

SEAFDEC AQD Matters

In-house newsletter of the SEAFDEC Aquaculture Department, Tigbauan, Iloilo

AQD holds ABOT AquaNegosyo Forum

Aquaculturists and neophytes alike turned out in force to attend the ABOT (Agree-Build-Operate-Transfer) AquaNegosyo Forum held October 15-16 at the Philippine Social Science Center (PSSC).

After the welcome remarks of AQD Chief Dr. Joebert Toledo, Dr. Nerissa Salayo gave a background on the ABOT AquaNegosyo, whose objective is to transform AQD's science-based technologies into operational businesses while enabling resource-generation mechanisms for AQD.



MT CASTAÑOS



From top: Dr. Hurtado and Dr. Toledo get ready for their close-ups; Dr. Efrén Ed. Flores, Atty. Malcolm Sarmiento, Mr. Renato Agbayani, and Dr. Rolando Platon during a session break; participants at their attentive/interactive best, including former AQD chief Dr. Flor Lacanilao (second from left); attendees in browsing mode



From left: AQD Chief Dr. Joebert Toledo, Mr. Phillip Daffon, BFAR Director Malcolm Sarmiento, and Mr. Phillip Cruz

Representing Department of Agriculture Secretary Arthur Yap, Atty. Malcolm Sarmiento of the Bureau of Fisheries and Aquatic Resources delivered the keynote message and bared plans to put up a mariculture highway in the near future.

The first session dealt with aquaculture business perspectives and experiences, wherein entrepreneurs Mr. Philip Cruz (Cruz Aqua Corporation), Mr. Rey Acap (abalone hatchery and grow-out operator), and Mr. Peter Uy

(milkfish grow-out operator) gave their take on the status, constraints and opportunities in the global and local fisheries and aquaculture industries and the hardships and successes in small- and medium-scale aquaculture operations. Mr. Uy, in particular, noted that he took the concept of milkfish modular cage system from the Igang Marine Station during a visit.

For these ventures to succeed, support systems must be in place. This is where institutions such as the Department of Agriculture, Department of Trade and Industry, Land Bank of the Philippines, Philippine Crop Insurance Corporation and Department of Science and Technology come in, whose representatives talked about their services and other relevant information. >2





Let them eat seabass: the participants got served with seabass cooked five different ways, including sweet and sour and teriyaki courtesy of Casa Ilongga



Technologies on the hatchery, nursery and grow-out of major aquaculture commodities like abalone, mudcrab, grouper, milkfish, seabass, snapper, tiger shrimp, giant freshwater prawn, catfish, tilapia and carp were then discussed by AQD's field of experts.

Emerging technologies on seaweed tissue culture, seahorse hatchery and grow-out were also given their dues to give the audience a glimpse of what's to come in aquaculture. AQD's diagnostics and

analytical services were also given a shout-out.

AQD also set up a booth and put up its publications and t-shirts for sale, which were snapped up by the participants, grossing around P53,000.

A seabass festival was also showcased during lunch to introduce the tastebuds of the uninitiated and connoisseurs alike to this sought-after delicacy.

All in all, the two day forum, through the efforts of all concerned, was a smashing success.

The forum's bottom line, in tables

What aquaculture commodity would give me the most bang (i.e., profits) for my buck (i.e., capital)? Really, what's a forum without Q&A sessions?

Industry stakeholders posed their queries, which were gamely answered by the AQD scientist/s concerned.

Dr. Clarissa Marte and Dr. Relicardo Coloso compared the

various commodities vis-a-vis factors such as croppings per year, survival rates, payback period, and other relevant indicators. Figures in red are rosy indicators, while those in blue are just the opposite.



HATCHERY	Abalone		Grouper	Seabass	Milkfish	Freshwater prawn	Catfish	Tilapia	Mudcrab		Shrimp	
	90 day juvenile	60 day nursery							zoea to megalopa	megalopa to crablet	Rented	New
Number of crops/yr	20	20	6	3	24	4	10	20	6	6	8	8
Production per run	12,800	10,800	60,000	600,000	960,000	700,000	120,000	179,200	192,000	96,000	1,600,000	
Survival rate (%)	4	85	5	50	40	70	25	70	3	50	25	25
Investment cost		1,061,000	2,614,500			2,100,000	150,800	304,000		280,000	250,000	641,500
Variable + Fixed cost	585,000	682,962	265,436	369,382	115,789	304,823	23,764	886,000		142,261	150,087	145,737
Net income per run	950,958	1,057,838	454,564	1,430,618	124,211	388,332	24,236	79,130		145,739	89,913	94,263
Payback period	1.02	0.92	0.89	0.58	0.82	0.49	0.59	0.48		0.27	0.81	0.75
ROI	101.48	111.56	104.32	164	114.02	176	159	163		78.53	49.58	118
IRR %	98.49	109.24	139			166	158	146		146	286	113



