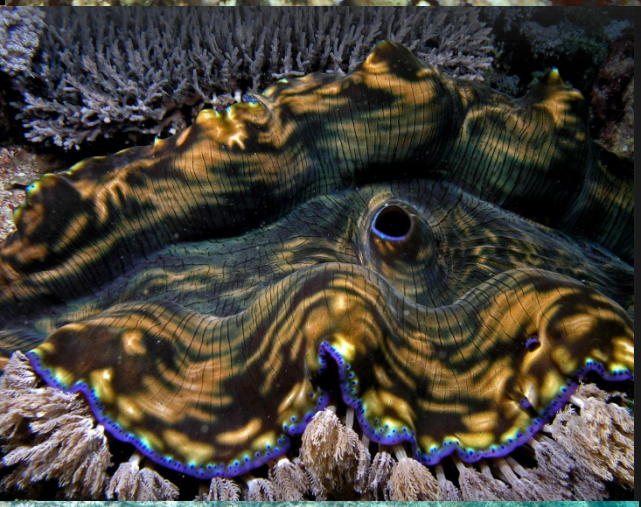

GIANT CLAM POPULATIONS IN ROMBLON PASS, PHILIPPINES

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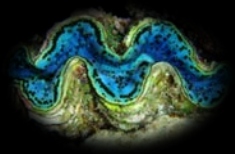
Introduction

What are Giant Clams?

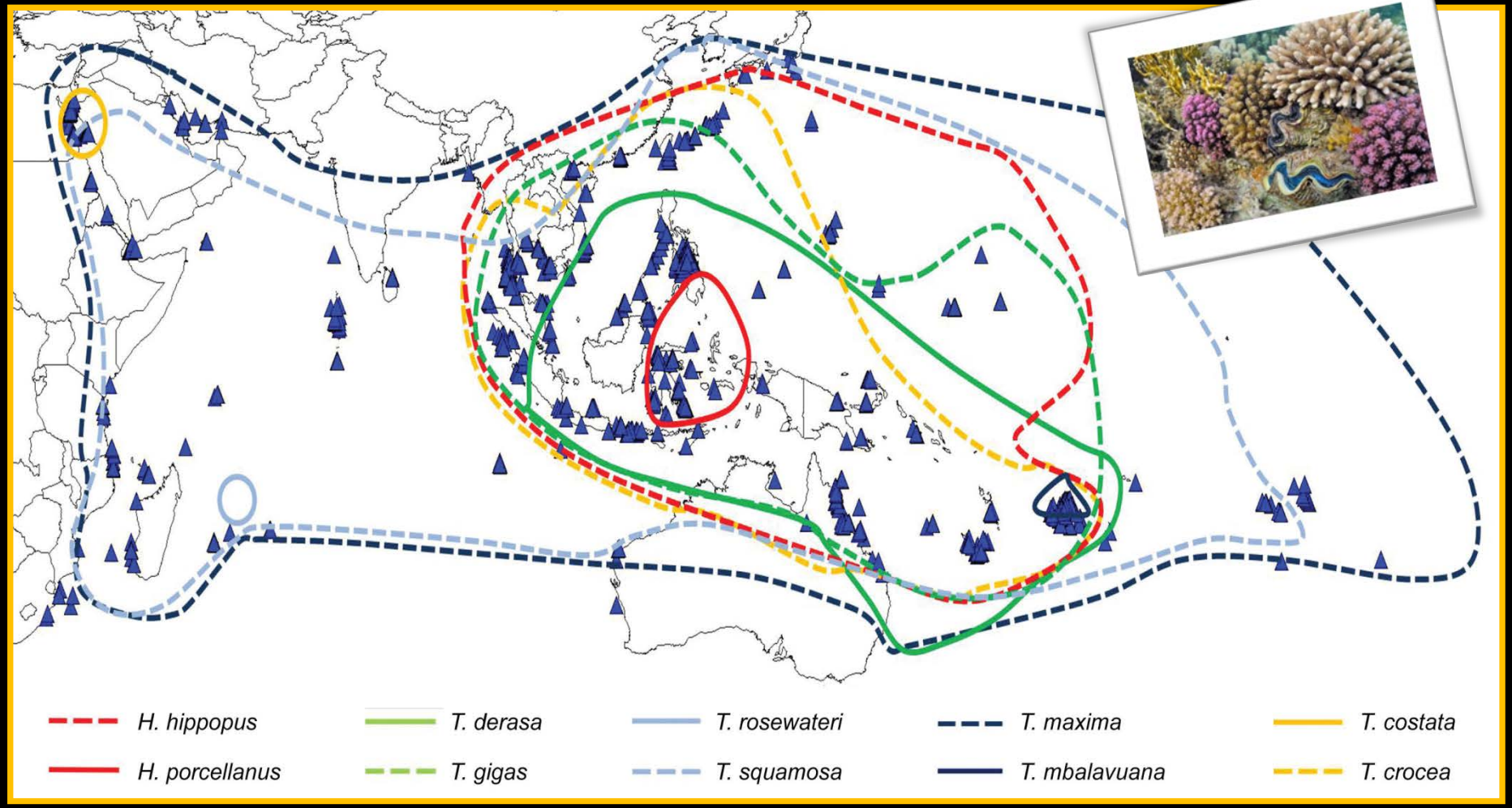
- Large-sized invertebrates with colorful mantles that are iconic to coral reef

