



## Pilipinas: Sa dagat at bundok, sa simoy at sa langit mong bughaw ...

**D**r. Daniel Montero from the Canary Islands, Spain, had a scientist's mind, an artist's eye, and good camera equipment. He maintains a website of incredible photographs of wildlife, people, and landscapes. He had planned to go to El Nido, Palawan to do wildlife photography after the ASEM Workshop on Education and Training last September, but he got some bad news from home and left early. But not before he saw a little bit of Iloilo and Guimaras. Through his eyes, the Philippines looks interesting and refreshingly beautiful.

But then, the Philippines is really a beauty. It's just that we do not see it anymore, or not enough of it. This issue provides a sampler of the country from recent travels of the AQD staff to Agusan Marsh, Lake Mainit, Surigao, Marikina, and Nogas. The Philippines is heavily fouled, but it is still a pearl within.



### Iloilo through Spanish eyes

*Dr. Daniel Montero's shots of (clockwise): a little girl in a little boat off Jordan, Guimaras; fishermen at work in Parara, Tigbauan; the hawksbill turtle *Eretmochelys imbricata* cared for by FishWorld; and the hawksbill being released at the Taklong National Marine Reserve in Guimaras*



Agusan River traverses Butuan City and exits north into Butuan Bay, carrying the overflow water from Agusan Marsh, 31 Oct 2005



At the entrance to the Marsh at Barangay Loreto, the science team poses with Datu Kandiboko (extreme right) and family. From left: Marcelino Tumanda, Benjie Lasam, David Alviola, Ellen Flor Doyola, Marianne Hubilla, Jojo Honculada, Jurgette Honculada, Ferenc Kis, and Danilo Sarong (Peter Alviola and Teodora Bagarinao not in photo), 1 Nov 2005



The Marsh yields gouramy, common carp, Nile tilapia, snakehead, snails, etc.

## Agusan Marsh

- Extensive flood plain (>40,000 ha) that collects water from the watersheds in Surigao, Agusan, and Bukidnon
- Wildlife Sanctuary under the National Integrated Protected Areas System (>200 species of birds, many migratory)
- Ramsar Site (Convention of Ecologically Significant Wetlands)
- Holds 15% of the fresh water in the Philippines



To survive the regular flooding, houses in the Marsh must be able to float. (above)..... or be on high stilts (below)



Datu Kandiboko has solar panels and a TV in his house



Ferenc Kis, a VSO volunteer from Hungary, speaks Cebuano and makes friends with the children in the Marsh, 1 Nov 2005

## Surigao

seemed so far from Iloilo, but once we made it to Butuan, it was an easy 3-hour bus ride away on Maharlika Highway, the good road that connects Metro Manila to Davao City. In a very real way, Surigao links the entire archipelago by anchoring the Nautical Highway. Surigao has three ports: a boulevard-like waterfront for the outrigger boats serving the nearby islands in Surigao; another one with a nice terminal for the shipping lines serving Cebu, Manila, and other islands in the Visayas; and a third one in Lipata Point serving the roll on, roll off Philtranco buses to and from Liloan, Leyte *en route* to Metro Manila.

Yet, Surigao had a clean natural and rural feel. Right at the city waterfront, there was no trash, but instead live coral heads under the boats. Short distances from the city are relatively clean beaches and friendly fishing villages. And on the reefs is life of incredible beauty and variety.

*TU Bagarinao*



*Surigao City ferry terminal, part of the infrastructure for the Nautical Highway*



*Outrigger ferry boats connect Surigao City and nearby islands*



*Placer town, inside a bay, facing the Pacific, is a rich fishing ground*



*Catch from the nearshore reef of Lipata Point, Surigao City, 3 Nov 2005*



*Mabua beach, Surigao City, 3 Nov 2005*



*Liang Bay from the sea grass bed on the southwest shore; seaweed farms, islands, and the Pacific surf in the distance*



Lake Mainit shore at San Roque, Kitcharao, 4 Nov 2005

## Lake Mainit

in Surigao del Norte is the fourth largest lake (17,340 ha) in the Philippines, but the deepest at 219 meters. Surrounded by mountains, the lake is only 27 meters above sea level and drains through Tubay River to the south and out into Butuan Bay. Thus, the lake has both freshwater and marine-derived fauna including the migratory eels, milkfish, snapper, etc.

