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Depth distribution and temperature preferences of wahoo *(Acanthocybium solandri)* off Baja California Sur, Mexico

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The depth distribution and temperature preferentes of wahoo (Acanthocybium solandri) were quantified in the eastern North Pacific using archival tags. One hundred and eight data-loggers were deployed on wahoo (105–165-cm fork length) from 2005 to 2008 at three locations off of the coast of Baja California Sur, Mexico (Alijos Rocks, 25_000N/115_450W; Magdalena Bay Ridge, 25_550N/113_210W; Hurricane Bank, 16_510N/117_290W). Twenty-five tagged individuals (23%) were recaptured within close proximity (\20 km) of their release sites. Collectively, depth and temperature data from 499 days revealed a predominant distribution within the upper mixed layer, with an average (±SD) depth of 18 ± 4 m turing the day and 17 ± 6 m at night. Wahoo spent 99.2% of the daytime and 97.9% of night above the thermocline, and the greatest depth achieved by any fish was 253 m. Mean dive duration (3.8 ± 2.9 vs. 2.3 ± 0.8 min) and the vertical rate of movement (3.8 ± 1.3 vs. 3.0 ± 0.5 m min-1) were greater at night when compared to day. Ambient temperatures obtained from tag records ranged from 11.1 to 27.9_C, with an average of 25.0 ± 1.1_C. These data identify the importance of the warm, upper mixed layer for the wahoo. High recapture rates proximal to the deployment sites suggest seasonal site fidelity and reveal the economic importance of this resource to both commercial and recreational fisheries of the region.

Palabras clave: Baja California Sur, Wahoo, depth distribution, archival tags