

CARETTA CARETTA (Loggerhead Sea Turtle). MORTALITY.

Three species of marine turtle (*Caretta caretta*, *Chelonia mydas*, and *Dermochelys coriacea*) are found in the Mediterranean, with *C. caretta* and *C. mydas* breeding in this semi-closed sea. In Greece, only *C. caretta* nests regularly. Nevertheless, all three species appear as strandings, dead or alive, along the 15,000 km-long Greek coastline. Since 1991, ARCHELON, the Sea Turtle Protection Society of Greece, has operated a nationwide Sea Turtle Stranding Network (STSN), through which injured and dead turtles are reported. Members of the STSN include Coast Guard officers, local NGOs and concerned citizens (Nantsou and Antipas 1992. *Testudo* 3:38–42). In cases of dead turtles, network members visit the stranding location, observe the condition of the stranded turtle, record injuries and body measurements, photograph the specimen and organize its disposal. In the cases of injured or impaired turtles, network members arrange for its transportation to ARCHELON's Sea Turtle Rescue Centre in Glyfada, close to Athens. Data collected through the STSN are used for assessing the annual magnitude and distribution of turtle strandings and for evaluating threats at sea. In addition, the 33-year operation of the STSN has revealed several cases of sea turtle behaviors and traits, e.g., a putative hybrid *C. caretta* x *C. mydas* (Margaritoulis et al. 2019. *Herpetol. Rev.* 50:118–119), and the predation of a juvenile *C. caretta* by an anglerfish (Margaritoulis and Tsaros 2019. *Herpetol. Rev.* 50:766–767).

On 14 March 2021, a juvenile *C. caretta* was found dead inside the mantle of a large squid (Fig. 1). The incident was



FIG. 1. Photo of the juvenile *Caretta caretta* found dead inside the giant squid's mantle.

reported from Skiathos Island, northern Aegean Sea, Greece (Megali Ammos Beach: 39.1626°N, 23.4797°E; WGS 84). The turtle, measured and photographed by the local Coast Guard, had a total length of ca. 60 cm and a carapace width of ca. 30 cm. Unfortunately, the squid was decomposed and could not be identified to species from the photographs. Nevertheless, from the reported size of the turtle we can estimate the size of the squid's mantle. Two species of large squids are known in the Aegean Sea: *Ommastrephes bartrami* (Neon Flying Squid) which has recently increased its presence in the Aegean (Lefkaditou et al. 2011. *Mediterr. Mar. Sci.* 12:413–428), and *Thysanoteuthis rhombus* (Diamond-shaped Squid) (Vardala-Theodorou et al. 1991. *Boll. Malacol.* 27:25–34). In large pelagic squids, it is common to observe the reduction of muscle tissue due to energetic demands of reproduction (Moltschaniwskyj and Carter 2013. *Physiol. Biochem. Zool.* 86:119–126), resulting in high post-spawning mortality and the rise of their positively buoyant gelatinous bodies towards the surface, where, floating in shallow waters or being stranded on shore, they become available to predators (Boyle and Rodhouse 2005. *Cephalopods: Ecology and Fisheries*. Blackwell Science Ltd, Oxford, UK. 451 pp.). A plausible explanation for this described incident could be that the turtle encountered the squid carcass, entered the mantle to scavenge its remains, was trapped inside the mantle, and died of suffocation. The inelastic mantle wall, observed in dead squids with advanced tissue breakdown (Roumbedakis and Guerra 2019. *In Gestal et al. [eds.], Handbook of Pathogens and Diseases in Cephalopods*, pp 207–211. Springer, Cham, Switzerland) might have prevented the young turtle from disentanglement. *Caretta caretta* exhibits a highly opportunistic foraging behavior, targeting both live and dead organisms, and exploiting almost any trophic resource within reach (Casale et al. 2008. *Mar. Ecol. Prog. Ser.* 372:265–276).

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