

IN-WATER BEHAVIOUR OF THE LOGGERHEAD SEA TURTLE (*CARETTA CARETTA*) UNDER THE PRESENCE OF HUMANS (*HOMO SAPIENS*) IN A MAJOR MEDITERRANEAN NESTING SITE.

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ABSTRACT. In the greek island of Zakynthos, the peak of the loggerhead nesting and tourist season coincide (June-July), and as a result, encounters between snorkelers and turtles occur very often during these summer months. Moreover, since underwater action cameras are widely used nowadays, people are trying to approach turtles in order to photograph them more often than ever. Since energy preservation plays an important role in turtle nesting activity, it is important to have an indication of the degree of any disturbance. Furthermore, there are suggestions in the bibliography that a large scale photo identification program can assess (additionally to traditional tagging methods) the size of the nesting as well as the local sea turtle population in Zakynthos. Since useful photographs for identification purposes are obtained more efficiently with underwater surveys, it is important to build a knowledge on how much sea turtles are disturbed by this process.

We report on the behaviour of loggerhead sea turtles in Laganas bay, Zakynthos, Greece, under the presence of an underwater photographer (author) while the latter's objective is to approach them closely in order to photograph them. The author has been consistently snorkelling with and photographing loggerhead sea turtles in Laganas bay for the last 6 years (2009-2014). This report focuses on observations made during 2014 from June till September, a period that includes the peak of the nesting season in Zakynthos when nesting females can be frequently observed in the shallow parts of the bay. During the whole period, 33 snorkelling sessions were conducted that resulted in 69 encounters (51 unique individuals) and more than 12 hours and 29 minutes of total observation time.

We classified the different behaviours into four categories. The responses of the turtles varied from immediate abandonment of the meeting site at a speed too high for a snorkeler to follow (category 1 - high disturbance) to indifference to human presence (category 4 - no disturbance). The intermediate categories 2 and 3 represent moderate and slight disturbance respectively. Precise descriptions of all the four categories are given and we make use of multimedia during the presentation (videos and photos) in order to define them accurately. We present the difference of distribution of the behaviours over these categories among all encounters, nesting females and resident female and male turtles (encounters well outside the nesting season). We finally present future research ideas and open questions upon which a more extensive survey of the same kind can be designed.

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