Mainit town is in the northern lake shore and has unfinished infrastructure for the use of lake resources (fisheries, transportation, etc.). Maharlika Highway comes closest to the lake at San Roque in Kitcharao. Fishing here is small-scale but intense, done every single day, both for family consumption and for income. During our visit, we collected about 15 fishery species from the lake, including the goby *Glossogobius giurus* and the freshwater prawn *Macrobrachium* sp. Some of the catch (*Macrobrachium* and *Anguilla* eels) goes to Manila through the Philtranco buses, and on to Taiwan.

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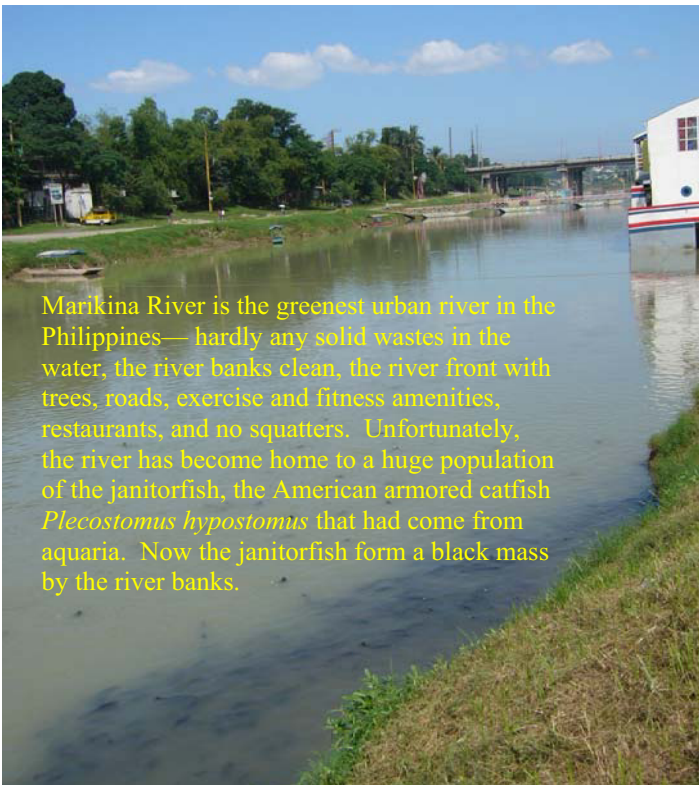
Small-scale fishing along the lake shores yields many species, several of them marine in origin



Kids take *Macrobrachium* from the lake to the local dealer along Maharlika Highway



Market in Mainit town sells lake fishes, including tilapia and gobies  
Inset: *Anguilla* eels in freezer of local dealer in San Roque



Marikina River is the greenest urban river in the Philippines— hardly any solid wastes in the water, the river banks clean, the river front with trees, roads, exercise and fitness amenities, restaurants, and no squatters. Unfortunately, the river has become home to a huge population of the janitorfish, the American armored catfish *Plecostomus hypostomus* that had come from aquaria. Now the janitorfish form a black mass by the river banks.



Marikina's public market is a good example of a local government that works



Marikit na by the river front



The Church is well maintained and impressive as well

Bayani Fernando could very well be the good President the Philippines will someday have. He and his wife Maria Lourdes have made Marikina a city its own residents could be proud of, and a local government unit worthy of emulation. When I visited Marikina last October, I felt *civilized*. Not inside the mall, but in the public market! And walking around the city. Visit Marikina and see for yourself.



