



The Mousseion

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FISHY TALES

•A fish is an animal which lives and breathes in water. All fish are vertebrates (have a backbone) and most breathe through gills and have fins and scales. Fish make up about half of all known vertebrate species.

•What do you call a person who studies fish?

Answer: Ichthyologist

•How are fish identified : A combination of the number of fins and their characteristics, scale counts, general features, colour, maximum length and distribution are used.

•How fishes breathe: Some fish have lungs and breathe air, but most breathe through gills. Gills are made up of thin sheets of tissue richly supplied with blood vessels. As water passes over them dissolved oxygen is absorbed into the blood and waste products such as carbon dioxide pass out into the water. The gills are protected by a large bony plate called operculum.

Source:

<http://www.indianchild.com/fish.htm>

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THE MURAL : Finally it's done! By S.S.Garibay

The UPV Museum of Natural Sciences' mural is now open for public viewing. The wall painting which started in April 2010 was finally finished and unveiled during the College of Fisheries and Ocean Sciences' 66th Foundation Anniversary on July 7, 2010.

As part of the improvement and enhancement of the museum display area, Ms. Ivane R. Pedrosa and Mr. Erro Nico M. Primaleon, both UPV students, were the two volunteer artists who made a great contribution to the creation of this art work.

The mural was created as background design to show the natural habitat

of the stuffed specimen of *Masturus lanceolatus* (sunfish). This specimen weighing approximately 180 kilogram was found dead and entangled in a fisher's net by Messrs. Rizalde Noblezada and Mark Montariel of Brgy. Mambatad, Miag-ao in May 5, 2008. The dead sunfish was immediately reported and turned over to the museum laboratory for taxidermy. Now mounted at the end portion of the museum hallway, the stuffed sunfish and the mural became a favorite area for visitors to take souvenir photos.

A mini program attended by faculty,



students, staffs and visitors had made the unveiling of the mural a success. During the program, the UP Intermedius entertained guests with their interpretation of the poem entitled "Sea Creatures" by Meish Goldish.

Prof. Pepito M. Fernandez, former Dean and faculty of CFOS also attended the occasion.

Fish Spa at the Museum By: J.A.D. Corvera



The UPV Museum of Natural Sciences also gave its share during the 66th Foundation Celebration of the College of Fisheries and Ocean Sciences by holding different activities. One of these activities includes the housing of the Tibiao Fish Spa set-up at the Museum lobby, Ground Floor of the Library Bldg., UP Visayas

Miag-ao, Iloilo. The Fish Spa, which was conceptualized by our very own CFOS graduates, is already making a name in Iloilo. At UPV, it has also become one of the main attractions during the three-day celebration. Visitors from different places came to see and experience Fish Spa at an affordable prize. A special discount was given exclusively to UPV staff and students.

Another activity conducted during the celebration was a lecture on "Whale Shark Conservation and Tagging in the

Philippines," this lecture was co-sponsored with UPV Graduate Students in Fisheries Association (UPV-GRASFA). The invited Speaker, Mr. Elson Aca, is an expert on whale shark conservation and tagging methods. The activity, which aims to educate students and general public through its Museum Education Program, was successfully attended by students, faculty, and staff of the University. Museum visit and lectures provide and enrich public awareness on fish conservation and marine biodiversity.

ON FOCUS...

The Red Frog Crab

By: Dr. Juliana C. Baylon
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Ranina ranina is an edible crab popularly known in Zamboanga City as “curacha”, a chavakano term for cockroach. These crabs are abundant in the waters off the islands of Southwestern Mindanao and Sulu Sea. The flesh of these crabs has a sweet and delicate taste and a favourite among the local residents. They are in demand by tourists who wanted to experience eating a “sea cockroach” from their plate. Unlike the usual crabs, the meat of curacha is mostly found in the body instead of the claws. Some are brought to Manila and sold in seafood markets together with other first class crabs such as “krusan” (*Charybdis feriatius*) and “blue crab” (*Portunus pelagicus*). Some are being exported to Taiwan. Prices vary depending on size and abundance. They are available year-round and especially plentiful during the months of November to March, where large crabs are sold at P300-350 per kilo. During lean months of April to October, price could be up to P500 per kilo.

R. ranina belongs to family Raninidae, order Decapoda and class Crustacea. This crab has an English name of “red frog crab” because their carapace is colored red and when they swim they exhibit hopping movement similar to that of a frog. They are characterized by an elongated carapace which is broad anteriorly. Males grow as large as 5.9 inches (150 mm) (Fig. 2) and females, 4.5 inches (115 mm) (Fig. 3). The carapace which is red in color has a series of white dots and covered with rounded spines. The abdomen is extended and visible

...their carapace is colored red and when they swim they exhibit hopping movement similar to that of a frog.

in dorsal view. Claws are very unusual in form, with the fixed finger extending at right angles to the hand. Walking legs are greatly flattened. They spend most of the time partially buried in the sand, with only the anterior part of the carapace visible. Movement is forward and backward, unlike the typical sideways walk of other crabs. They ambush small fish and other organisms from their hiding place in the sand. When disturbed, they would burrow deeply into the sand. They are considered to be gentle crabs because unlike the mud crabs of the *Scylla* species, they do not bite with their claws when threatened.

