

SEAFDEC AQD Matters

Newsletter of the SEAFDEC Aquaculture Department (AQD), Tigbauan, Iloilo, Philippines



Seated (left to right) are AQD Chief Dr. Joebert Toledo, SEAFDEC Secretary General Dr. Chumnarn Pongsri, AQD Deputy Chief Dr. Teruo Azuma, and BFAR VI Regional Director Drusila Esther Bayate; with country report presenters and plenary lecturers Dr. Eduardo Leaño (standing rightmost), Dr. Celia Pitogo, and Dr. Teruo Miyazaki (standing 2nd- 3rd from left)

Scientists and stakeholders discuss fish health issues

Fishfarmers can protect their stocks from disease outbreaks by practicing good aquaculture management. This was the message of the *International workshop on fish health management* held 1-2 March 2012 in Iloilo City. The workshop was organized by AQD with funding from the GOJ-Trust Fund. A total of 222 participants comprised of scientists, researchers and industry stakeholders attended the workshop.

Aquatic animal diseases are huge problems that hinder aquaculture production. In China alone, around \$1 billion is lost yearly to fish diseases.

SEAFDEC Secretary General Dr. Chumnarn Pongsri noted that the heavy use of chemicals and drugs in aquaculture is a non-sustainable answer to diseases. "Avoid unnecessary use of these drugs, and apply proper withdrawal periods of antibiotics to help keep aquaculture products safe for consumers," he advised.

Fish vaccination is an option to control diseases, and has been introduced in countries like Indonesia and the Philippines. This can prevent the occurrence

of potential diseases like streptococcosis, koi herpes virus, and vibriosis. At AQD, vaccines against viral nervous necrosis in pompano, grouper and seabass have been developed.

Other innovative approaches such as RNA interference for silencing gene expressions in viruses, use of lectins to boost the fish immune response, and aptamer technology were also discussed during the workshop. Lectins from some teleosts, for example, are said to be good biomarkers in innate immunity for fish health management. Aptamers on the other hand have the ability to bind to fish viruses; thus, can be used to prevent unwarranted outbreaks of viral diseases.

The workshop also emphasized the need for an enhanced regulation and better monitoring of diseases in accordance with the protocols of the OIE (Office International des Epizooties). Disease reporting is necessary so that countries can provide online reports and access diseases of regional concern.

Workshop participants also identified the gaps on fish health management

particularly in accelerating awareness and innovative research on fish pathogens. One of the problems highlighted by Lao PDR and Myanmar was the absence of laboratory facilities capable of performing molecular, histological, and microbial methods to detect pathogens. On the other hand in countries like Malaysia, Philippines, Thailand, and Cambodia, there is lack of fish health experts or qualified fish pathologists.

The workshop recommends capacity-building activities such as intensive hands-on training on fish pathology; continuous collaboration with relevant agencies; and information sharing to improve fish health management, food security, and aquaculture sustainability.



Dr. Clarissa Marte (left) and Dr. Yukio Maeno (right) give their impressions on the workshop. Dr. Marte notes that technological and resource capability of staff & laboratories should be increased especially for countries with limited resources. She further suggests that information dissemination be intensified online; while Dr. Maeno says that fish health networking is an effective way of disseminating information



Malaya Business Insight editor and writer Mr. Paul Icamina visits the AQD booth



The Irong-Irong Dance Company (IIRC) entertained the workshop participants during the welcome dinner on 1 March by performing several Filipino dances. IIRC is composed of students from the College of Physical Education, Sports, Culture, Arts, and Recreation of the West Visayas State University.

AQD attends NACA meetings



As NACA's (Network of Aquaculture Centres in Asia-Pacific) regional lead center in the Philippines, AQD participated in its 23rd Governing Council Meeting held in Siem Reap, Cambodia

from 27 to 29 March. During the meeting, AQD Chief Dr. Joebert Toledo presented AQD's activities in 2011. He said that there are significant areas of common interest in AQD's and NACA's work plans such as sustainable aquaculture, resource enhancement, fish health and

food safety, and adapting to climate change.

Prior to this, Dr. Toledo also attended the 11th Meeting of the NACA Technical Advisory Committee from 5-7 March in Bangkok, Thailand where NACA's work plan for 2012-2016 was reviewed.

Milkfish and seaweed culture as livelihood options in Aklan

Around 40 representatives from the academe, LGU, and private sector participated in AQD's workshop on *Small-scale aquaculture and livelihood ventures* in Kalibo, Aklan, Philippines on 6 March.

AQD scientist Dr. Felix Ayson talked about the culture of high-value marine fishes while AQD scientist Dr. Evelyn Grace Ayson shared to the participants the updates on milkfish culture. AQD researcher Ms. Maria Rovilla Luhan with technical assistants Ms. Hananiah Sollesta and

Ms. Jonalyn Mateo also taught the participants how to make seaweed value-added products such as gyoza (a dumpling), spring rolls, and pickles.

