

**SPATIAL DISTRIBUTION OF EGGS, LARVAE AND JUVENILES
OF EYEBROW GOBY (*Oxyurichthys ophthalmonema*)
IN BATAN BAY ESTUARY, AKLAN**

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**A Master's Thesis presented
to the Institute of Marine Fisheries and Oceanology
College of Fisheries and Ocean Sciences
University of the Philippines Visayas**

**In Partial Fulfillment of the Requirements
for the Degree of
Master of Science in Fisheries (Fisheries Biology)**

JUNE 2019

ABSTRACT

To understand better the biology of eyebrow goby *Oxyurichthys ophthalmonema*, the spatial distributions of its eggs, larvae and juveniles were investigated in Batan Bay Estuary, Aklan from October 2016 to September 2017 by employing a fisheries-independent methodology. Nesting grounds were located through burrow assessment followed by physico-chemical characterization of identified nesting grounds. Fifteen stations were established all over the study area. Results showed that *O. ophthalmonema* burrows were present in mudflats all over the study area. Of the 196 burrows assessed in detail, only 34 (17%) burrows had the presence of nesting adult *O. ophthalmonema*. For the spatial distribution of eggs, they were only found in Moto, Jalas and Kapispisan burrows. The highest observed density was obtained in Kapispisan at 5 eggs/burrow. For the spatial distribution of larvae, they were only found in 9 stations with the Jalas showing the highest density at 32 larvae per 100m³. For the spatial distribution of juveniles, they occurred in all stations but the density was higher in Kapispisan at 4 juveniles per 1000m². The nesting grounds are located near the upper river tributaries with substantial mudflats and mangrove forest cover. The physico-chemical characteristics of the nesting grounds were as follows: 24.50-26.67ppt for salinity, 29.75-31.25°C for water temperature, 3.26-3.55 for sediment pH (dry weight sediment, DW), 29.82-77.89µg/g for iron (DW sed), 2053-5378µg/g for Sulphur (DW sed), 1.50-8.24µg/g for phosphorus (DW sed), and 0.52-1.15% organic matter (DW sed). The physico-chemical characteristics of the water and sediments of Batan Bay Estuary is favorable to nesting of *O. ophthalmonema*. There is a need, therefore, to protect these habitats from threats that may negatively affect the nesting of *O. ophthalmonema*.

Keywords: Spatial distribution, *Oxyurichthys ophthalmonema*, fisheries-independent method, nesting grounds, density, frequency occurrence