1st Philippine Symposium on Freshwater Biodiversity and Ecosystems 2016

Symposium Overview

This symposium is hosted by the University of Santo Tomas, together with the California Academy of Sciences, PUSOD Inc., University of the Philippines – Institute of Biology, Ateneo de Manila University, the Association of Systematic Biologists of the Philippines (ASBP), the Biodiversity Management Bureau, and the National Fisheries Research and Development Institute (NFRDI), in cooperation with International Society of Limnology (SIL).

This 4-day event intends to gather international and national experts from the different fields of limnology and freshwater biodiversity. It will serve as a venue for dissemination of current research updates from the Philippines and abroad, as well as showcase the results of the USAID / NSF PEER Project of the University of Santo Tomas and the California Academy of Science on Lake Taal biodiversity.

This event is in cooperation with the International Society of Limnology (SIL), specifically the Working Group on Inland Waters of Tropical Asia which would provide opportunities for researchers to interact and collaborate on future projects

Participants

There were a total of 143 participants during the symposium. This is consisting of participants from Philippine Government/Research Institutions (53), Philippine Universities (52), University of Santo Tomas (26), National University of Singapore (11) and Khon Kaen University (1).
Guest Speakers

There were a total of 20 guest speakers both local and international institutions. From University of Hongkong, National University of Singapore, California Academy of Sciences, National Taiwan University & Academia Sinica, Taiwan University of Shiga Prefecture, Research Institute for Humanity and Nature, Japan, Shiga University, International Lake Environment Committee Foundation, Shiga University, Ateneo de Manila University, University of Santo Tomas, University of the Philippines, Laguna Lake Development Authority, National Fisheries Research and Development Institute and Southeast Asian Fisheries Development Center.
June 7, 2016 (Day 1)

Dr. Jonathan Carlo Briones (left) served as the master of ceremonies on the first day of the symposium which was followed by the prayer by Mr. Dino Tordesillas (middle) and the opening remarks of Dr. Maribel Nonato (right).

The PSFBE 2016 Chair, Dr. Rey Donne Papa, gave an overview about the symposium and on how this event can be a venue for academics to discuss updates on current researches and collaboration especially in the field of freshwater biodiversity and ecosystems.
The opening remarks was delivered by the Presidential Adviser of Environmental Protection and General Manager of Laguna Lake Development Authority, Juan Romeo Nereus Olaivar Acosta, Ph.D.

Special awards have been given to the pillars of freshwater biology for their significant contribution to research and other areas of freshwater biology. The reading of the citations was led by Dr. Francis Magbanua and the awards were given by Dr. Rey Donne Papa, Dr. John Donnie Ramos and Dr. Maribel Nonato. Prof. Augustus C. Mamaril received the Freshwater Taxonomist award for his important contribution to freshwater zooplankton taxonomy in the Philippines.
Dr. Roberto Pagulayan received the Freshwater Biology Mentor award for his role as a research supervisor to many students who had them become successful as freshwater biologist.

Prof. Emeritus Macrina T. Zafaralla, Ph.D. has been given the Community Engagement and Environmental Awareness award for her ability to link research in the field of freshwater biology and community development and environmental awareness.
Ms. Adelina Santos-Borja, M.Sc. has been given the Environmental Science Management Award for her outstanding contributions to lake conservation both here and abroad.

Acad. Prof. Rafael D. Guerrero III, Ph. D. has been given the Public Service Award for his pioneering work on vermiculture in the Philippines and Southeast Asia. In behalf of Acad. Prof. Guerrero, his son was there to receive the award.
The special awards were given to Dr. Maria Lourdes Cuvin-Aralar and Prof. Ruben Umaly for their co-authorship in the 1988 book Limnology: Laboratory and Field Guide, Physico-chemical factors and Biological factors.

Prof. Augustus C. Mamaril, M.Sc. delivered an acceptance speech on behalf of the awardees.

After the intermission number of the UST Singers, Dr. Arvin Diesmos (top) served as the moderator for the keynote lecture of Prof. David Dungeon, Ph.D (bottom). His lecture is entitled “Apocalypse in Anthropocene Asia: Can we conserve freshwater biodiversity in this rapidly changing world?”
The audience were given the chance to raise interesting questions to the speaker.
Outside the convention hall, different laboratory suppliers set up booths for product demonstration.

Dr. Maria Lourdes A. Cuvin-Aralar of SEAFDEC talked about: “Impact of aquaculture on fish biodiversity in the freshwater lake Laguna de Bay, Philippines” (left). Assoc. Prof. Teresita R. Perez, Ph.D. of the Ateneo de Manila University talked about: “Updates on the studies in the Seven Lakes, Philippines” (middle). Finally, Ms. Adelina C. Santos-Borja of LLDA talked about: “The Laguna de Bay Ecosystem Health Report Card: An assessment and communication tool for stakeholders.” (right)
For Parallel Session 2, Prof. Jonas P. Quilang, Ph.D. of UP-Diliman delivered a lecture entitled: “DNA Barcoding and population genetics of Philip-pine Freshwater Fishes” (left) and Assoc. Prof. Hendrik Freitag, Ph.D. of ADMU delivered a talk entitled: “The AQUA Palawana Program – a decade of taxo-nomic and ecological research on freshwater insects and crabs from Palawan” (right)

Prof. Misako Urabe, Ph.D. of the University of Shiga Prefecture delivered a talk entitled: “Evolutionary history of snails endemic to Lake Biwa and their parasitic digeneans: parasites left behind evolving hosts”. This was then followed by a talk from Asst. Prof. Darren C.J. Yeo of the National University of Singapore entitled: “Diversity, ecology, and conservation of decapod crustaceans in Singapore freshwater systems” Finally Dr. Jonathan Carlo Briones of UST delivered a talk entitled: “Fish parasite research in the Philippines: history, current state, and recommendations for future directions”.

