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## Striped Blenny (*Chasmodes bosquianus*) Presence and Behavior between Sunrise and Sunset at Oyster Landing, South Carolina

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## ABSTRACT

Lunar and diel cycles of fishes can help to interpret their behaviors during their reproductive season. Temperate estuaries are used by many benthic fishes for shelter and reproduction. This study examined the behavior and presence of striped blennies (*Chasmodes bosquianus*) during diel and lunar cycles. PVC pipe shelters were placed to mimic oyster shell nests, a natural habitat for blennies, and cameras were placed to monitor these shelters in April, May, and June 2022, during the striped blenny reproductive period. Video footage was reviewed and analyzed for the presence and behavior of both male and female blennies. Male presence was observed in the nesting site every day from hours 6:00 to 20:00. The highest presence of male blennies was measured during the lunar days surrounding the full and new moons, with the full moon period showing the highest presence of males and females. The predominant behavior of blennies was peaking. The highest activity levels for males was observed during the full moon period while females were the most active during the new moon period. The hours between 9:00 and 15:00 had the highest daily activity levels across both sexes. Different days had similar trends suggesting lunar cycle and time of day influence the presence and behavior of blennies in temperate estuaries. Other temperate estuarine benthic fishes may share these same patterns in regard to the lunar cycle and reproductive seasons. The behaviors of these fish may connect to predation risk, with new moon having the lowest light levels, making it the safest time to mate.