck above was dark olive and at the sides becoming progressively creamy white towards the throat. Venter of flippers were yellow-white with brown scales

TABLE 1

Measurements and scalation of three specimens of the green sea turtle *Chelonia mydas* (L.) captured or stranded in Greece (L: Left side, R: Right side)

	Individual I	Individual II	Individual III
Curved carapace length	33.0 cm	35.5 cm	10.5 cm
Straight carapace length	30.5 cm	33.5 cm	10.1 cm
Curved carapace width	30.0 cm	32.0 cm	10.0 cm
Straight carapace width	25.5 cm	28.5 cm	8.7 cm
Plastron length	—	28.5 cm	8.07 cm
Head width (maximum)	58 mm	57 mm	23.8 mm
Head length	—	81.5 mm	33.5 mm
Number of costals	L 4 R 4	L 4 R 4	L 4 R 4
Number of vertebrae	5	5	5
Number of nuchals	2	1	1
Number of marginals	L 11 R 11	L 11 R 11	L 11 R 11
Number of supracaudals	L 1 R 1	L 1 R 1	L 1 R 1
Number of inframarginals	L 4 R 4	L 4 R 3	L 4 R 4
Number of postoculars	L 5 R 4	L 5 R 4	L 5 R 4
Number of prefrontals	1 pair	1 pair	1 pair
Weight	4,650 g	—	127 g

towards the trailing edges. The throat was white and the plastron yellow-white with two prominent keels running longitudinally at the middle of the ventral scales. The tomium of the lower jaw had conspicuous grooves.

After some investigation it was found that the turtle was given to the Aquarium by Mr. A. Vaziakas, skipper of the trawler «MARIA» who had accidentally captured the turtle while fishing about one mile off the western coast of Rhodes (36° 01' N × 27° 44' E) in April 1981. Regrettably no measurements were taken at the time of capture. The turtle seemed to be in good health. It shared with a *Caretta* specimen a tank about 1 m³ with a constant flow of sea water. The food given to the turtles consisted mainly of chopped fish. In March 1983 the temperature of the water in the tank was about 16° C.

Individual II

It is a preserved specimen at the home of Mr. Tsoukandas, a Messologhi fisherman, who caught the turtle accidentally on a fishing line in Messologhi lagoon (38° 19' N × 21° 20' E) in September 1981. The turtle was mounted by taxidermist Mrs. Makris in Messologhi who was interviewed and confirmed the case. The specimen was photographed and measured (Table 1) on 8 January 1984. One keel along the midline of carapace and two keels along the ventral scales of plastron are present as in the case of individual I. The streaks on the scales of carapace and the grooves in the tomium are also evident.

Individual III

It was found by a little girl on 8 March 1984 stranded on a beach of Rhodos island ($36^{\circ} 25' N \times 28^{\circ} 14' E$). The turtle was alive but evidently in a weak state. Unfortunately it was put in fresh water for about 24 hours before it was taken, in a very bad condition, to the Hydrobiological Station where it died.

The specimen was identified by Mr D. Georgopoulos of the Oceanographic and Fisheries Research Institute, who at that time was in charge of the Hydrobiological Station. Mr. Georgopoulos deep-frozeed the specimen and kindly sent it to Athens where it was photographed and measured on 3 April 1984 (Table 1).

Ventrally, except the flippers and the marginal scales, it has the characteristic creamy white colour of *Chelonia mydas* of that size. Dorsally, it is uniformly olive grey with a narrow white strip along the lateral edges of carapace and the trailing edges of flippers. Venter of flippers and of marginal scales have basically the same olive grey colour which becomes lighter towards the base of flippers. One keel along the carapace and two keels along the plastron are present (Fig. 1).