MT CASTAÑOS



GROW-OUT	Abalone	Grouper	Seabass	Snapper	Milkfish	Freshwater Prawn		Catfish	Tilapia	Carp	Mudcrab		Shrimp		
						pond	cage				Nursery	Grow-out		without bio-security	with bio-security
												Mono	Poly-culture		
Production area	1 module	1 module of 4 cages (48 m ² /cage)			384 m ³		1 ha with 8 units cage module	1,000 m ²	5 ha	5 ha	5,000 m ²	0.5 - 1 ha	0.5 - 1 ha	1 ha	1 ha
Number of crops/yr	3-4	2	2	2	2	2	2	2	2	2		2	2	2	2
Culture period (mos.)	9	5-6	5-6	5	5	5	4-6	120 days	5-6	2	30 days	4-5	4-5	150 days	150 days
Production per crop (kg)	189	1,600	1,728	1,310	7,296	2,700	2,700	770	2	45 tons	100,000	280	280	3,000	5,250
Survival rate (%)	90	80	90	90	95	70	70	70	75	60	50			40	70
FCR	20-25	2	1.6	1.6	2.5		1.8-2.2	2.3	1.8					2	1.7
Investment cost	30,000	615,360						30,900	522,250	604,000		78,000		450,000	632,000
Variable + Fixed cost	42,992	240,760	159,934	140,425	307,680	989,000	1,060,000	64,000-77,000	3,007,906	496,208	259,833	82,160.00		1,290,632	2,014,378
Net income per run	13,707	143,023	44,496	48,991	27,088	180,500	144,500	23,000-35,700	671,125	149,076.15	70,083	52,240	79,240	281,684	594,811
Payback period	0.62	1.51	2.62	3.22	4.93	0.8	1	0.8-1.2	0.72	0.5	0.21	0.63	0.49	2.09	1.57
ROI	137	289	90	55	121	110	76	80-122	129	166	305	134	203	43.65	59.06
IRR %		359	140	98	209	76	70	148-231	108	163	434	85	148	124	188

AQD signs accords with new collaborators

Two new agreements for collaboration on new projects have been entered into by AQD in the last two months.

An agreement to develop propagation techniques of the Napoleon wrasse (*Cheilinus undulatus*) with the Palawan Aquaculture Corporation, was signed last September 5 at the Tigbauan Main Station.



Under the terms of agreement which is in effect for the next two years, the PAC (represented by Engr. Ben Lim Jr) is tasked to make available its existing stock of Napoleon wrasse breeders for spawning and larval rearing activities; shoulder the cost of maintaining the breeders; provide eggs or yolk-sac larvae and other inputs (phytoplankton and rotifer stocks) and facilities.

On its part, AQD is tasked to assist PAC in developing techniques to improve larval survival of the wrasse; shoulder expenses for small-scale

experiments to be conducted at TMS; send staff to visit the PAC facility in Coron, Palawan; and, in collaboration with PAC, conduct experimental hatchery runs in Coron.

PAC has been developing hatchery techniques of the Napoleon wrasse, and is quite successful in the initial stages of broodstock development, hatching and larval rearing up to day 10.

AQD's other collaborator, the Tario Lim Memorial College-Polytechnic State College of Antique (TLMC-PSCA) Campus, expressed their interest to implement sustainable freshwater aquaculture development projects. Thus, a letter of agreement was signed last October 30 at TMS by AQD Chief Dr. Joebert Toledo and Dr. Victor Navarra of PSCA.

The agreement, which is good for three years, calls for PSCA to, among other things, provide facilities and venue for the conduct of on-site training courses on native catfish, freshwater prawn, tilapia, carp, seabass and mudcrab; provide technical support services for the hatchery, nursery and grow-out culture operations; and conduct training on research methodologies; provide P100,000 in funds for broodstock development and management.

AQD is tasked to effectively transfer appropriate aquaculture technologies to TLMC-PSCA; provide appropriate technical assistance to develop the research capabilities of PSCA's faculty and students; and allow them the use of some research equipment in the conduct of on-site training courses and freshwater aquaculture projects.

PTAC meeting and a reg'l consultation

Dignitaries flocked to the PSSC in Quezon City for the *18th Meeting of the Philippine Technical and Administrative Committee (PTAC) for SEAFDEC/AQD* last October 18.

The meeting reviewed the status of SEAFDEC/AQD's 2007 R&D programs and plans for 2008, for endorsement to the SEAFDEC Program Committee and discussed issues and matters that concern the operation of AQD and its relations with the Philippine Government.

On the other hand, the *2nd ASEAN-SEAFDEC Regional Expert Consultation on Future Role of SEAFDEC in Fisheries Management in Southeast Asia*, held last October 23-25 Bangkok, Thailand discussed and finalized a proposal on the establishment of a Scientific

Advisory Committee for Fisheries Management in Southeast Asia (RSAC).

The consultation was participated in by the National Coordinators and representatives from the ASEAN-SEAFDEC Member Countries, senior officials of the SEAFDEC Secretariat and Departments, a representative from the ASEAN Secretariat, as well as Dr. Deb Menasveta and Dr. Purwonto who served as resource persons.

The "Draft proposal on establishment of a scientific advisory committee for fisheries management in Southeast Asia" was adopted. It outlines RSAC's roles, scopes and terms of reference, organizational structure, activities and required financial arrangements.