- Sessile, marine bivalves that belong to Phylum Mollusca and family Tridacnidae
- Considered unique because of their symbiont algae called zooxanthellae in their mantles

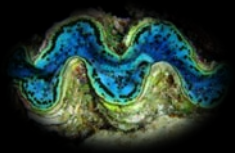
- They are the largest species of bivalve mollusk in the fossil record



Habitat and Distribution



Found in relatively shallow and clear waters, such as those associated with coral reefs



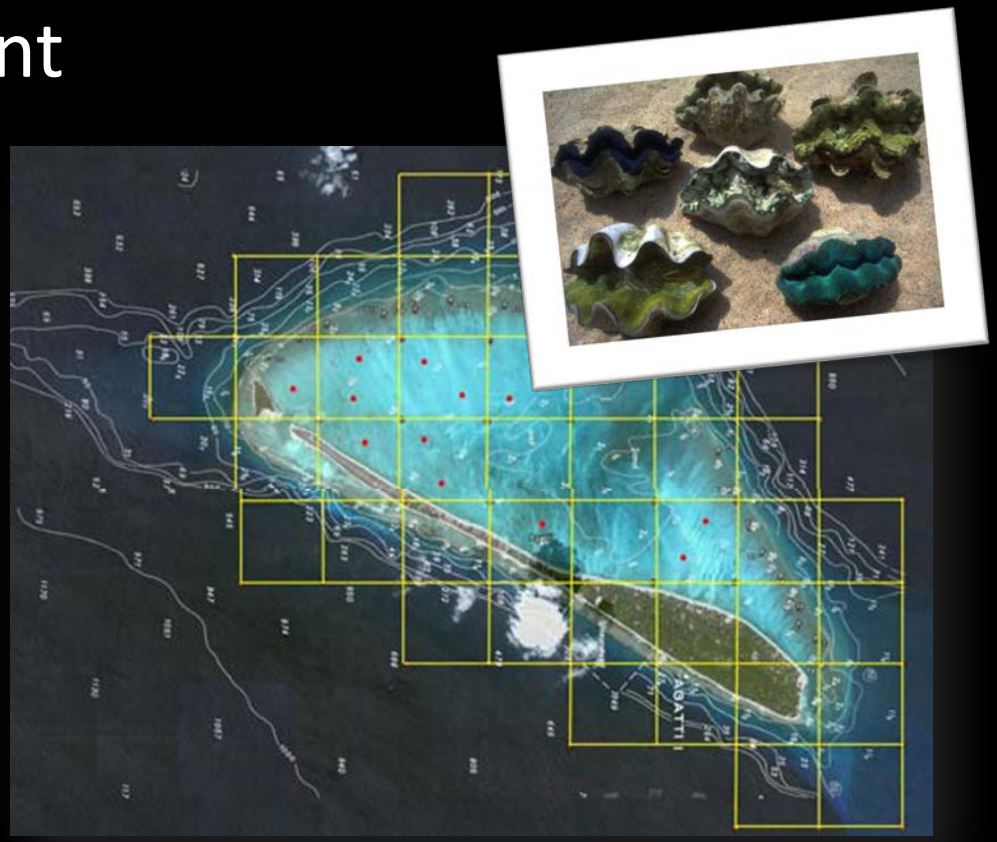
Species of Giant Clams

1. *Tridacna gigas*
2. *T. maxima*
3. *T. derasa,*
4. *T. crocea,*
5. *T. squamosa*
6. *T. teveroa*
7. *T. rosewateri*
8. *T. Costata*
9. *Hippopus hippopus*
10. *H. porcellanus*

