

SEAFDEC AQD Matters

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

AQD joins Asian-Pacific aquaculture conference in Vietnam



Dr. Mae Catacutan; Dr. Eleanor Tendencia; a Philippine participant; Dr. Jerome Genodepa and Prof. Valeriano Corre Jr. of the University of the Philippines Visayas; Dr. Relicardo Coloso; PhD student Ms. Gladys Ludevese of Ghent University; and Mr. Eliseo Coniza

The 2013 *Asian-Pacific Aquaculture* conference organized by the World Aquaculture Society was held in Ho Chi Minh City, Vietnam from 10 to 13 December. AQD scientist Dr. Eleanor Tendencia and senior technical assistant Mr. Eliseo Coniza were among the oral presenters.

Dr. Tendencia talked about her study *Management strategies employed by small-scale shrimp farmers in the Philippines in coping with economic crises due to shrimp diseases*. Her study shows that majority of the small-scale shrimp farmer respondents reverted to milkfish monoculture or polyculture of shrimp with milkfish, tilapia or crab. The farmers who are still

into shrimp farming stock their shrimps in net enclosures for 2-3 weeks before releasing into the rearing pond to increase survival. To lower rearing cost, most farmers rely on naturally grown food such as *lumut* and *lablab* as shrimp feed. Alternatively, to save on production cost, some farmers practice feeding shrimp with commercial pellets on the first month only instead of feeding with pellets for the whole production cycle.

Mr. Coniza, on the other hand, discussed his paper on the *Effect of liming on pond soil biota*. He found out that five tons per hectare of hydrated lime applied to the pond can increase the soil pH to about 12. The increase in

soil pH lowered the presence of *Vibrio* in the soil, eradicated carriers of disease-causing microorganisms (eg. crab) and predators (ie. fish). In addition, beneficial bacteria present in the pond were not affected by liming or the increase in soil pH.

Dr. Tendencia's participation was funded by the Department of Science and Technology (DOST-Philippines) and Government of Japan Trust Fund while Mr. Coniza was supported by AQD's staff development program. AQD scientists Dr. Mae Catacutan and Dr. Relicardo Coloso were also present at the conference through grants from DOST.

AQD and Hokkaido University: a continuing partnership

An international seminar on environmental-friendly aquaculture and stock enhancement in Southeast Asia was held on 3 December 2013 at SEAFDEC/AQD.

Through the Japan Society for the Promotion of Science – Asia-Africa Science Platform (JSPS-AASP) program, Hokkaido University had been supporting the research done by some AQD staff.

During the seminar, four papers (3 AQD and 1 Hokkaido University) were presented. The topics included fatty acid profiles in abalone fed artificial diets supplemented with different enrichment products, identification of bacterial species in biofilm on settlement plates for abalone larvae, genetic studies on species identification & population structure of seahorse for stock

enhancement and the various achievement in abalone and seahorse studies by the JSPS-AASP program.

The partnership of AQD and Hokkaido University will continue as Prof. Yasuaki Takagi presented three more programs that AQD staff can participate in, including the JSPS-DOST Bilateral program, Asia-Africa Science Platform program, and RONPAKU (dissertation, Ph.D.) program.

“Try to be aggressive!” AQD Chief Dr. Felix Ayson advised AQD's young technical assistants whom he hopes to become bonafide AQD scientists in the future.



(L-R) Hokkaido University's Prof. Arai, Prof. Yasuaki Takagi, AQD Deputy Chief Dr. Teruo Azuma and Chief Dr. Felix Ayson.

Future patent agents

SEAFDEC/AQD serve as a venue for a review course for the *Patent agents qualifying examination* from 7 until 10 January 2014.

The review course was organized by the Intellectual Property Office of the Philippines (IPOPHL) for 50 staff (identified as future patent agents) from the academe and other institutions in the Visayas and parts of Mindanao including AQD. The staff had undergone a series of lectures

on patent search and drafting for a total of 13 days from March to November. The previous lectures/practicals were held in various schools and was spearheaded by West Visayas College of Science and Technology (WVCST).

Exam passers will become registered patent agents who can facilitate and draft patent application to IPOPHL, the patent-granting office. The schedule of the qualifying exam is yet to be determined.

AQD put up its Innovation and Technology Support Office (ITSO) in March 2013 which is composed of associate scientist Dr. Roger Edward Mamaug, laboratory manager Ms. Margarita Arnaiz, senior information assistant Mr. Daryl Superio, and administrative assistant Ms. Lyn Lee Lucero. ITSO formulates policies, strategies and action plans in patent search and patent drafting, as well as, assisting in patent prosecution.



Reviewees during a lecture at the review course

Photos by JM de la Cruz

The best of research seminars

AQD's Journal Club presented awards to staff who helped make the 2013 research seminar series a success.

Dr. Veronica Alava was given the best presenter award for the presentation of her study *Lipid, fatty acids and protein utilization during egg development in mud crab (Scylla serrata)*.

Fish health section (group) and seven staff (individual) including Ms. Germin Moquera, Ms. Schedar Novilla, Ms. Charis Bais, Ms. Gregoria Pagador, Dr. Jacques Zarate and Dr. Edgar Amar garnered the best in attendance awards.