-- KD CAUMBAN

New livelihood option for Guimaras: milkfish cage culture

In addition to geotextile, salabat, dried fish, seaweeds, earthworms, swine and vegetables, oil spill affected families now have another livelihood option: milkfish.

The project is a collaboration between Petron Foundation Inc, SEAFDEC Aquaculture Department, the Philippine Business for Social Progress (PBSP) and the local government unit of Nueva Valencia, Guimaras.

Milkfish will be raised by five fisherfolk associations in three 10 m x 10 m x 6 m net cages at SEAFDEC's Mariculture Park situated in Igang cove in Nueva Valencia, Guimaras.

And to ensure that the fisherfolk will know how to grow the milkfish, a season-long training course on milkfish cage culture will be held. The venue is SEAFDEC's Igang Marine Station.

SEAFDEC/AQD will conduct and host the training as it has the technical expertise and the facilities to do it. This is also in fulfillment of an agreement it signed two months ago with Petron Foundation Inc who gave P3 million to fund a milkfish cage culture project. An NGO is also involved, the PBSP, and they will strengthen the existing fisherfolk associations in terms of values formation, leadership, management, and accountability.

To be trained are 30 fishers nominated and selected by four barangays in Nueva Valencia ~ San Antonio (to send 12 trainees as it has two associations), Igang (6 trainees), Magamay (6), and Santo Domingo (6). From the 30 trainees, three will be designated (also by the fisher associations) as full-time feeders. The three will be paid P3,000 a month each. These



slots will not necessarily go to the same people but the associations can rotate their trainees so everyone can have the experience.

The fisherfolk associations will decide on what to do with the profit. They can re-invest it in a second run, make additional cages, or spend it on other projects. A P50,000 profit is expected per cage (or a total P150,000 for the three cages) since a company, Alcantara & Sons (Alsons), has already committed to buying the produce at P85 per kg provided each milkfish attains 500 grams in weight. [Incidentally, the family of the Chair of Petron Foundation Inc also owns Alsons, the country's largest importer of milkfish.] A total of 24,000 milkfish will be stocked per cage. This stocking density can be likened to stocking 8 hectares of fish pond.

The first harvest is expected in December or January 2008; this is for the first cage ceremonially stocked on August 17.

The season-long course will run for six months, from September through February, although only two days each month will be required for each module. This is 10-12 days of training. There will be lectures and practical sessions in cage management and construction, stock sampling, feed formulation and

preparation, disease detection, post-harvest processing and value addition.

Meeting the SBs

The project proponents, SEAFDEC-Petron Foundation-PBSP, had the chance to meet with Mayor Alex Araneta, who stated the importance of community organizing to prepare and train the target beneficiaries.

The proponents also presented the milkfish cage culture project to Nueva Valencia's Sanguniang Bayan (SB) when Vice Mayor Juan Gaitan invited them to their regular Monday meeting on September 3.

There, Mr. Renato Agbayani (AQD's Head of Training & Information Division and Project Leader of the *Institutional Capacity Building for Sustainable Aquaculture Project*) answered questions on what is needed from the fisherfolk (answer: "their equity is time to be spent on training and cooperation for the success of the project") and from the LGU (answer: "policy support on territorial use rights"). He offered AQD's help in coming up with scientific information to support use-rights policies, citing AQD's successful experience in Malalison Island in Culasi, Antique. He also explained that use-rights will give organized fisherfolk

protection for their investment, as it would mean excluding other users of the hitherto “common property” resources.

The SB was positive on the policy support, saying that it is their role and that such support is vital to the success of the project. They expressed willingness to accept any recommendations, and requested that they be given the technical description of the area to be zoned for a fisherfolk association’s exclusive use.

Ms. Racquel Cedeño and Mr. Danny Bayani of Petron Foundation were requested to consider projects for barangays like Dapdap and Anhawan that are far more affected by the oil spill. As an SB noted, the choice of Igang and others was mostly results of “convenience” or “convergence.”

Ms. Kathy Recabar of PBSP on the other hand was requested to formalize the accreditation of PBSP in Nueva Valencia as only one NGO is currently recognized

for community organizing and social preparation work.

Meeting the community-beneficiaries

Around 170 and 90 residents (excluding children) attended the consultations in San Antonio and Magamay, respectively, on September 3. Other than Mr. Agbayani and the Petron-PBSP representatives, Mr. Albert Gaitan of IMS and Ms. Kaylin Corre, head of Training Section) were on hand to explain the details of the milkfish cage culture training and technology demonstration. Guimaras Provincial Fishery Coordinator Ms. Rebecca Serna and representatives from the Office of Municipal Agricultural Services and Department of Social Welfare and Development (DSWD) joined the group in the second, Magamay consultation.

In San Antonio, the group was welcomed by Brgy. Captain Danilo Tagulalap and Mrs. Felicitas Segovia of the 155-member *Samahan ng mga*

Mahihirap na Mangingisda. At the end of the two-hour meeting, the fisherfolk successfully negotiated for free transportation in addition to the free lunch and snacks for their trainees. They were also assured that women can attend the training as long as they are in good physical condition and not pregnant.