The workshop was a joint project of AQD, North Carolina State University, AquaFish-Collaborative Research Support Program, and the province of Aklan.



AQD scientist Dr. Evelyn Grace Ayson gives an update on milkfish culture



Participants learn how to prepare seaweed spring rolls

AQD researcher Ms. Maria Rovilla Luhan supervises a participant in making seaweed pickles



AQD scientist Dr. Felix Ayson lectures on the overview of high-value marine fish culture

AQD joins thanksgiving festival in northern Negros



Mr. Ferdinand Alico (rightmost), city agriculturist of Escalante (Negros Occidental) takes a peek at the AQD publications

AQD participated in the 5th Sinigayan Bugay-Sagay Agro-Aqua Fair 2012 in Sagay City, Negros Occidental, Philippines from 17 to 19 March. The activity was organized by the city government of Sagay in cooperation with the Sinigayan Foundation Inc as part of the city's annual festival called Sinigayan (thanksgiving in honor of the city's patron St. Joseph).

Earlier on 14 March, AQD scientist Dr. Nerissa Salayo, AQD visiting scientist Dr. Frances Nievaes, and AQD technical assistant Mr. Rafael Barrido conducted a



Abalone juveniles are being prepared for stocking

sampling of abalone stocks in Molocaboc, Sagay City. They were joined by Dr. Akiko Ikeguchi of Yokohama University, Japan who surveyed intertidal areas in Carbin reef as part of her study *Comparative study of tidal-flat culture in the western Pacific islands with biogeographic perspective*.

On 16 March, AQD Deputy Chief Dr. Teruo Azuma along with AQD senior technical assistant Mr. Vincent Encena II and Mr. Barrido installed long-lines and stocked abalone juveniles for the livelihood project of the Molocaboc community. This is for the GOJ-funded project on grow-out culture of abalone.

Research seminar



University of the Philippines Visayas Associate Professor **Dr. Philip Ian Padilla** shared his training experiences in Japan and in the USA on 9 March. According to Dr. Padilla, biomedical research in Japan is quite challenging compared to the USA, but US has a bigger budget than Japan. Dr. Padilla did

his doctorate in Nagasaki University (known for excellence in biomedical research) through a Monbusho scholarship and has been a postdoctoral fellow in the National Institutes of Health in the US.



Dr. Akiko Ikeguchi of Yokohama University talked about her study *Comparative study of tidal-flat culture in the western Pacific islands with biogeographic perspective* on 12 March. Her study looks at the analytical framework to describe the culture-environment relationship in tidal flats, focusing on biogeography.



A back-to-back seminar by **Dr. Masashi Kodama** of the Fisheries Research Agency in Japan and AQD technical assistant **Ms. Haydee Rose Dumarán** was held on 22 March.

Dr. Kodama talked about his study *Tidal variability of biochemical composition of suspended particulate matter and feeding environment of Manila clam, *Ruditapes phillipinarum* in Banzu intertidal sand flat, Japan*.

The results showed that phytopigment-suspended particulate matter ratio is high during high tide periods, suggesting this time as a suitable feeding environment for Manila clam. Also, his study shows that

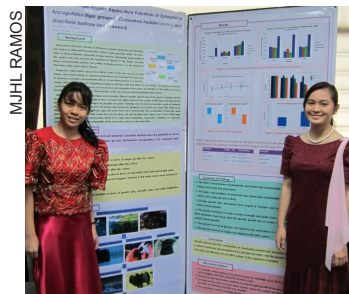


phytoplankton transported offshore during high tide is an important food source of Manila clam.

Ms. Dumarán on the other hand, recounted her training on fish and shrimp histopathology at Mie University in Japan sponsored by Marino-Forum 21 (a Tokyo-based agency supported by the Japanese government). Her activities, which was conducted at Professor Teruo Miyazaki's (an expert in studying histopathology) laboratory, include slide preparation of preserved fish samples; familiarization with the normal histology of the fish's gill, skin, liver, kidney, and spleen; and reading slides of tissues with disease manifestations.

Kudos to young Filipino researchers!

AQD congratulates **Ms. Raymee Tabobo** and **Ms. Zyra Grace Zaragosa**, young researchers from the Philippine Science High School - Western Visayas Campus for receiving the Outstanding Award for Significant Project in the *8th Regional Congress Search for SEAMEO (Southeast Asian Ministers of Education Organization) Young Scientist* held in Penang, Malaysia from 6 to 9 March. Their research project titled, "Integrated multi-trophic aquaculture potentials of *Epinephelus fuscoguttatus* (tiger grouper),



Ms. Zyra Grace Zaragosa (left) and Ms. Raymee Tabobo (right) pose at the poster of their research project

Crassostrea iredalei (oyster), and *Gracilaria bailinae* (red seaweeds)" was done in consultation with AQD scientist Dr. Ma. Junemie Hazel Lebata-Ramos.

