CAPSULE PROPOSAL

Research Title 1	Population Density, Size and Distribution of Spider Conch *Lambis Lambis* in Snake Island, Honda Bay, Palawan
Research Title 2	Species Richness, Relative Abundance and Distribution of Strombus sp. (Strombidae) in Snake Island Honda Bay, Palawan.
Research Title 3	Population Density, Size and Distribution of *Anadara sp.* (Bivalvia) In Snake Island, Honda Bay, Palawan.
Researcher/s	Rico, Sharra L., BS Aquatic Biology IV Ubay, Mecaella A., BS Aquatic Biology IV Alivar, Christell Ann S. BS Aquatic Biology IV
Adviser	Dr. Ma. Lotus E. Patiluna Asst. Prof. IV, CFAS-WPU
Background of the Study	The Spider conch *Lambis lambis* locally known as "ranga-ranga" *and Strombus species locally known as "sikad-sikad"* are marine gastropod species in the family Strombidae (Poultiers 1998). Anadara species, also known as "bakalan", is a bivalve species. In the Philippines, the spider conch, *Lambis lambis*(Linnaeus 1758) Strombus sp. and Anadara sp. are economically important invertebrate. They are widely collected as food throughout the country. (Picardal & Dolorosa, 2015). Both are sold in the market as fresh or live shell. The empty shell is also sold in the shell craft industry and even the operculum is sold (Mazo et al., 2007). Ecologically, the importance of gastropods and bivalves cannot be underestimated. Grazing gastropods can control ephiphytic and macro algal bloom. Bivalves as filter feeders can help purify silted marine waters (Picardal & Dolorosa, 2014). Although molluscs are of huge importance to the ecosystem and the society, not much is known about the gastropods and bivalves of Snake Island, Palawan. Due to the rising local gleaning pressure which lead to the decrease of population density and size structure of these following species.
Objectives of the Study	Specifically, this study aims to: 1. Determine species composition, population density, species richness and relative abundance. 2. Determine the shell weight and size in terms of length, width and thickness. 3. Determine the distribution of species.
Significance of the Study	The result of this study may generate baseline information in the present condition of gastropod and bivalve species in Snake Island, Honda Bay, Palawan. It will enable future

	researchers to detect and monitor changes in the species composition, size, density, and distribution over time and as a potential index of changes. To the community, the result of this study will be a basis of conservation, protection and sustainable utilization of these resources. To the regulating body, serves as a basis in reviewing and implementation of the policies regarding the harvesting of these species.
Scope and Limitation of the Study	The general intent of this study focuses only to determine the species composition, species richness, population density, size, and distribution of Spider conch *Lambis lambis; Strombus sp. and Anadara sp.* in Snake Island, Honda Bay, Puerto Princesa City, Palawan. Sampling will be conducted one-time survey in shallow sites that can be accessed through snorkeling and walking at low tide. Gastropod and Bivalve species be found within the 50x2 m^2 belt-transect will be identified, counted, measured, and photographed. There will be no collections of samples for conservation purposes.
Methodology	**Sampling Procedure** Three stations with three transect lines will be established from the shoreline to the shallow reef flats. A 50x 2 m^2 belt-transect lines in each station will be laid perpendicularly to the shoreline. All gastropods and bivalve's species found within the belt-transect will be identified, counted, photographed and measured the shell length, width and thickness (in mm) using Vernier caliper or ruler and weight (in grams) using a digital weighing scale. **Treatment on Data and Statistical Analysis** 1. Population density will be will be measured by determining the average number of species per area (m2) of the plot. 2. The distribution of species will be determined based in terms of their count per transect. The distribution method will be based on the difference in the mean (X) and variance (S2) ratio of the number of individuals per plot. The variance obtained will be plotted against their respective mean. 3. The relative abundance (RA) will be determined by dividing the number of species from one group by the total number of species from all groups. 4. The descriptive statistics of growth trait and morphometric relationships of total weight-length, weight-width will be analyzed by statistical software DPS 16.5. The relationship between total shell length (SL) and total weight (TW) and total shell width (SW) will be calculated

	by the power regression Y= a × Xb, where Y can represent as wet weight (g), X was the total shell width (cm), length (cm), and b was the value obtained from the trait's relationship. Being isometric when b = 3 and allometric when this is not the case (positive if b > 3, negative if b <3). The association degree of traits will be calculated by the determination coefficient (R2).
Expected Results and Output	Publication EIC Data Banking
References	Abarquez, V. R., Mendez, N. P., & Galan, G. L. (2019). Preliminary study on diversity of intertidal gastropods in Barangay Day-asan, Surigao City, Philippines. Ruhuna Journal of Science, 10(1). Gonzales, BJ 2004 "Puerto Princesa Bay and Honda Bay Palawan" An ecological profile FRMP Technical monograph series, No. 8; 28p Dolorosa, R. and Picardal, R. 2014. The molluscan fauna (gastropods and bivalves) and notes on environmental conditions of two adjoining protected bays in Puerto Princesa City, Palawan, Philippines Dolorosa R. and Conales S. 2015. Bivalves and gastropods of Tubbataha reefs Natural Parks. Vol.11 no.1 http://orcid.org/0000-0002-3863-3968. Floren, A. S. (2003). The Philippine shell industry with special focus on Mactan, Cebu. Coastal Resource Management Project of the Department of Environment and Natural Resources.