Note: text in yellow are species found in the Philippines and the whole South East Asia

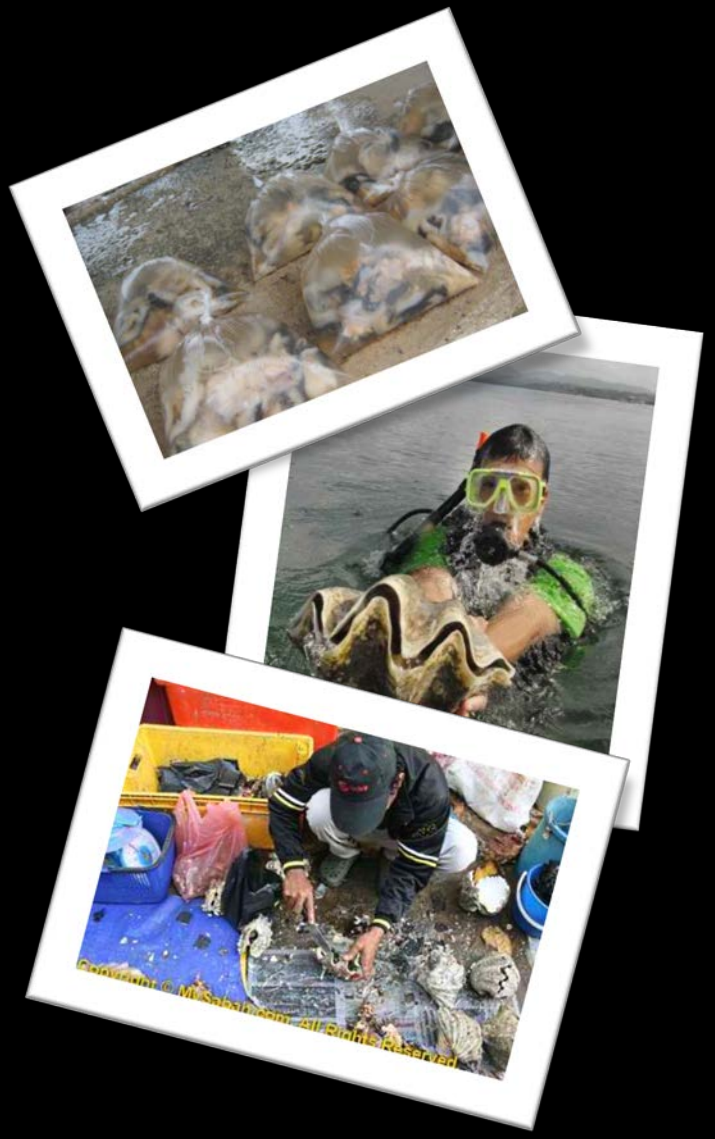
Giant Clams Population density

Varying densities of giant clams were recorded across the globe. Typically, the range is from 10^{-3} to 10^{-5} individual per square meter.



Threats

- Illegal Poaching of giant
- Over fishing
- The illegal trade in adductor muscle
- Increases in sedimentation and pollution.
- Increased sea surface temperatures



Conservation Status

- Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)
- R.A. 9147 (Philippine Wildlife Act)
- R.A. 8550 (Fishery Code)

Objectives

- Determine the species composition and density of giant clams across depths and between sites in Romblon Pass;
- Determine the size structure of giant clams across sites and
- Characterize the habitat substrate of giant clams.