In Magamay, Brgy. Captain Julie Mojedo welcomed the group and introduced the three representatives of the fisherfolk associations in Magamay, Igang and Sto Domingo. There was a query on whether Petron will provide some stopgap measures to members of the association, i.e., assistance during the implementation of the project. Answer: No, because the project is not implemented as a main source of livelihood and hence, is not expected to answer the daily needs of the fishers. The project should be seen for its long-term benefits, like technology know-how and practical investment.

Milkfish training at IMS

Phase I of the *Season-long training course on milkfish cage culture* was successfully conducted in a 2-day training last October 8-9 at the Igang Marine Station in Nueva Valencia, Guimaras.

The 29 participants from four barangays (San Antonio, Magamay, Sto. Domingo and Igang) were composed of fisherfolk and a representative from the Municipal Agriculture Office of Nueva Valencia.

The first day had lectures on the following topics: overview on sustainable aquaculture by Mr. Renato Agbayani; milkfish

culture in cages, pens and ponds by Mr. Albert Gaitan; and water quality and methods of monitoring by Engr. Nelson Golez.

There were also practical sessions on instrumentation by Engr. Golez on the first day and fabrication of net cages and installation by Mr. Gaitan held on the second day of training.

- CV GENZOLA



Catfish training at BFS

From left: Mr. Anemelu receives instructions on how to prepare farm-based catfish feeds from Ms. Geronilla; injects hormone into a catfish breeder during the induced spawning practicals; and learns the use of the water quality checker during the water quality analysis practicals with Engr Emil Aralar



MRR EGUJA

From October 22-29, Mr. Nonso Anemelu, who came all the way from Anambra State in Nigeria, underwent a training course on *Induced spawning of catfish*.

He spent three weeks at TMS with training coordinator Dr. Maria Rowena Eguia,



Ms. Alma Lazartigue and Ms. Antonietta Evangelista, who provided him with an in-depth view and first-hand experience in the breeding of *Clarias macrocephalus* and *C. gariepinus*. Among the topics tackled are broodstock selection; hormone preparation and injection; striping and

artificial fertilization; design and construction of tanks, cages, ponds and pens; nutrition and feeding; natural food culture; packing and transport; and catfish hatchery design.

In addition to lectures and practical sessions, a field trip to an African catfish hatchery and grow-out farm in Bustos, Bulacan was also scheduled.

By the end of the training, Mr. Anemelu was able to produce fry through the proper operation of a catfish hatchery and analyze conditions to ensure production of catfish seedstock, thanks to the excellent work of BFS staffers.



October activities in Binangonan

AQD participated in the *Agri/Food/AquaLink 2007* last October 4-6. A display was set up, wherein AQD staff provided free technical advise to booth visitors during the fair. Mr. Armando Fermin gave a seminar on abalone, seaweed and seahorse culture on the last day of Aqualink.

October 18 - 22 saw Mr. Manuel Laron, Mr. Fermin and Dr. Maria Rowena Eguia attend lectures during the first day of the *National freshwater fish identification training* held in SEARCA. Mr. Laron, who registered as a participant, stayed on until the end of the five-day training course coordinated by UPLB's Dr. Lourdes Castillo. The training was done to enhance the capability of local research institutions in the field of freshwater fish taxonomy.

Ms. Antonietta Evangelista and Engr. Emiliano Aralar were invited as resource persons on natural food culture and water quality analysis in the recently held *BFAR-NIFTC training on induced breeding of freshwater fishes* conducted in Tanay, Rizal last October 25.

Fifteen participants, mostly BFAR technical staff from Batangas, Laguna, Ilocos Norte, Isabela, CAR, Tuguegarao, Zambales and Pampanga attended the training course which was coordinated by Dr. Adelaida Palma of BFAR-NIFTC. This is the second time that BFS research staff were invited as lecturers and practical instructors in their regular *Induced spawning training course*.

And lastly, congratulations are in order for Ms. Evangelista, Mr. Ruel Eguia and Dr. Eguia, who took their oaths as licensed Fisheries Technologists (without examination) in ceremonies held at the Manila Hotel last October 30. Also among the newly-minted fisheries technologists were Mr. Laron and Dr. Maria Lourdes Aralar.

Clockwise from top: Participants in the *Training on induced breeding of freshwater fishes*; AQD staff with clients at the Agrilink; participants gathering at the AQD booth; and participants of the *National freshwater fish identification training*



MR EGUJA

A who's who of AQD visitors

A number of visitors dropped by AQD in the busy month of September. Sen. Edgardo Angara visited last September 28 and sought a meeting with AQD Chief Dr. Joebert Toledo regarding the establishment of an integrated mariculture



center for high-value species in his home province of Aurora. Mr. Ramon Fernandez along with his wife Marissa, toured TMS last September 11. The entrepreneur and former basketball star (a four-time PBA MVP) was scouting for carrageenan sources in their food businesses.

International visitors for the month included Hon. Don

Elmo Weerakoon, Director of the National Fisheries Development Authority; Hon. John Felix Perera, the Minister of Transport; and Mr. Asanga Abeyagoonsekera, Senior Consultant, with Mr. Jayantha Chandrasoma, Project Director, of the Ceylon Fisheries Harbours Corp. of Colombo, Sri Lanka, who visited from September 3-8.



