

## **Preliminary Results on Post Nesting Fine Scale Movements of Olive Ridley Sea Turtles in the Gulf of Fonseca, Honduras**

Duran, N.<sup>1,2</sup> Dunbar, S. G.<sup>1,2,3</sup>

<sup>1</sup>Department of Earth and Biological Sciences, Loma Linda University, Loma Linda, CA. 92350

<sup>2</sup>Protective Turtle Ecology Center for Training, Outreach, and Research, Inc. (ProTECTOR), Colton, CA 92324

<sup>3</sup>Protective Turtle Ecology Center for Training, Outreach, and Research (ProTECTOR) Honduras, Tegucigalpa, Honduras

Punta Raton is the most important nesting site to date, for Olive Ridley sea turtles on the Pacific coast of Honduras. Although a nesting beach conservation project has been carried out in the area since the 1970s and a systematic tagging program has been conducted for the last 5 years, little is known about the movements and activity of females in the gulf waters during the interesting periods. In order to study their post nesting, fine scale movements, we tracked three females ranging from 61 to 65.6 cm minimum curved carapace length with GPS-VHF telemetry. After successful nesting, we attached 20 cm balsa wood buoys containing a GPS data logger, a VHF transmitter and a chemical glowstick to each turtle's carapace by way of a 30 m nylon cord tether with a safety release at the end proximal to the turtle. We followed the animals in a small skiff for 2, 4 and 10 hours, respectively. The first female swam to the west for the first 1.3 hrs, then turned to the southwest until the end of the trial, covering a total of 3.18 km. The second female headed north for 2.0 hrs but afterwards shifted southwest, swimming in that direction for another 2.0 hrs and covering a total distance of 6.88 km. After swimming perpendicular to the shore for 0.7 hrs, the third turtle followed a straight, stable trajectory to the southwest during more than 5.0 hrs, then slowed down and remained in the same area until the end of the trial, covering a total of 15.21 km. The average speed was 1.59, 1.72 and 1.52 km/h, respectively, and the maximum recorded speeds were 4.28, 6.99 and 4.57 km/h.

The goal of this preliminary study was to evaluate the adequacy of using floating buoys to assess the fine scale movements of females from this population during the interesting period, as well as levels of nesting site fidelity. Results of these three trials suggest that these types of buoys are useful tools that easily allow following and locating target turtles both by day and night. However, we are uncertain that the attachments last long enough to measure nest site fidelity levels. The large amounts of floating debris observed in the gulf waters, as well as the presence of numerous artisanal fishing nets in the area, are likely to cause entanglement and detachment of the buoy within several hours or days.