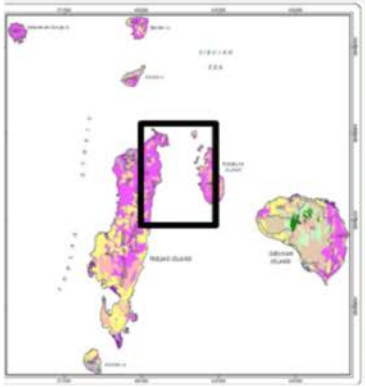
Methods

Locale of the Study

Philippines

Romblon Pass

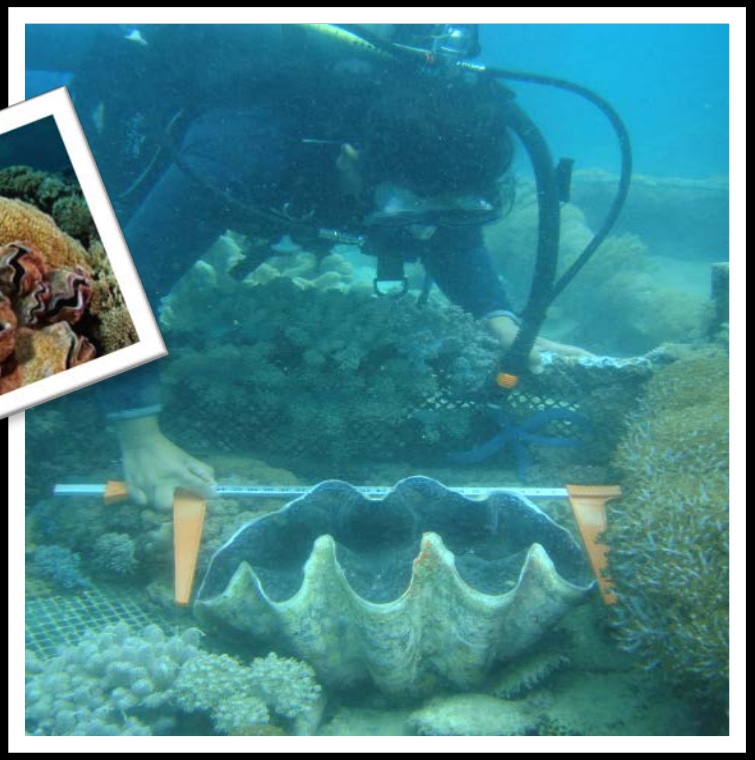
Province of Romblon



Research Design

- Descriptive-quantitative research design