AQD at the 15th PSM reg'l scientific convention...

Organized by the Philippine Society for Microbiology Inc -Visayas Regional Chapter, the 15th meeting and regional scientific convention was held at the

Sampaguita Gardens, New Washington, Aklan.

From October 18-19, the participants, including four from AQD led by Dr. Rolando Pakingking Jr, listened to lectures, participated in

workshops and viewed posters and exhibits revolving around the theme *Microbiology and biotechnology for countryside development and empowerment*. Antibacterial substances from bony fish, biodiesel from microalgae, and PCR-based techniques for typing aquatic bacterial pathogens were just some of the aquaculture- and fisheries-related topics discussed.

AQD also put up its publications for sale, which grossed around P2,800.

Gov. Carlito Marquez of the province of Aklan with UPV's Dr. Aklani Rose Hidalgo and AQD's Dr. Rolando Pakingking; participants huddle over Dr. Delia Ontengco in the workshop on research assays of antimicrobial substances



...and the 16th Visayas Area conference

No stranger to collaboration with relevant stakeholders, AQD took part in the 16th Visayas Area Business Conference held last September 6-8.

Organized by the Philippine Chamber of Commerce and Industry, the affair, held at L'Fisher Hotel in Bacolod City, featured speakers from a who's-who in business and politics, including Senators Juan Miguel Zubiri and Francis Pangilinan.

During the next three days, the participants had workshops in topics ranging from tourism, investment and franchising; production, raw materials and sourcing; Republic Act 9367 and the needs of the industry. They also listened to speakers give their take on updates on "Actions for Competitiveness," sourcing information on the Japanese Market, and mariculture parks.

AQD put up a booth, including posters about the recently-held ABOT forum.



AQD researchers attend IP seminar...

The old adage “Publish or perish” is out. Patent, protect, publish and profit is in. This and many other useful tips were learned by AQD scientists with the conduct of the *Intellectual property awareness seminar* last September 20 held at AQD’s conference room.

Dr. Andrea Agillon, head of Intellectual Property Rights Office of the Bureau of Agricultural Research (BAR), along with Atty. James Dennis Gumpal, DA-BAR’s IPO legal adviser, briefed SEAFDEC/AQD researchers on the sensitive topic that is intellectual property rights.

Through the seminar, the attendees were able to know the different types of intellectual property, including patents, copyright, trademarks, trade secrets, utility models, industrial design, plant variety protection, traditional knowledge, and geographic indication. Furthermore, they were made aware of the economic (exclusive rights to sell, license and use), institutional (positive image for an institution or enterprise), and social (diverse choices of products and services) functions of the IP system.

The speakers noted that in the Philippines, there is a

very limited knowledge and awareness about IP, and that there is a lack of appreciation among policymakers and decision makers about this. To prove her point, Dr. Agillon stated that in the Philippines, only five universities have IP policies. Dr. Agillon also appealed to scientists to patent their work, if not for profit, then at least for nationalism. Technologies, services and products that would have benefitted our own citizens have been snapped up by patent-savvy countries. Cases in point: *lagundi*, a locally-available medicinal herb known for suppressing cough symptoms, is patented in Japan; the *macapuno* is patented in the United States; and that mangoes from Mexico are being marketed as Manila mango.

Dr. Agillon then went on to describe the IP management procedures and services offered by BAR.

Atty. Gumpal then lectured the participants on the guidelines in the drafting of an intellectual property rights policy. The policy relates to goals, procedures and what to do in particular situations. He managed to shed light on its importance and its hows and whys. The good attorney also allayed the apprehensions of prospective patent applicants that working in a publicly-funded institution does not mean that the inventor/creator cannot make use of it; in fact, scientists, inventors, artists and other “gifted” citizens have the constitution to fall back on to protect their rights.

A more IP-aware AQD community has been a long time coming, but it’s definitely better late than never. Which brings us to coin a new saying: Love your country, patent your intellectual property.



From top: Dr. Agillon drives home her point; Atty. Gumpal discusses guidelines in the drafting of IPR policy



...and other meetings

A Program review meeting was held September 13 at the TMS conference room, where ongoing projects were reviewed and probable studies for next year were identified. One of the topics discussed was the need for a more realistic costs-and-returns analysis.

A Mini-workshop on socio-economics was organized on September 28 for AQD to come up with similar criteria on the costs-and-returns analysis of its various technologies in preparation for the ABOT Forum.

Presenters for the forum had their practice presentations last October 9 at the RD AV room to iron out the kinks prior to the big day(s).

AQD scientists were also on hand for a meeting with Dr. Shoji Kitamura, Director of Fisheries Division of Japan International Research Center for Agricultural Sciences (JIRCAS) last September 26 at the OC conference room.