AQD scientist lectures in MAP forum



AQD scientist Dr. Nerissa Salayo receives the *Certificate of Appreciation* given by MAP ABCDF President Mr. Victorio Amante

AQD scientist Dr. **Nerissa Salayo** gave a lecture during the MAP ABCDF (Management Association of the Philippines AgriBusiness and Countryside Development Foundation) forum on 20 March at Rockwell, Makati City. Dr.

Salayo discussed about the *Economics of small scale aquaculture development in the philippines: how are the poor benefiting?*

Graphic design seminar



The participants with resource person Mr. Alberto Purzuelo Jr (front row, in white)

Eager to learn the basics on designing posters, publications, and powerpoint presentations; 51 AQD senior and junior staff attended the *Seminar-workshop on graphic design techniques* on 16 March at AQD's Main Station in Tigbauan, Iloilo.

The resource person, Mr. Alberto Purzuelo Jr, talked about the basic design principles;

tips on effective design; and digital design concepts. Mr. Purzuelo also gave a demo on how to use the different tools in the Photoshop (one of the commonly used image editing software) work area.

The activity was organized by the Development Communication Section with support from the Staff Development Committee.

Guests @ AQD

Five Malaysians of the Ikhtiar Dominan Sdn Bhd company were at AQD on 29 March. They visited AQD's hatchery facilities in Tigbauan and talked to AQD scientist Dr. Emilia Quintino about the mud crab culture technology developed by AQD.



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Cheers to the graduates of 2012!



Christian Myrell Teruel, son of TID Officer-in-Charge Dr. Myrna Teruel, graduated from Iloilo National High School – Special Science Class



Dyan Reizl Valencia, daughter of AFD Head Ms. Renee Valencia, graduated *valedictorian* from Ateneo de Iloilo



Chad Anthony Aralar and **Erin Maryse C. Aralar**, children of BFS Head Engr. Emiliano Aralar and scientist Dr. Maria Lourdes Aralar, finished respectively with degrees in BS Manufacturing Engineering and Management at De La Salle University, Manila and BS Architecture at the University of the Philippines Diliman



Aishwarya Isabel de la Peña, daughter of researcher Ms. Milagros de la Peña, graduated from Philippine Science High School-Western Visayas Campus



Loushelle Leonida Ursua, daughter of researcher Ms. Shelah Mae Ursual, finished pre-school at Kinaadman Elementary School Inc



Xedric Llonel Laranja and **Xaraih Vllir Laranja**, children of associate researcher Mr. Joseph Leopoldo Laranja Jr, finished respectively elementary and pre-school at Kinaadman Elementary School Inc



Anne Gwyneth Traya, daughter of administrative officer Ms. Eileen Traya, graduated *4th honor* from Kinaadman Elementary School Inc



Nic Franz Mallare, son of senior technical assistant Ms. Mae Mallare, graduated from Kinaadman Elementary School Inc



Denise Marie Guevara, daughter of finance officer Ms. Marivic Guevara, finished pre-school at Georgia International School



Jan Martin Pagtanac and **John Michael Pagtanac**, sons of administrative assistant Ms. Elisa June Pagtanac, finished respectively high school at Ateneo de Iloilo and elementary at Assumption Iloilo



Undrich Jose Bautista, son of information assistant Ms. Richelle Bautista, finished pre-school at Kinaadman Elementary School Inc



Glory R. Gabawa, sibling of financial assistant Ms. Laila Galaura, graduated from Buenavista National High School



Erika Marie Bonitillo, sibling of administrative assistant Ms. Sunshine Salonga, graduated from San Jose Elementary School



Jashenee Balacanta and **Shayeen Balacanta**, siblings of administrative assistant Ms. Cheryl Sitchon, graduated respectively at Guimbal National High School and Guimbal Elementary School



Alfred Acdol and **Katrina Acdol**, children of administrative assistant Ms. Nancy Acdol, finished respectively BS Nursing and high school at the University of San Agustin



Anna Portalibre, sibling of administrative assistant Ms. Ruth Portalibre, finished BS Special Education from West Visayas State University



Jhan Rey Depaclarayon, son of senior technician Mr. Ramy Depaclarayon, graduated from Guimbal National High School



Jiawen Meria Gerolaga, daughter of genset operator Mr. Ariel Gerolaga, graduated from Pipindan Elementary School



Gabriel Olorvida, son of research aide Mr. Nemencio Olorvida, finished high school at Catalino D. Salazar National High School



Cheene Ann Tortosa, daughter of janitor Mr. Francisco V. Tortosa, graduated from Guimbal National High School