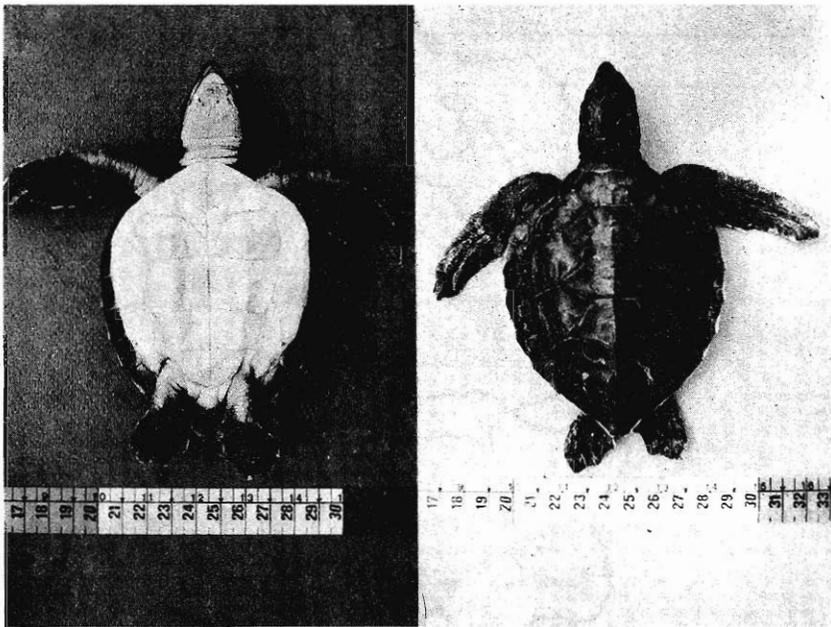


Fig. 1. Ventral and dorsal views of individual III.

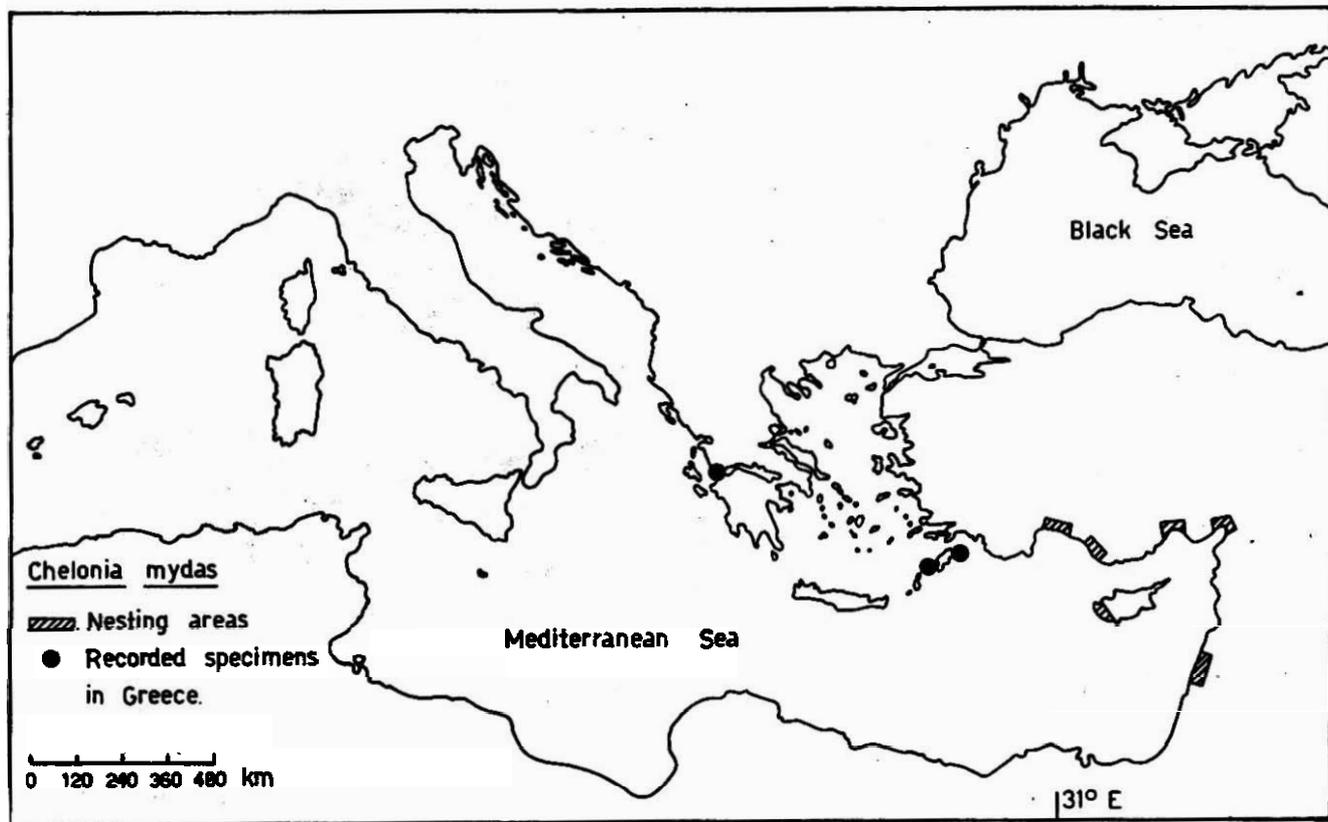


Fig. 2. Map showing known nesting areas of *Chelonia mydas* (L.) in the Mediterranean and recorded specimens in Greece.