IT TENDENCIA



The USS Albatross and Theodore Roosevelt

By TU Bagarinao

Washington DC, 16 October 2007. One hundred years ago today was a Wednesday, the day the United States Steamer Albatross left San Francisco on her way to Manila to begin the two-year long Philippine Expedition. Assistant Curator Paul Bartsch of the Smithsonian Institution recorded the scene in his journal:

“There is scarcely any indication of a breeze this morning, and the swells are scarcely broken by a ripple. The sun is struggling bravely to disperse the fog which obscures the greater front of the shoreline of the bay. Numerous merchant ships and smaller craft crowd the wafts [sic] and the regular ferries between San Francisco, Sausalito, and Oakland are plying back and forth. Two large government boats lie at anchor at a little distance from our vessel and our launch seems impatient to be off to shore for her last trip before we lift anchor and depart. Numerous ... gulls are beating back and forth watching the vessels for discards from the cook’s pantry. All is cheerful and if present indications augur well we should have a most successful and enjoyable expedition”.

At the helm was Lt. Commander Marbury Johnston of the US Navy. The director of the expedition was Hugh McCormick Smith, then Deputy Commissioner of the US Bureau of Fisheries. To Smith fell the task of organizing the expedition: planning the itinerary, negotiating with the island government, gathering the equipment, and selecting the civilian crew. Frederic M. Chamberlain, Lewis Radcliffe, Harry C. Fassett, and Clarence E. Wells from the Bureau of Fisheries, and Paul Bartsch boarded the Albatross in San Francisco. The Albatross



spent 10 days in Honolulu, two days in Midway, two days in Guam, and on 28 November 1907, she steamed into Manila Bay. Smith had traveled separately to Japan, and joined the Albatross in Manila on 3 December, along with the Japanese artist-illustrator, Kumataro Ito. While waiting for delayed equipment, Smith and Bartsch spent nearly two months exploring the interior of Luzon and even climbed up to Baguio.

In 1907, the Albatross was already 25 years old, having been built in 1882 at the instigation of Spencer Fullerton Baird, ornithologist and second Secretary of the Smithsonian (1878-1887) who founded the US Commission of Fish and Fisheries in 1871 and served as its First Commissioner until his death in 1887. It was Baird who submitted the proposal for the Albatross to the US Congress and persistently lobbied for funding until he got a total allocation of \$190,000 (a huge amount in 1880!) to build it. The iron-hulled Albatross was the world’s first large civilian vessel especially designed for deep-sea oceanographic and fisheries research. Propelled by twin screws made of wrought iron, it could go 10 knots, was 70 meters long and 8 meters wide, had two spacious laboratories, two powerful dredging engines, and carried 8,100 meter of steel rope. It was also the

first US government ship with electrical lighting. Although owned by the Bureau of Fisheries, the Albatross was run by a crew of about 60 officers and enlisted men of the US Navy.

All this information has been easy to come by via the internet and various publications by the Bureau of Fisheries and the Smithsonian. Government records are very well kept in the United States. I actually handled the original US Navy deck logs of the Albatross, now at the National Archives, and the original Bureau of Fisheries Albatross log books, now at the Smithsonian Archives. It was so exciting to be transported a century back in time and imagine being on the Albatross. It was fortunate that the Philippine expedition happened at all. A period of relative peace seems to have followed the establishment of a civilian government in the Philippines after President Theodore Roosevelt declared the Philippine-American War over on 4 July 1902.

Because of our first names, I feel an affinity for Theodore Roosevelt and was happy to learn that he was very interested in the Philippines. As Assistant Secretary of the Navy, he strongly urged then President William McKinley to take the Philippines from Spain in 1898, partly to save it from Germany and Japan. It was Roosevelt who



Clockwise from top: Paul Bartsch, Curator, Division of Mollusks, at the Conference on the Future of the Smithsonian; Hugh McCormick Smith, Director of the Philippine Expedition; Spencer Fullerton Baird, sponsor of the USS Albatross; and President Theodore Roosevelt

chose Commodore George Dewey to command the Pacific fleet and it was him who ordered Dewey to engage the Spanish Armada in Manila Bay in May 1898. Dewey won in a few hours. Roosevelt actually wanted to be the Governor of the Philippines, but was persuaded to become Vice-President to McKinley when the latter ran for reelection.

Roosevelt became President when McKinley was assassinated in 1901 and won the election himself in 1904 to serve until 1909. He was the youngest ever to become US President, and he was a man of many talents and great achievements. He kept an eye on the Philippines the whole time, and even proclaimed several of the country's earliest national parks, including Mt. Makiling

in 1903. Even as Roosevelt sought to build an American empire, he also tried to bring the benefits of freedom and democracy to the Philippines. I was very pleased to witness two weeks ago the centennial celebration (with reenactment) of the laying of the foundation stone of the Washington National Cathedral on 29 September 1907, an event attended by Roosevelt himself. The Washington National Cathedral is a most beautiful and uplifting place and I now consider it my favorite church, partly because of Roosevelt.

