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## New records of *Chelonia mydas* off the Spanish Mediterranean coast

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**RESUMEN:** La mayoría de las observaciones de *Chelonia mydas* en las costas españolas corresponde a ejemplares juveniles procedentes de las distintas zonas de puesta existentes en el Océano Atlántico. En la presente nota se proporciona información sobre dos observaciones (una de ellas fotografiada)

de *C. mydas* en aguas de Calpe (Alicante) realizadas en septiembre de 2014. Además, se resumen las citas de *C. mydas* existentes para las aguas mediterráneas españolas desde mediados del siglo XIX.

The green turtle (*Chelonia mydas*) is a large, long lived, herbivorous reptile that grazes on marine macrophytes in shallow tropical and sub-tropical waters around the world. Indeed, the benthic vegetarian feeding habit of juvenile and adult *C. mydas* is unique among sea turtles. Other characters that distinguish it from other sea turtles species are its smooth carapace with four pairs of lateral scutes and a single pair of elongated prefrontal scales between the eyes. The common name derives from the green fat underneath the shell, while it is known to have various colour patterns that change over time as the turtle grows. The carapace colour starts as solid black and then turns to shades of grey, green, brown, and black in differing patterns (Pritchard *et al.*, 1983). The species is listed as endangered by the International Union for Conservation of Nature and Natural Resources (IUCN) and is listed in the Appendix I of the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES).

The green turtle is present in the Mediterranean Sea, where it maintains nesting areas

in Turkey and Cyprus (Kaspavec *et al.*, 2001), and has limited nesting sites in Lebanon, Syria, Israel and Egypt (Kuller, 1999; Rees *et al.*, 2008; Khali *et al.*, 2009). In the Western Mediterranean Basin only few sightings in Italy, France, Spain, Morocco and Tunisia have been reported (Casale & Margaritoulis, 2010; Bentivegna *et al.*, 2011). Almost all *C. mydas* specimens found along the Spanish Mediterranean coast are juveniles, and recently it has been proposed that they have an Atlantic origin, suggesting the isolation of Mediterranean nesting populations, although further genetic studies are needed to confirm this scenario (Carreras *et al.*, 2014).

The oldest documented records date from the XIX century and include a turtle captured by fishermen in the waters of Cabrera Island (Balearic Islands) in June 1850 (Barceló i Combis, 1876), two specimens for sale in a fish market in Palma de Mallorca in the spring of 1865 (Pagenstecher, 1867) and another captured in the vicinity of Columbretes Islands (Valencia) in July 1899 (Boscá, 1916), although this record could have been a misidentified *Lepi-*

**Figure 1:** Location of the site where *C. mydas* was observed in waters of Calpe (Alicante, Spain) during September 2014. PNOA: Instituto Geográfico Nacional de España.

**Figura 1:** Localización de la zona donde se observó a *C. mydas* en las aguas de Calpe (Alicante, España) en Septiembre 2014. PNOA: Instituto Geográfico Nacional de España.



*dochelys kempii* specimen rather than a *C. mydas* individual (Carreras *et al.*, 2014). In the last decade of the XX century, new records were obtained: one specimen in Valencia in 1989 (Raga & Salinas, 1990), another captured alive in a net in Mallorca in 1991 (Pou *et al.*, 1991) and five specimens (three alive and two dead), in the Ebro Delta between 1993 and 2000 (Bertolero, 2003).

In recent years, there have been a number of other observations in the Spanish Mediterranean Sea, including stranded dead animals and injured or hypothermic ones, all of which were successfully recovered in different Marine Species Recovery Centers and released. In 2004, a dead specimen was found in the Ebro Delta and in December 2009 another turtle was rescued alive in the same area, with obvious signs of hypothermia and weakness (UICN Co-

mité Español, 2014). In the summer of 2010, a group of divers found a turtle injured in waters of Calpe (Alicante) (Martín, 2010). Off the coast of Águilas (Murcia) the bodies of an adult and a juvenile *C. mydas* were found in February 2011 (Agenda Verde, 2011) and in December of the same year, an adult with hypothermia. Finally, on 2 January 2013, another turtle was found in Cuevas de Almanzora (Almería) with a hook in its mouth. After removing the hook it was released without any other pathologies being detected (Europa Press, 2013).

On 8 September 2014, a *C. mydas* specimen was observed in the waters off the northern face of the rock, Peñón de Ifach (Calpe; 38°38'208" N / 0°04'753" E). The dive took place in an area called "The Arches", so-called because of the large void structures in the rocks covering the sea floor, a formation caused by pieces of the Peñón

Photos F. & E.J. Wattenberg



**Figure 2:** *C. mydas* photographed in "The Arches" (Calpe, Spain) during a dive on 8 September 2014.

**Figura 2:** *C. mydas* fotografiada en "Los Arcos" (Calpe, España) durante una inmersión el 8 de Setiembre de 2014.



falling into the sea. These rocks have a rich cover of different kinds of algae. Nearby, on the sandy seabed, the characteristic Mediterranean seagrass *Posidonia oceania* grows. The specimen was observed at 7 m depth, swimming quietly over the rocky bottom. Its estimated size was over 1 m and it had a very noticeable green coloration, which, together with its powerful swimming, indicated a healthy state. Three divers (a student and two diving instructors from the Les Basetes Diving Center) were able to follow the turtle for several minutes and take several photographs before it disappeared swimming towards the sandy bottom.

On 19 September 2014, a *C. mydas* specimen was seen resting between two rocks, this time on the southern side of the Peñón, near an area known

as “Flat Rock” (38°42’569” N / 0°10’050” E). In the presence of four divers, it started moving away slowly, followed by the divers until they lost visual contact with it. There are no photographs from the second observation or evidence that it was the same turtle, although the divers are certain it was a *C. mydas* individual.

The presence of *C. mydas* in the Mediterranean Sea has been recorded since the second half of the XIX century, although sightings are unusual and mostly related to by-catch or strandings. Of the two observations described above (two different specimen or the same on two different dates), the former is the first graphically documented encounter with *C. mydas* in the underwater environment near the Spanish Mediterranean coast.

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