Discussion

The presently recorded individuals have the main morphological features of the species as described in various keys (CARR, 1952; MERTENS and WERMUTH, 1960; BRONGERSMA, 1972) with few minor variations. Individual II appears to have three inframarginals on its right side, instead of four, because the scale at the position of the first inframarginal is divided longitudinally in two and therefore cannot be considered as a true inframarginal. All specimens have—strangely—the same atypical number of postocular scales on their left side, five instead of four.

It is interesting to note that the recorded individuals are considered as juveniles according to the size classification proposed by HIRTH (1971). Assuming that there are no other nesting areas of *Chelonia* in the Mediterranean besides the known ones, the present records indicate that juvenile green turtles in the Mediterranean may venture as far as 1200 km from the nearest nesting beach (Fig. 2).

The conspicuous scarcity of small size specimens of *Chelonia* led CARR et al. (1978) to suggest that green turtles pass the first stages, up to about 14 months, of their life cycle in a pelagic habitat—the «lost year» habitat—and later turn up in various inshore estuarine or reef-system habitats. Individual III belongs apparently to the «lost year» size class. The fact that this individual was found stranded in a weak condition shows that it was carried off its pelagic habitat.

Furthermore, CARR et al. (1978) suggested that when development is completed and the diet switches to herbivory, adult *Chelonia* utilize a different kind of habitat which is characterized by protected warm water not too deep for photosynthesis. The apparent lack of adult size specimens of the green turtle in Greece could mean that there is no resident adult population of *Chelonia* in the Greek seas. Nevertheless, some attention must be paid to this evidence since fishermen who may capture accidentally turtles keep more easily small size individuals than large ones.

On the other hand the existence of healthy juvenile specimens of *Chelonia* in Greece may indicate that Greek coastal waters are utilized as part of a developmental habitat for a Mediterranean green turtle population. But, in view of the exceedingly small number of records this indication needs further investigation.

Acknowledgements

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examine individual I, and Mr. D. Georgopoulos of the Oceanographic and Fisheries Research Institute for notifying and carrying to Athens individual III.

Abstract

Three specimens of the green sea turtle, *Chelonia mydas* (L.), are described from Greek territorial waters. Their main biometric data and scalation patterns are given. All specimens are juveniles; one of them belonging clearly to the «lost year» size class. These records show that juvenile green turtles may venture as far as 1200 km from the nearest known nesting beach of the species in the Mediterranean.

Furthermore, the occurrence of these specimens suggests that coastal regions in Greece may be utilized as a developmental habitat of *Chelonia mydas* in the Mediterranean.

Περίληψη

Περιγράφονται τρία δείγματα της πράσινης θαλάσσιας χελώνας *Chelonia mydas* (L.) που πιάστηκαν τυχαία από ψαράδες ή βρέθηκαν σε Έλληνικά χωρικά ύδατα. Επίσης δίνονται τα κυριώτερα βιομετρικά τους στοιχεία και η διάταξη των πλακών τους. Όλα τα δείγματα που περιγράφονται είναι νεαρά άτομα. Ένα απ' αυτά ανήκει στην τάξη μεγέθους του πρώτου χρόνου που στη βιβλιογραφία αναφέρεται και ως «lost year» λόγω των σχετικά ελάχιστων αναφορών που υπάρχουν. Τα άτομα που πιάστηκαν δείχνουν ότι οι νεαρές πράσινες χελώνες απομακρύνονται μέχρι και 1200 χλμ. από την πλησιέστερη γνωστή περιοχή ωτοκίας τους στη Μεσόγειο. Περαιτέρω, η ύπαρξη των ατόμων αυτών στον Έλληνικό χώρο δείχνει ότι παράκτιες περιοχές της Ελλάδας μπορεί να χρησιμοποιούνται ως τόπος ανάπτυξης της *Chelonia mydas* στη Μεσόγειο.

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1. *Herodotou* 34
GR-145 63 KIFISSIA
Greece

2. *Arivvou* 12
GR-116 33 ATHENS
Greece

3. *Sahtouri* 86
GR-185 37 PIRAEUS
Greece

4. *Akti Moutsopoulou* 66
GR-185 36 PIRAEUS
Greece