When I was young, I hated history because in all my classes, it was taught as names, places, and dates, without a story. (Ambeth Ocampo came around too late for many of us.) History was a burden and a bore. But call it menopause, history now fascinates me, to the extent that when I come back next year, I will mine my 73-yr old mother for her life and times. Right now, within sight from my Constitution Avenue bus stop, are the US National Archives,

the Smithsonian Institution, the Capitol, and the Library of Congress—history in my face every day! Incredibly, October is Filipino-American Heritage Month and National Genealogy Month at the National Archives. Last Tuesday, 2 October, at 11 AM, there was a lecture, *Governing the Philippines: Records of the Department of the Interior, 1898-1971*, an overview of the records of the two US agencies that administered the Philippines—the Bureau of Insular Affairs and the Office of Territories. I did not know about that lecture until today, but I will be working at the Archives the next two weeks, and who knows what I find.

Philippine history has been poorly written about in textbooks, including versions that have been lambasted for errors or bias in facts and interpretation. I choose to go by Stanley Karnow's (1989) Pulitzer Prize winner, *In Our Image—America's Empire in the Philippines*. I bought a hard cover of this book in San Diego when it came out, but I never read it because I saw the TV version of it on Public Broadcasting Station. That PBS documentary was too much Cory Aquino, but the book (I had to get a used paperback last month) is so much more, and very engrossing, as good stories are. Karnow is a journalist and knows how to write and tell non-fiction; I recommend *In Our Image* to all senior citizens at SEAFDEC/AQD. I read Karnow to get a feel for life, politics, and war in the Philippines and the United States at the beginning of a bittersweet "parent-child" relationship, and just before the USS Albatross expedition in 1907-1910. Karnow makes no mention of the USS Albatross at all—I am sure he intended me to tell that story! More next month.

Stenella longirostris, R.I.P.

Last September 21, a spinner dolphin was found dead in Parara, Iloilo. Strong currents due to inclement weather was cited as the cause of the dolphin's dislocation.

FishWorld staff collected the cetacean for proper disposal.

Spinner dolphins measure 6-7 feet long and have a dark gray back, pearl-gray sides and white belly.



ITTENDENCIA

It's raining seminars!

September and October were busy months for research seminars. The researchers presented their papers in front of a discerning

AQD audience. With topics running the gamut from the world's smallest commercial fish to giant clams, from stock enhancement activities to new

aquaculture practices, the attendees got their information bases covered.



First to present was Ms. Sheila Mae Santander of the UP-Marine Science Institute. In the paper entitled *Impacts of organic matter input from mariculture on the bioturbation recycling capacity of polychaetes in marine*

sediments (co-authored by Dr. Maria Lourdes San Diego-McGlone and Dr. Wolfgang Reichardt), she expounded on the ability of burrowing fauna to recycle organic matter in the sediments. Her experiments showed that the

large polychaete *Eunicids* had higher organic matter degradation capacity than the small polychaete *Spionids*. She also took the time to present the programs of MSI, including a movie clip on the stock enhancement of the giant clam.



The Journal Club's in-house seminar the following day saw Mr. Bogart Abrogueña presenting the paper (co-authored with Dr. Ma. Junemie Hazel Leбата-Ramos) *Giant clam population in Carbin Reef, Sagay Marine Reserve,*

Negros Occidental. A protected reef in the 32,000-hectare reserve, Carbin was evaluated for abundance and distribution of giant clams. A total of 277 giant clams consisting of *Tridacna crocea*, *T. squamosa* and *Hippopus*

hippopus were recorded. He also reported that with most of the clams sexually mature, strict protection of Carbin Reef and other "no take" zones in the reserve will allow spawners to produce recruits and enhance clam population.



Mr. Victor Soliman of Bicol University presented his paper *Population dynamics of sinarapan (Mistichthys luzonensis), the world's smallest commercial fish* – a 2007 Elvira O. Tan Awardee for Best Paper in Aquaculture

and Fisheries – last September 11. Found in Lake Manapao in Buhi, Camarines Sur, this fish was analyzed for its size-frequency and catch data in 1999 for 12 consecutive months to estimate population parameters using an objective

length-frequency analysis technique. From these results, the stability of the stock can be attributed to the consistent co-community, local government-supported and scientifically-backed take on sanctuary management.



A back-to-back research seminar was held on September 18 and featured the presentation of Mr. Eliseo Coniza on the *Economic evaluation of grow-out diets for Asian catfish Clarias macrocephalus (Gunther) production*. The study evaluated the economic feasibility of four grow-out diets

on a 1000 m²/crop basis. The results obtained suggest that *C. macrocephalus* culture is most profitable with a formulated diet composed of 34% crude protein.

of tilapia, Oreochromis mossambicus. He and his co-proponents illustrated that "green water" from a broodstock tank can inhibit luminous vibriosis over a one-week period. Furthermore, broodstock is a better source of "green water" than juvenile tilapia.

Mr. Fredson Huervana (at left) expounded on the *Inhibition of luminous Vibrio harveyi by "green water" obtained from tank culture*



The seminar on *Aquaculture technologies suited to Southeast Asia* was presented by Dr. Shoji Kitamura under the Japan International Research Center for Agricultural Sciences (JIRCAS) project on September 26. Problems

in intensive shrimp culture, including eutrophication, low growth rate and occurrence of disease outbreaks and high mortality prompted the proponents to conduct a study on the *Development of co-culture system of black tiger shrimp and seaweeds*. Based on

their findings, *Penaeus monodon* grew best in a mixed-seaweed culture system of *Rhizoclonium* and *Caulerpa*. Next up for JIRCAS: tackling aquaculture problems in Laos, wherein the targeted species include the climbing perch (*Anabas* sp.), gourami and cyprinids. >13

Contributions from AQD employees are always welcome!

