*Presenting Author. Noemi Duran nduranroyo@llu.edu fax: (909) 558-0249
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Duran, N.[1,2,] *
Dunbar, S. G.[1,2,3]

*Corresponding author: nduranroyo@llu.edu
[1]Marine Research Group, Department of Earth and Biological Sciences, Loma Linda University, Loma Linda, CA. 92350
[2]Protective Turtle Ecology Center for Training, Outreach, and Research, Inc. (ProTECTOR), Colton, CA 92324
[3]Protective Turtle Ecology Center for Training, Outreach, and Research (ProTECTOR) Honduras, Tegucigalpa, Honduras

DO HATCHLING SWIMMING PATTERNS MATTER WHEN IT COMES TO PREDATION?

We compared diurnal and nocturnal swimming patterns of recently hatched Olive ridley *(Lepidochelys olivacea)* neonates from Punta Raton, Honduras. We followed individual hatchlings tethered to a modified Witherington float by 1.5 m of sewing thread during an average time of 23.9 min (SD ± 5.2), and recorded the time intervals for swimming at the surface (less than 20 cm of depth) and swimming at depth (more than 20 cm). Hatchlings were released from a small skiff located 200 - 500 m from the shore in the coastal waters of the Gulf of Fonseca. We tracked 13 hatchlings during the day and 5 at night. During all observations, hatchlings were either swimming at the surface or at depth, with no periods of rest. We calculated the ratios of time spent swimming at the surface vs. total observation time, and time swimming at depth vs. total observation time for each hatchling, and compared these ratios between the two groups. Hatchlings spent a significantly greater amount of time swimming at depth during the day, and swam mostly at the surface during the night ($t_{(16)} = 27.79$, $p<0.001$). The mean percentage of time spent swimming at the surface was 0.12 (SD ± 0.07) during the day and 0.99 (SD ± 0.03) at night. The intervals of surface swimming averaged 6.90 sec (SD ± 4.53) during the day and 1029.84 sec (SD ± 654.88) during the night, whereas the mean time for swimming at depth was 52.75 sec (SD ± 11.81) during the day and 3.85 sec (SD ± 5.33) at night. The longest recorded time swimming at depth during the night was 19 sec, whereas the longest interval swimming at depth during the day was 194 sec. Differences between day and night swimming patterns during the frenzy period have not previously been described in the literature. We suggest that this is a characteristic behavior of *L. olivacea* that has remained undetected since, although several studies have been performed on hatchling movements during the first hours of their offshore migration, few have included this species, or that this swimming pattern is an adaptation for enhancing survival under the local conditions of the Gulf of Fonseca not shown by hatchlings at other locations. Increased swimming at depth during the day may serve to reduce visibility of the hatchlings to aerial predators, and may also help them avoid high temperatures in surface waters. Further research is needed to test these hypotheses and assess the adaptive significance of this behavior.