R. ranina is also found in the Eastern coast of Africa across Indian Ocean to Indonesia, Australian, Japan and Hawaii. Annual world commercial catch is estimated at 1000 metric tons. The largest commercial fishery of this crab is in Australia (Kennelly and Scandol 2002).

As a highly prized food commodity, *Ranina ranina* is a potential species for aquaculture, domestication and stock enhancement. To acquire information on the present status on the fishery and the biology of this crab, Dr. Juliana C. Baylon of the Division of Biological Sciences, College of Arts and Sciences, University of the Philippines Visayas, Miagao, Iloilo in collaboration with Prof. Oliver D. Tito, a professor at the Zamboanga State College and presently a PhD student at CFOS, are presently implementing a research project at the Zamboanga State College of Marine Sciences and Technology (ZSCMST) entitled “Fishery, reproductive biology and larval rearing techniques for the red frog crab *Ranina ranina* (Crustacea: Decapoda: Raninidae) caught in the waters of Southwestern Mindanao”, with funding support from the UPV In-house Grant. This is an attempt to develop hatchery techniques for the seed production of this crab. The seeds or juveniles produced from the hatchery can be used to restock the depleted resources in the natural environment.



(Photo source: www.panoramio.com)

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Payao

In many places, fishermen often see school of fish and many single fish that swims around a lot but are difficult to catch. One day they are here, but the next day they maybe in another place. They just come and go. Once a school of fish has found a Fish Aggregating Device (FAD), this school of fish aggregates under it and may stay there for days, weeks, or months before moving to another place. This way, a FAD can be a very efficient means to collect more fish from the same group.

Payao Use in the Philippines

In the Philippines, the local term for Fish Aggregating Device is Payao. Based on the Philippine Fisheries Code of 1998, a Payao is a fish aggregating device (FAD) consisting of a floating raft anchored by a weighted line with suspended materials such as palm fronds to attract pelagic and schooling species common in deep waters. The previous design of payao was crudely

made of few pieces of bamboo poles joint together with indigenous ropes. In its underside, hanging the line of the coconut fronds in one end and the line of anchor on the other end or both are combined by attaching the palm fronds in the anchor line. These simple payao were used by fishermen in Northern Philippines in coastal Cavite, Batangas and Mindoro (Aprieto, 1990). However, as the purse seine and other surrounding nets become widespread, payao evolved into more efficient structure.

Payao Design

Today, a payao is made up of one or two layers of up to 15 bamboo with 10 to 15 meters long and 2 to 4 meters wide in each layer. Although in some cases, a fisherman adds or reduces the number and length of bamboo poles. The bamboo poles are arranged and tied together with nylon twine to form a raft. The tips are bind together either with rope or used tire or the combination of the two. The anchor line is shackled at the wide end of the raft. The anchor is made up of empty drum or drums filled with cemented rocks. On the rear underside of the Payao is an attractor or lure, a hanging line 25 meters to 35 meters long with coconut fronds tied to it at 2 meter intervals and weighted with a 10 kg weight (Aprieto, 1990).

Why Fish Aggregates?

There are hypotheses that give explanation to the response of the fish towards a payao. The most widely accepted theory is that fish use floating materials to protect themselves from predators (Castro et al. 2002). Though for some species the reasons of their aggregation are mixed, providing both refuge from predation and

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(Photo by: G.S. Conserva)

a source of food, depending on the circumstances (Taquet et al. 2007). Adult fish of some migratory species like tuna and dolphin fish have also developed similar associative behaviour around drifting objects for other reasons like resting places, presence of bait fish, geographical references and school recomposition (Castro, 2002).

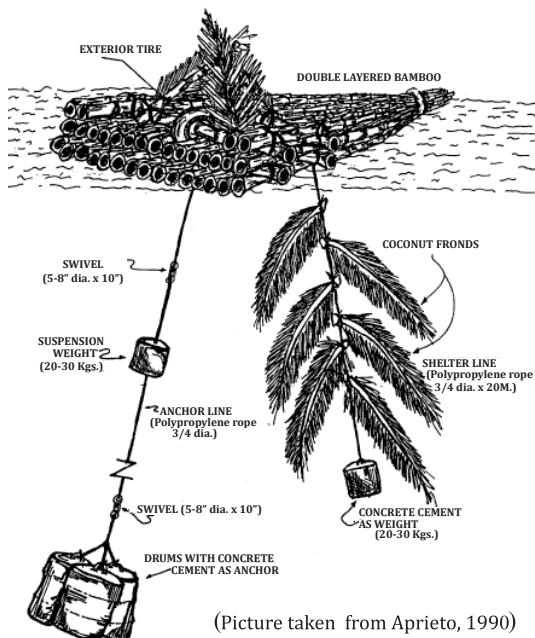
Possible Conflict

The use of payao in the Philippines is a very effective way of catching fish for it reduces the searching and catching time. However, it has a negative impact too. The fish that aggregates in payao may also include juvenile species like tuna. This poses threat to the already declining tuna industry in our country. At present, students of the University of the Philippines Visayas are conducting studies on payao. These studies aims to assess fish stocks, understand fish behaviour and gather more data regarding payao.