The first shoe factory has been preserved, very close to modern shoe factories like Otto



The Museo ng Sapatos has 700 pairs of Imeldific shoes and photos of Imelda meeting the world's leaders during her the 25 years as First Lady

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*Nogas Island as seen from Anini-y, Antique, 19 October 2005*



*Participants arrive at Nogas Island and gather for a briefing*



*A beautiful Pempheris acidula provides shade from the mid-day sun*



*An enormous balete tree broken by a storm*

## **FishWorld joins UPV training on marine fauna**

The Philippines is the center of the center of marine biodiversity, according to a 2005 paper by Kent Carpenter and Victor Springer. Filipinos harvest an incredible array of marine organisms at enormous quantities every single day. And yet, very few Filipinos are involved in the scientific study of marine organisms, and most of us take our national treasures for granted. Most of the published knowledge about biodiversity in the Philippines comes from the work of American and European scientists.

Every summer for three years now, SEAFDEC FishWorld has brought high school science students to beaches, markets, rivers, farms, islands, and coral reefs to see and appreciate marine biodiversity. Then these students were taught how to recognize morphological differences and similarities among species, and how to use dichotomous taxonomic keys to find the correct scientific names for them. But FishWorld should also work with biology teachers themselves.

Biology teachers (high school and college) were the main participants in the First National Training-Seminar on Collection and Preservation of Common Seashore Animals conducted by the University of the Philippines-Visayas' Museum of Natural Science on 17-19 October 2005. FishWorld Curator Teodora Bagarinao was requested to lecture about biodiversity and conservation. In return, she requested Sol Garibay to allow me to join the seminar and both of us to go with the trainees to Nogas Island (off Anini-y, Antique). In her talk, Dr. Bagarinao showed the teachers how important biodiversity is to Filipinos and urged them to guide more students into the study of biodiversity.

Prof. Enrico Viloso of UPV was the main resource person—he taught what he wrote in his booklet *Collection and Preservation Techniques of Common Seashore Animals*. We learned that we should relax the specimens before plunging them in fixative, and never forget to make detailed labels. Prof. Nestor Yunque and Michelle Tumilba also gave lectures.

The trip to Nogas Island was most appreciated. The group walked through and around the island, guided by the Municipal Information Officer (Nogas is a municipal fish sanctuary). Snorkeling on the reef, we found echinoderms, corals swaying in the waves, and colorful fishes among the sea grasses.

The training-seminar allowed biology teachers to learn part of the work done by taxonomists—the collection and preservation of marine animals. The hope is that they will pass on to their students what they learned. Unfortunately, identification of species was not included in the UPV seminar. I guess that will be for FishWorld to do.

*EFC Doyola*



*Dead coral heads make up the beach*



*Finds from the reef*

## My third close encounter with a whale shark

The first time was in February 1996 in Buyuan, Tigbauan— an 8 meter long whale shark was trapped in the fish corral *punot* in Lim-ao. It was sold for P5,000. I called the pupils of Kinaadman Elementary School and we watched as the whale shark was slaughtered *while still alive*. It was heart-breaking.

The second time was in Villa Arevalo in November 2003. A whale shark had gotten caught in the filter net *tangab* in Iloilo Strait, and it was going to be landed. But it was low tide and the boat could not come close enough to shore. The media people were at the scene very promptly. I told one of them that it was a whale shark and should be released. BFAR was informed about the shark— I assumed the shark was released.

The third time was a logistics nightmare. A dead whale shark was landed in Morobuan, Jordan, Guimaras, on 30 November 2005. Mateo Doyola of the BFAR called his sister Ellen at FishWorld. Soon, BFAR Director Sonia Seville called me and asked if FishWorld would be interested in keeping a whale shark! I hesitated, but barely. Since we had just prepared a huge tank of formalin for the sunfish, I thought we might as well accommodate a whale shark. So I asked Dr. Seville to facilitate the transport of the shark from Morobuan to the AQD beach in Tigbauan. I was told the pumpboat would cost P5,000 and that there would be many big men on board to carry it into the formalin tank. OK...