Field Survey

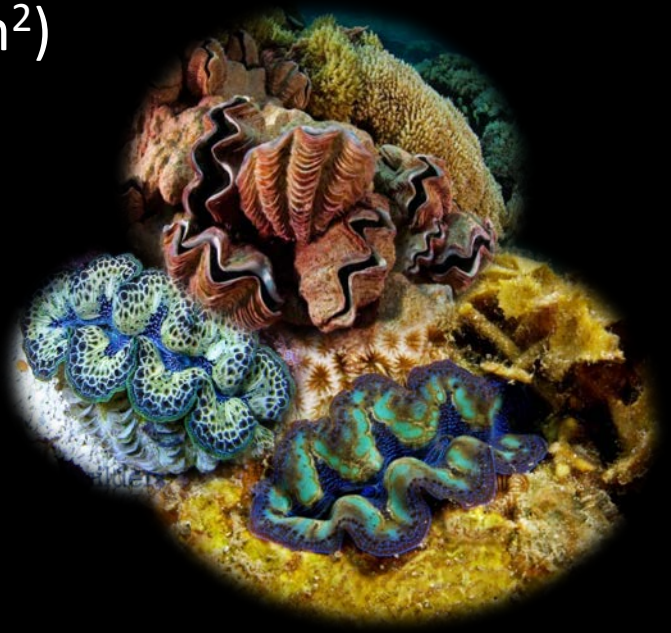


Data Analysis

- Density

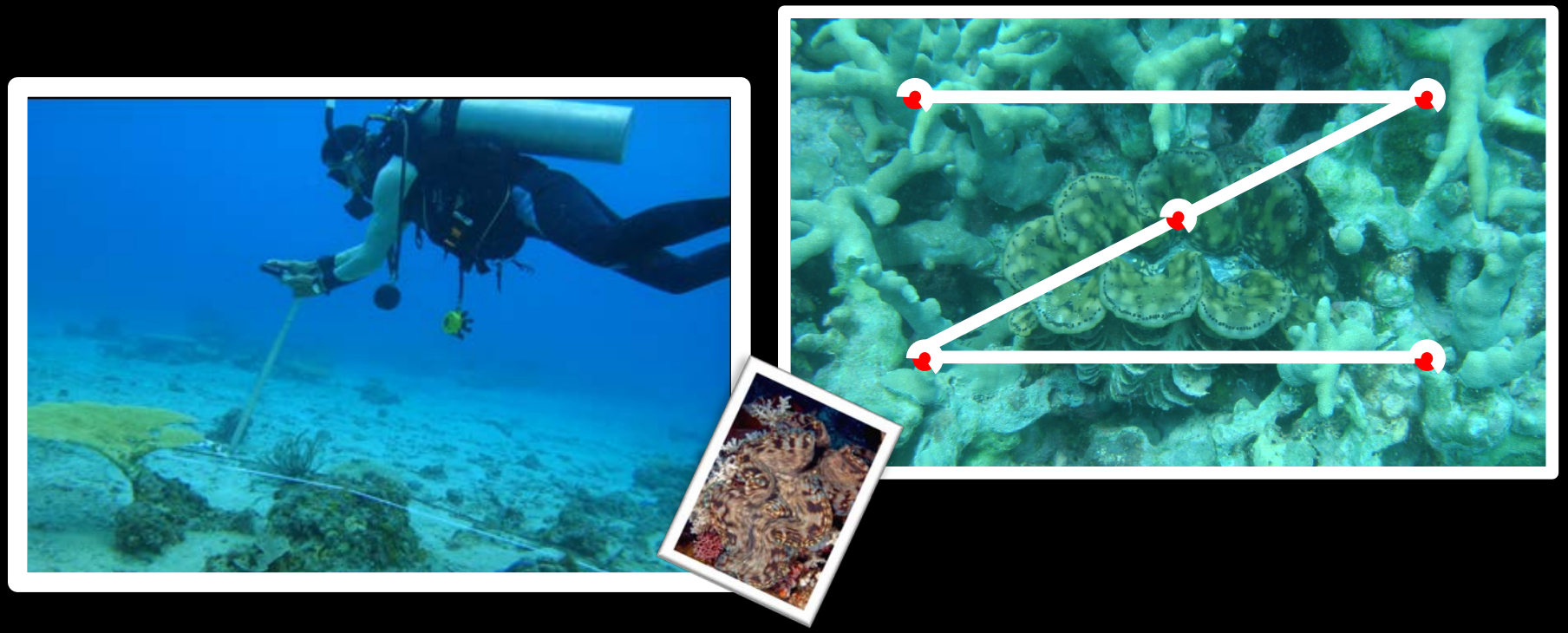
$$\text{Density per site} = \frac{\text{Total number of giant clams}}{\text{Area (200 m}^2\text{)}}$$