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(Picture taken from Aprieto, 1990)

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Taxidermy : A challenging experience

By: S.S. Garibay

At first, I hesitated to attend the training but as a museum coordinator I also need to update my knowledge and skills in taxidermy.

Taxidermy is the art of preparing, stuffing and/or mounting the skins of dead animals for study and exhibition purposes in a life-like form*. So together with Mr. Leonardo H. Mooc, our Museum staff, we went to the National Museum, Manila and joined the training on the "Taxidermy of Birds and Mammals" (An Advanced Course in Museology) last October 11-15, 2010.

The National Museum, whose mandate is to

preserve and conserve not only the cultural but also the natural heritage of the Philippines, takes the lead in disseminating scientific knowledge and laboratory techniques to promote scientific development in the country. With this mandate, the National Museum through the Museum Education Division (MED) organized the training to provide the technical know-how on heritage understanding, appreciation and conservation to its varied audiences and clientele.

After this training, I realized that an advanced course in Museology was really meant for participants

like us, who are engaged in the natural history discipline. The techniques taught and demonstrated in the training can be applied to all vertebrate species of animals including mammals, birds, reptiles, amphibians and fish. The training objectives are the following:

➤ To train participants on the scientific technique of taxidermy for study and exhibition purposes;

➤ To teach the anatomy and morphology of mammals and birds which are necessary for understanding the practice of taxidermy;

➤ To create a pool and network of taxidermists who will help promote and professionalize the

discipline; and

➤ To encourage participation in the preservation and conservation of Philippine fauna.

This five-day training course also included lectures, workshops, interaction with experts, and visits to zoological collections.

A closing ceremony was held on October 15, 2010 at the National Museum. Certificates of Participation were awarded to participants who had successfully completed the training program.

The UPV Museum of Natural Sciences now looks forward to organizing a similar training in the near future.

* National Museum, Manila

MUSEUM CO-SPONSORS COASTAL CLEANUP

By: V. B. Garcia



(Cleanup participants)

The international coastal cleanup is an annual activity participated by the local government and communities all over the country as mandated by PD No. 470, which declares that every third Saturday of September as International Coastal Cleanup (ICC) Day. For this year's theme: "*Basurang napabayaan, problema hanggang ibang bayan.*"

For UP Visayas, the cleanup was organized by the UPV Museum of Natural Sciences together with the UP Fisheries Guild. The cleanup site is the beach front of the Ocean Weather Laboratory. Students from different organizations and CFOS staff came to help with the cleanup.

Participants were divided into groups, each group were given an ICC Card for data recording and 4 different

colored plastic bags. The yellow bag for glass, black for plastic, red for metal, and green for other trash that does not fall in the first three classifications.

Every year, tons of garbage are collected all over the world. These garbage poses threats to humans; plastics and cans can be eaten by ocean animals; and nets can entangle marine mammals and turtles.

Ocean cleanup cannot solve the problem alone, the source of garbage must be stopped. Filling the ICC data card correctly and accurately is an important part of the cleanup. This data will be forwarded to the DENR office. By understanding what is out there, the government and institutions can work together on the possible solutions on ocean garbage.



(Fisheries students participating in the cleanup)

FISH CONSERVATION WEEK CELEBRATION

By: J.A.D. Corvera

The Museum of Natural Sciences conducted a series of activities in celebration of Fish Conservation week.

Proclamation No. 176 signed by the late President Diosdado Macapagal on October 21, 1963, pronounced the third week of October as Fish Conservation Week to emphasize to stakeholders the importance of conservation and proper management of fishery resources. This year's National Theme is: "*Asenso sa Pangisdaan Makakamit sa Sama-samang Pagtutulungan.*"

The celebration began with the opening of the exhibit at the Museum Lobby. The exhibit showcased the work of the Aquatic Science I class. It includes drawings, poems, and tarpaulin posters on marine conservation.

A storytelling session was also held. Students from Guibongan-Igtuba Elementary School and Miagao West Central School were invited for the storytelling session. The guest storytellers were museum volunteers Farisal U. Bagsit and Marciel G. Siladan.

There was also a talk on "Abalone Culture: The Philippine Setting." This activity was co-sponsored with the UPV Graduate Students in Fisheries Association.



Museum exhibit during Fish Conservation Week Celebration



Kindergarten students of Guibongan-Igtuba Elementary School



Storytelling session with Ms. Marciel G. Siladan