EFFECTS OF BEACH MICROPLASTICS ON SEA TURTLE NESTING TEMPERATURES IN THE MEDITERRANEAN – A BLOG


Iztuzu Beach, Dalyan, Turkiyë

As part of my MSc Environmental Dynamics and Climate Change thesis I (Rhys Bowen) was fortunate to have travelled to the DEKAMER Sea Turtle Rescue and Rehabilitation Centre at Iztuzu Beach, Dalyan, Turkiyë for a month long expedition (July 2022).

Leading a team of Swansea Marine Biology students (Jack O'Callaghan, Tommy Rodrigues), the trip provided the opportunity to undertake fieldwork on multiple projects as well as fulfill a number of volunteering roles at the centre. Ultimately, the information and experience gained improved our knowledge on sea turtle ecology and the link between human activities and loggerhead (*Caretta caretta*) sea turtles.

THESIS FIELDWORK

My thesis aimed to evaluate the effects of three microplastics (polyethylene terephthalate, high-density polyethylene, polystyrene) on sand temperatures at depths that are representative of *C. caretta* nests. Fieldwork involved burying temperature loggers at 30 cm and 50 cm underneath experimental plots seeded with each microplastic separately (as well as a control plot) at 4 sites on Iztuzu Beach. Temperatures were recorded over a 2 week period from 17th – 31st July. The results are reported in my thesis which will be available after marking.


Experimental plots at 1 site

VOLUNTEERING

Beach Surveys

Nightly beach patrols (21:30 – 04:30) at Iztuzu Beach involved track identification, locating and relocating nests, caging nests to protect eggs from predation, tagging adult females and taking samples for laboratory work. Later into the month, as eggs began to hatch, I was also able to open hatched nests and assist in recording the number of eggs that had hatched and unhatched and their stages in embryonic development.

Rehabilitation and Information

In this role I was able to get first hand experience cleaning tanks and feeding *C. caretta* and green (*Chelonia mydas*) in rehabilitation. Further, I presented information on sea turtle ecology and the conservation efforts of DEKAMER to visiting tourists. DEKAMER believe that educating the public is the best way to make a positive impact for sea turtle conservation.

General Support

Lastly, I provided assistance in the maintenance and upkeeping of the centre, alongside the other volunteers.

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