- Size Structure



Habitat Characterization

- A photo transects survey method

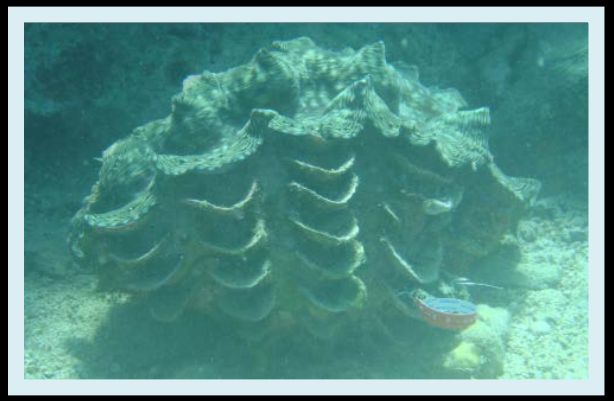


Result and Discussion

Species Composition of Giant Clam in Romblon Pass

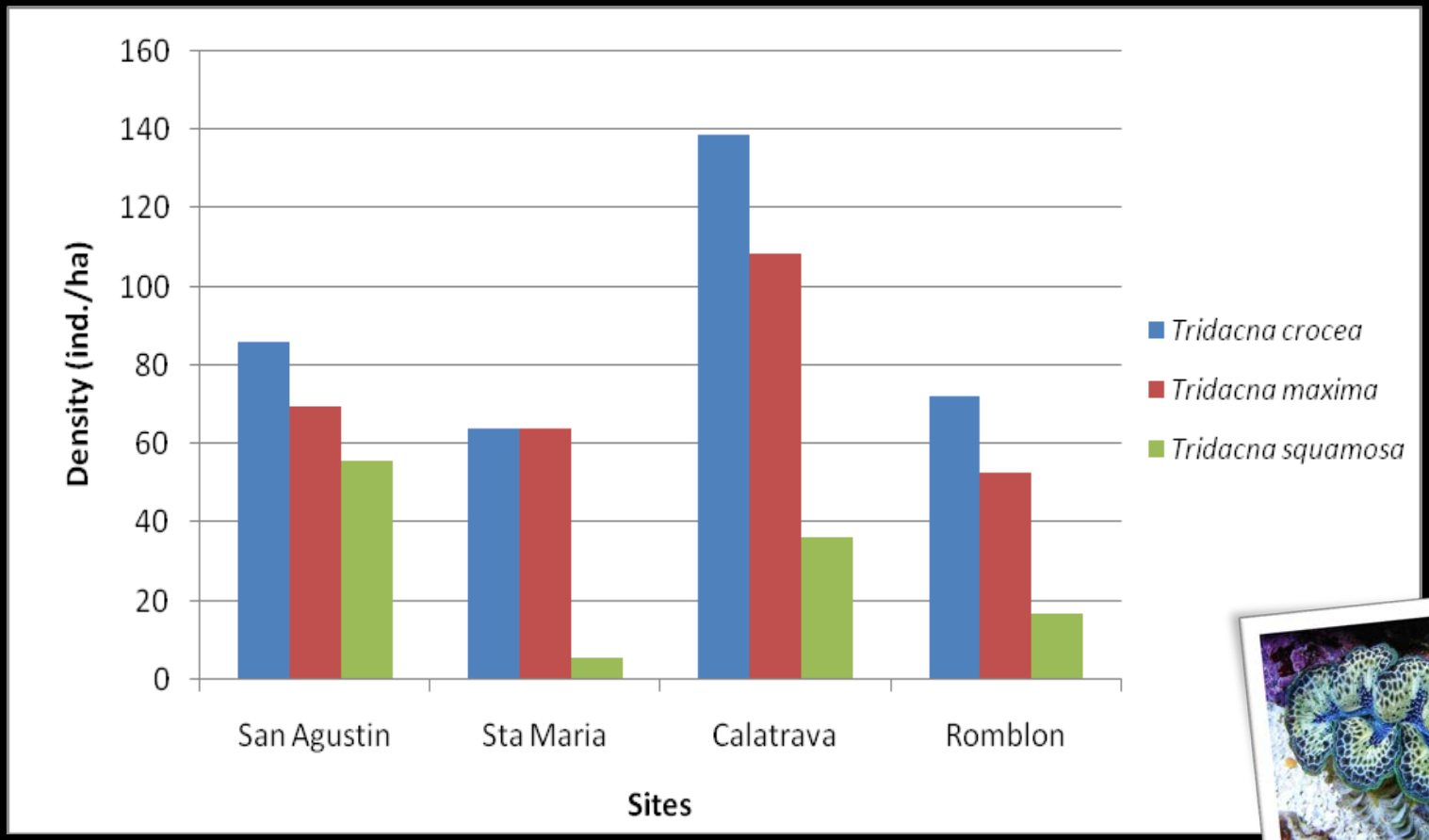
Tridacna crocea

T. squamosa



T. maxima

Density of Gant Clam



Population density of all giant clam species per site.