The shark arrived at 5 pm and was put in formalin at 8 pm. It took all the power of 25 men from Morobuan and Buyuan, AQD's Cabstar truck and Pajero driven by Eufredo Dumaran and Rogyn Benedicto, a huge DRV dump truck, and Dennis Valencia giving instructions to the men. Dennis and Renee Valencia had rushed to the scene to help after I texted out news of the whale shark. It was also Dennis who moved the megamouth from outside the feed mill to FishWorld a year ago almost to the day.

At the late supper for the haulers, I learned that it was Nestor Villar who stopped the fishers from slaughtering the whale shark. Nestor is a member of the Bantay Bayan Foundation, an AFP-PNP Auxiliary Force, national in jurisdiction and headed by Regional Director Nedina Diamante and Provincial Director Loreto Gellor. The PNP and BFAR were informed of the capture of the whale shark, and soon the *Ratsada* crew came. By the time my whale shark #3 came to AQD, it was already a hunk of a star, and high-priced, too.

*TU Bagarinao*



*But it was people power that got the whale shark out of the water*



### Whale shark *Rhincodon typus*

Total length 5.2 meters, weight about 2 tons, a male

Found at 7 am on 30 November 2005

Caught and died in filter net (*tangab*) in Iloilo Strait off Morobuan, Jordan, Guimaras

World's largest fish, can grow to 12 meters and 34 tons  
A big-mouth plankton-feeding shark harmless to humans  
Populations depleted by harpoon fisheries



*Government was there (foreground from left): PO1 Precile Cordero of the PNP-Maritime Group, Rufino Briones of the Guimaras Public Safety Task Force, Ellen, Doris, Regional Director Nedina Diamante and Provincial Director Loreto Gellor of the Bantay Bayan Foundation*

## An oceanic sunfish comes to FishWorld

Ricardo Detablan, Jr., a porter on the outrigger boats plying the Iloilo City to Guimaras route, first noticed it around 5 in the afternoon of 23 November—a large fin sticking out of the water at the mouth of Iloilo River. He thought it was a shark and called on his fellow porters to help secure it. They soon realized it was a fish they had never seen before. It was so big, heavy, rough-skinned, and strong, they could not load it onto a boat. They also did not release it, realizing somehow that it was an important catch, perhaps one that would bring them some income. News of the strange fish spread quickly and people gathered to see it. Director Sonia Seville of the Bureau of Fisheries and Aquatic Resources was informed about it; she called AQD Chief Rolando Platon. The Chief called me and I went to Parola pier around 8 at night. There in the dark water was a sunfish, still alive, but tied up. Edwin Javier (BFAR) and I decided to wait until morning to take it back to FishWorld. The sunfish died during the night.

At 9 in the morning of 24 November, I came with a truck to get the sunfish. Director Seville turned the sunfish over to SEAFDEC/AQD. Ricardo and his friends staked their claim to the sunfish, and so I hired them to handle and transport it from Parola pier to FishWorld. We put the sunfish in a circular concrete tank at the fish hatchery (thanks to Denny Chavez). It took a lot of formalin to preserve such a big fish, and a lot of wood and plywood to cover the tank. It was an expensive undertaking, but now we have a sunfish at AQD.

As if that was not enough, a whale shark came, too, just a week later (see inside).

*TU Bagarinao*



### **Oceanic sunfish *Mola ramsayi***

220 cm total length, 130 cm body depth

270 cm high at the fins

Skin thick and rough (scales modified into ossicles)

Blubber very thick

Mouth small for such a big fish

Gill opening small, high on the body

Had lots of endoparasites

**Maligayang Pasko sa inyong lahat!**