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The Biology of the Angel Wing Clam (Pholasorientalis)

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ABSTRACT

Diwal (Pholasorientalis) or angel wing clams are endemic in Western Visayas, and prized for its delicate creamy taste and exported in large quantities. But its availability has erratically fluctuated because of its unregulated harvesting. To conserve this native species, we must understand its basic biology. This multidisciplinary program examines its reproductive biology, ecology, microbiome, and genetics. Initial microbiome survey showed that bacterial and fungal species isolated from four sampling sites in Negros Occidental, Capiz and Aklan, identified using API Identification kits (bacteria) and morphological examination (fungi) showed were Vibrio alginolyticus, Staphylococcus spp., Bacillus pasteurii and Aeromonashydrophila/cavicae and Aspergillusfumigatus, A. niger and A. flavus. Sequence analysis of diwal COI showed highly conserved regions. Three distinct COI sequences were identified from 16 samples. These sequences were not site-specific but most samples had the Seq_1 genetic variant. No direct correlation between phenotypic traits (shell length and width) was observed with the genetic variants. These findings suggest the presence of a diverse microbiome population and a genetically conserved species in Western Visayas.

KEYWORDS: Sequence Analysis; Phenotype; Microbiome Survey; Species conservation