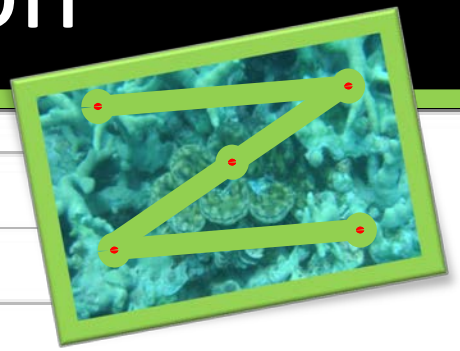
	Site	Area surveyed	No. of clams	Density (clam/ha)
San Agustin	Cabolutan	1,200 m^2	35	292 Ind./ha
	Cagboaya	1,200 m^2	21	175 Ind./ha
	Cawayan	1,200 m^2	20	166 Ind./ha
	Total	3,600 m^2	76	211 Ind./ha
Sta. Maria	Bonga	1,200 m^2	19	158 Ind./ha
	Sto. Nino	1,200 m^2	16	133 Ind./ha
	Paruyhog	1,200 m^2	13	108 Ind./ha
	Total	3,600 m^2	48	133 Ind./ha
Calatrava	San Roque	1,200 m^2	45	375 Ind./ha
	Guindawahan	1,200 m^2	36	300 Ind./ha
	Lapus-lapus	1,200 m^2	21	175 Ind./ha
	Total	3,600 m^2	102	283 Ind./ha
Romblon	Lonos	1,200 m^2	20	167 Ind./ha
	Ginablan	1,200 m^2	17	142 Ind./ha
	Agnipa	1,200 m^2	14	117 Ind./ha
	Total	3,600 m^2	51	142 Ind./ha

Density of Giant Clam between Depth

Size structure

Species	San Agustin		Sta. Maria		Calatrava		Romblon		Total	
	Range	Mean	Range	Mean	Range	Mean	Range	Mean	Range	Mean
T. crocea	5-14	9.35	6-15	10.22	5-17	8.98	5-17	7.5	5-17	8.99
T. maxima	7-19	11.12	4-13	8.43	5-13	9.17	5-15	8.42	4-19	9.34
T.squamosa	9-24	15.95	10-12	11	10-21	13.61	8-15	11.7	8-24	14.07

Habitat Characterization



Conclusions

- There are six giant clam species recorded in Romblom Pass, though only three species were found in the sampling sites.

- Densities vary per species but the highest was noted for *T. crocea*.

Continuation of conclusion

- Since shallow water at around 3m appeared as preferred habitat of *T. crocea* and *T. maxima* as cited by Hernawan in 2012.

- Though densities of giant clam species recorded in this study were comparable to other areas surveyed in the country, their population is threatened by illegal gathering that is apparently due to weak enforcement of laws pertinent to giant clams.

Continuation of conclusion

- The high incidents of dead corals (DC) and dead corals with algae (DCA) indicate that high temperature is thriving in the area. Despite of the condition of the substrates, it does not affect the population of giant clams on the area.

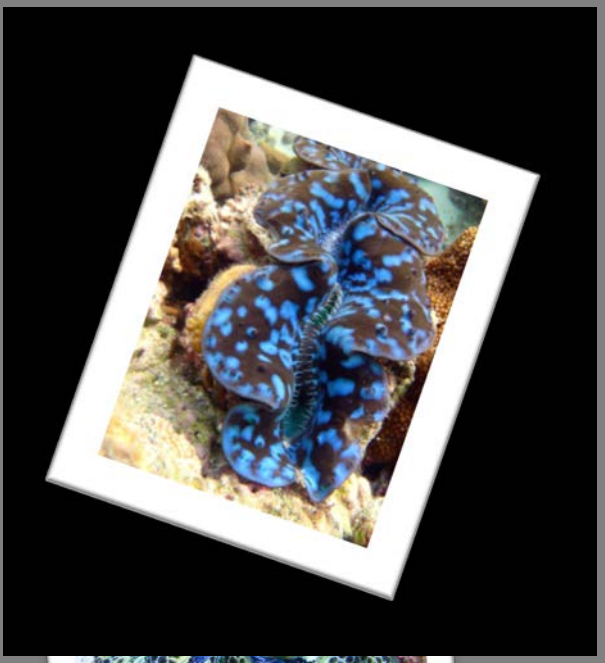
Recommendations

- Suggest to the LGU the areas with high densities of giant clams like Calatrava and San Agustin, Romblon to be declared as Marine Protected Areas (MPA).
- Conduct transplantation of giant clams should be done in areas with low populations.
- Conduct follow-up study or monitoring of giant clams population in the area.

Continuation of recommendations

- Conduct Information Educational Campaign (IEC) and prepare materials for the same to be distributed or posted in coastal areas.

- Suggest to the LGU the stringent implementation and strict enforcement of laws, rules and regulation on giant clams as stated in R. A. 8550



Thank You!

Acknowledgement

- DA-ATI
- RSU
- WPU-PPC