Photos by JM de la Cruz

Research seminar

Transfection of red fluorescence protein gene in goldfish



Can one deliver a gene into a fish cell and get this expressed successfully? Yes, according to Dr. Casiano Choresca Jr. when he visited SEAFDEC/AQD on 9 January 2014. He described his Ph.D. work on *Transfection of the red fluorescent protein gene in the goldfish caudal fin-derived somatic fibroblasts cells* done at the Seoul National University's Laboratory of Aquatic Biomedicine, College of Veterinary Medicine in Korea.

Transfection is the process of deliberately introducing nucleic acids into cells. Using

goldfish *Carassius auratus*, Dr. Choresca determined (1) the expression of red fluorescent protein gene caudal fin primary cells and (2) the transfection efficiency of plasmid DNA using DSRed Express 2 to various Fugene HD transfection reagent ratios. PCR results confirmed that the transfected cells were positive for the protein, and that the reagent ratio of 1:6 (DNA:Fugene HD) worked best.

Dr. Choresca is currently a faculty of the graduate school at the Iloilo State College of Fisheries in Barotac Nuevo, Iloilo.

New heads of offices



Dr. Mae Catacutan
Head, Technology Verification and Demonstration Division and Concurrent Head of Nutrition and Feed Development Section, RD



Ms. Maria Rovilla Luhan
Head, Farming Systems and Ecology Section, RD



Dr. Rolando Pakingking Jr.
Head, Fish Health Section, RD



Dr. Emilia Quinitio
Head, Dumangas Brackishwater Station



Dr. Myrna Teruel
Head, Technology Verification Section, TVDD



Dr. Veronica Alava
Head, Demonstration and Packaging Section, TVDD



Atty. Gina Gualingco-Gomez
Head, Human Resource Management Section, AFD

Now accepting enrollees!

AQD released the 2014 training schedule. For more information, <http://www.seafdec.org.ph/2014/2013-training-schedule/> or email training@seafdec.org.ph



Photo by CV Genzola

Date	Training Course*	Venue**
17 – 21 Feb 05 – 09 May 08 – 12 Sept	Freshwater Prawn Hatchery & Grow-out Operations	BFS
10 – 14 March 02 – 06 June 11 – 15 Aug	Tilapia Hatchery & Grow-out Operations	BFS
21 – 25 Apr	Carp Hatchery & Grow-out Operations	BFS
22 Apr – 06 May	Sandfish Seed Production, Nursery and Management	TMS
07 – 27 May	Abalone Hatchery and Grow-out	TMS
27 May – 18 June	Mud crab Hatchery, Nursery and Grow-out Operations	TMS
18 June – 25 July	Marine Fish Hatchery	TMS
08 Sept – 22 Feb 2015	Distance Learning Course: Basic Principles of Health Management in Aquaculture	Online
13 – 17 Oct	Catfish Hatchery and Grow-out Operations	BFS
25 Nov – 04 Dec	Community-based Freshwater Aquaculture for Remote Rural Areas of Southeast Asia	BFS
Other courses		
By arrangement	Fish Health Management	TMS
	Hatchery of Selected Species (Milkfish/Seabass/Grouper)	TMS
	Seaweed Farming	TMS
	Cage/Pond Culture of Selected Marine Species	TMS
	Detection of Viral Diseases in Fish and Shrimp	TMS
	On-site Training Course on Aquaculture Technologies <i>(depending on training need of clients)</i>	

*Training courses may be postponed if minimum number of participants cannot be attained. Courses should have at least 7 local participants

**BFS – Binangonan Freshwater Station, Tapao Point, Binangonan, Rizal; TMS -Tigbauan Main Station, Tigbauan, Iloilo

Wet lab ready for use

A blessing for the mini wet laboratory was held at AQD's Igang Marine Station on 19 December 2013. AQD Chief Dr. Felix Ayson together with division heads Dr. Ma. Junemie Hazel Lebata-Ramos, Dr. Emilia Qunitio, Dr. Evelyn Grace Ayson and Ms Kaylin Corre and other AQD staff graced the activity.

The mini wet laboratory can help AQD researchers perform experiments in a more conducive space.

Its construction was co-funded by JIRCAS (Japan International Research Center for Agricultural Sciences) with AQD.



Photos by MR Yap

The blessing was officiated Rev. Father Noe Lozada of Nueva Valencia Parish



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PLAN YOUR DAY...

...using the 2014 SEAFDEC/AQD calendar! It features photos and write-ups on AQD's R&D work for the past 40 years.

Five hundred copies were published and distributed. If you want to share with friends, it is available from <http://www.seafdec.org.ph/2013/free-downloads/85/>



AQD organizational structure

AQD is composed of...
The organizational structure of AQD is as follows:
AQD is headed by the Director, Dr. Felix Ayson, D.V.S., who is assisted by the Deputy Director, Dr. Ma. Junemie Hazel Lebata-Ramos, D.V.S., and the Assistant Director, Dr. Emilia Qunitio, D.V.S.

Photoshoot in December 2012