Please send text separately from your JPEG photos (300 dpi or better). Devcom also uses these materials to update the AQD website and as SEAFDEC Newsletter articles. Having the original text and photos would give us more flexibility

AQD Matters is published by the [Development Communication Section](#), Training and Information Division, Tigbauan Main Station in Iloilo

Editor this issue: RP Guarin

Editorial consultants: MT Castañons, RF Agbayani

Thanks to our colleagues who provided facts, images and feedback



On the paper *History of Kuruma prawn (Penaeus japonicus) Stock enhancement in Hamana Lake, Japan* (co-authored by Jon Altamirano), Dr. Hisashi Kurokawa told the audience last October 5

that the catch of the Kuruma shrimp drastically decreased in the lake. Because of this, stock enhancement was started in 1978, with the Government of Shizuoka Prefecture grading it up as a pilot project in

1983. By the time the project ended, the Hamana Fisheries Cooperative took over the activities, which has yielded mostly positive results.



This was followed by Ms. Dianne Hope Tormon, who presented the paper *Valuing Coastal tourism in Boracay Island: coral reef conservation and boating recreation* co-authored with Mr. Rodelio Subade last October 5. They aimed to

value coral reef conservation in the perspective of both tourists and island folks; describe boating recreation as a potential livelihood option that is negatively affected by the degradation of corals; and formulate policy implications and recommendations.

Their studies showed that the Mean Maximum Willingness to Pay (MMWP) of respondents and island tourists amounted to P357; Social Willingness to Pay (SWTP) of all respondent tourists had a value of P30,345.



Dr. Wee Koj Leong, the general manager of the Nutrition & Technical Services of Gold Coin Services based in Singapore, spoke about the *Challenges in the aquafeed*

industry last October 26. He cited the benefits of using high quality feeds, including better performance, higher profit, and better quality of shrimp stocks, among other species.

He also mentioned that they are promoting the use of mold inhibitors and antioxidants in feeds and not adding antibiotics in their feed formulations.

AQD assists police to grow catfish and tilapia

As part of its continuing efforts to disseminate aquaculture technologies, AQD gave 1,500 catfish fry nearly 30 mm in size and about 100 red tilapia fingerlings to the 606th Iloilo Provincial Mobile Group of the Philippine National Police (PNP).

The PNP training camp is located in Barangay Bagumbayan, Tigbauan, Iloilo, and has ricefields and fishponds.

Police Chief Inspector Larito Abordo Nobleza gladly received the catfish fry and tilapia fingerlings on September 11 and immediately stocked them into the five fishponds inside the training camp, with the assistance of Mr. Deogracias Reyes Jr of RD.

Mr. Reyes then gave a short briefing to the fishpond caretakers on proper management and feeding schedule for the fishes.

Aside from the stocks, three kilograms of AQD-formulated

feeds were also given to initially feed the fish.

Inspector Nobleza is very optimistic that aquaculture, like rice farming, will give them added economic opportunities. They expect multiple returns from the red tilapia stock (75 females and 25 males) because it is a prolific breeder and could be harvested once they are numerous.

Based on the sampling done last October 23, fish weigh an average of 4.36 grams and measure 7.74 cm. The stocks were fed 376.612 grams per feeding ration thrice daily.

For catfish, PNP plans to harvest and sell half of the stocks after four months, and the remaining for their own consumption. *Pantat* has gained the interest of fish farmers due to its tender and delicious meat.

Both tilapia and catfish fry are cultured in freshwater fishponds. Seedstocks are available for sale at AQD hatcheries in Tigbauan, Iloilo.



Abalone training is not a baloney

Eighteen trainees completed the *International training course on abalone hatchery and grow-out* conducted from 6 to 25 September 2007 at AQD's Tigbauan Main Station. They came from Indonesia (1), Myanmar (1), Malaysia (2),

and the Philippines (14). The training focused on the tropical abalone, *Haliotis asinina*, which is a highly prized commodity.

The topics tackled during the 20-day training ranged from broodstock management, egg collection and incubation, veliger collection and

stocking in settlement tank, identification of different abalone stages, identification and culture of benthic diatoms, larval rearing and cage grow-out techniques.

How did the participants fare in the training? Let the pictures below tell the whole story.

RT BAUTISTA



The trainees in their courtesy call on Dr. Ogata



Hmmm..... I wonder what kind of diatom this is?



Not exactly scaling new heights in the scaling up of diatoms, but still....



Letting the seeds of information grow in diatom seeding



The trainees get busy



Broodstock selection at the hatchery



Bonding over the preparation of settlement plates



The mature trainees gathering over abalone juveniles



Telling unfabricated stories over fabrication of rearing cages



Flexing muscles in handling abalone



The participants' sorting, packing....



...and preparation of transport materials means they're ready to let the abalones move on