

**FIELD PRACTICE REPORT ON THE CULTURE AND BREEDING OF  
SIAMESE FIGHTING FISH (*Betta splendens*) AT BUREAU OF  
FISHERIES AND AQUATIC RESOURCES REGION 4-A,  
FRESHWATER DEMONSTRATION FISH FARM  
IN BAY, LAGUNA**

by

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Philippines**

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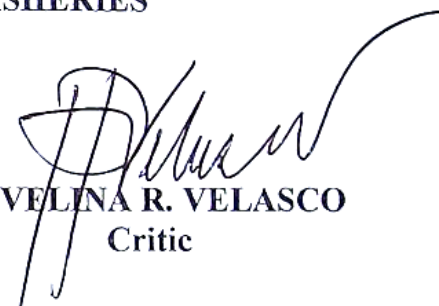
Undergraduate Field Practice Report presented to the faculty  
of College of Fisheries, Central Luzon State University  
in partial fulfilment of requirements for the degree


of

**BACHELOR OF SCIENCE IN FISHERIES**

Approved:

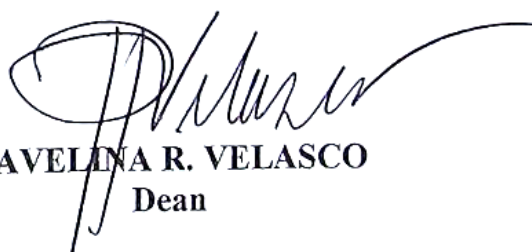
  
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**FRANC JACOB LAURETA SABACAN**

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**EXECUTIVE SUMMARY**

The Field Practice was conducted at BFAR Region 4-A (CALABARZON) stations, Padre Burgos Mariculture Zone in Barangay Campo, Padre Burgos, Quezon; Multi Species Finfish Hatchery in Unisan, Quezon; Regional Fisheries Research and Development Center in Barangay Bambang, Los Baños, Laguna. The main activities were performed at the Freshwater Demonstration Fish Farm located in Barangay Sto. Domingo, Bay, Laguna. The field practice commenced on June 24, 2016 and completed on July 29, 2016. Work days were from Monday to Sunday.

The Freshwater Demonstration Fish Farm (FDFF) produces quality broodstocks and fingerlings of egg laying and live bearing freshwater ornamental fishes. The field practice focused on the culture and breeding of Siamese fighting fish. The main activities performed in FDFF for two weeks included broodstock management, selection of breeders for mating, preparation of breeding facilities, conditioning of breeders, breeding of fighting fish, rearing of fry, harvesting of fighting fish and hatching of *Artemia* cysts.

Strengths of the station include its production of quality ornamental fishes, efficient facilities and equipment and providing technical assistance. However, the station is prone to calamities and outside the station is a dirty environment, considered as their weaknesses.

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1/Undergraduate Field Practice Report presented in partial fulfillment of the requirements for graduation with the degree of Bachelor of Science in Fisheries. *Prepared* under the supervision of Prof. Rodora M. Bartolome under the Department of Aquaculture, College of Fisheries, Central Luzon State University.

## REFERENCES

- Froese, R. and D. Pauly. 2010. Fishbase. Species Summary Siamese Fighting Fish. Accessed August 20, 2016 at <http://www.fishbase.org/summary/SpeciesSummary.php?id=4768>
- Sturgeon, D. 2001. "Betta splendens" (On-line), Animal Diversity Web. Accessed August 21, 2016 at [http://animaldiversity.org/accounts/Betta\\_splendens/](http://animaldiversity.org/accounts/Betta_splendens/)
- Brough, C. 2014. Siamese Fighting Fish Guide, Animal-World. Accessed August 27, 2016 at <http://animal-world.com/encyclo/fresh/anabantoids/bettas.php>
- Sharpe, S. 2015. How to Determine Betta Gender, Fresh Aquarium, About. Accessed August 27, 2016 at <http://freshaquarium.about.com/od/betta1/ss/How-To-Determine-Betta-Gender.htm>
- [https://en.wikipedia.org/wiki/Siamese\\_fighting\\_fish](https://en.wikipedia.org/wiki/Siamese_fighting_fish)