Following all the parallel sessions, in the lobby of the UST Main Building, “TAALAMAN: The Lake’s First Biomuseum” was inaugurated by UST Museum Director Fr. Isidro Abaño, OP, UST-Graduate School Dean Marilu G. Madrunio, Ph.D., UP Vice-President for Academic Affairs Prof. Gisela Padilla-Conception Ph.D., DENR-BMB Asst. Director Antonio C. Manila, Ph.D., UST-College of Science Dean John Donnie Ramos, Ph.D. (left to right) with Richard Thomas Pavia, Ph.D. (consultant of the wet exhibit), Cecilia Banag, Dr. rer nat. and Rey Donne S. Papa, Ph.D. (instructors of the Graduate School Biodiversity and Conservation Class). The exhibition took place from June 7 to June 17, 2016.
The work force of the Taalaman exhibit, the UST Graduate School Biodiversity and Conservation Class A.Y. 2015-2016, with their professors, Dr. Rey Donne Papa and Dr. Cecilia Banag.
Handout of the Taalaman exhibit, a very useful tool for the exhibit audience’s better understanding.
The first part of the exhibit, located at the University of Santo Tomas’ Main Building Lobby was the wet exhibit. This set-up showcased live specimens of fishes, amphibians, reptiles, and arthropods contained in glass aquaria.
The second part, located at the UST Museum Gallery, was the dry exhibit which presented posters about Lake Taal and its biodiversity. Photos of notable lakes in the Philippines were also exhibited.
The day ended with the performance of the UST Salinggawi Dance Troupe while having a sumptuous dinner.

**June 8, 2016 (Day 2)**

The first plenary session was moderated by Dr. Francis Magbanua and the lecture was delivered by Dr. Terence Gosliner of the California Academy of Science via Skype. He talked about the Verde Island Passage: an exemplar of Philippine aquatic megadiversity.

The second plenary lecture was delivered by Prof. David Taylor, Ph.D of National University of Singapore. He talked about the environmental resilience and recent environmental changes in Tropical East Asia: sedimentary evidence from crater lakes.
The final plenary lecture was delivered by Prof. Mudjekeewis Santos, Ph.D of the National Fisheries Research and Development Institute (NFRDI). He talked about establishing a long-term landed catch and effort monitoring (LCEM) to support stock assessment and management of major freshwater ecosystems in the Philippines.

The parallel sessions of oral presentation followed after the plenary lectures. 41 parallel oral presentations were conducted and grouped into 4 categories: a) Conservation Management and Policies; b) Philippine Freshwater Ecosystems; c) Freshwater Ecosystems of Tropical Asia/ Taxonomy & Systematics and d) Taal Biodiversity. The following are some pictures from the said presentations.
Asst. Prof. Donna May Dela Cruz-Papa, M.Sc. of UST delivering her talk on: “Endemic bacteriophages of Aeromonashydrophilain Lake Taal and their potential for aquaculture therapy” (left). Esther Clews, Ph.D. of NUS delivering her talk on: “Extending the Application and Accessibility of Freshwater Ecological Monitoring “(center). Julius Parcon of UP-Los Banos museum delivered a talk entitled: “Diversity and community assembly of macroinvertebrates along the watershed streams of Mount Makiling, Philippines “(right)

Speakers of the parallel sessions of the symposium
Following this, the poster exhibit for the conference officially opened. Twenty-four competing and thirteen non-competing posters were on display.
June 9, 2016 (Day 3)

There were three plenary sessions in the morning by Dr. Chih-Hao Hsieh, Dr. Noboru Okuda and Masahisa Nakamura. The moderator during the plenary session is Dr. Mudjekeewis Santos.

The first plenary lecture was delivered by Prof. Chih-Hao Hsieh, Ph.D. of National Taiwan University & Academia Sinica in Taiwan. His plenary lecture is entitled “Climate and human induced impacts on plankton in Lake Biwa. He discussed the human induced impacts especially on plankton in relation to the existing problems on Lake Biwa’s water quality and loss of biodiversity.
Dr. Noboru Okuda from the Research Institute for Humanity and Nature in Japan delivered the second plenary lecture entitled “Methanotrophic food webs as a carbon recycling system in lakes under climate changes”. He talked about the controlling mechanisms of the Methanotrophic food webs and on how it can be useful in estimating the global methane flux with accuracy.

Lastly, the third plenary lecture was delivered by Dr. Masahisa Nakamura of International Lake Environment Committee Foundation, Shiga University in Japan. His talk is mainly about the Integrated Lake Basin Management as an ecosystem service framework for integrated water management with lakes as a key component.
After each plenary lecture, interesting questions and clarifications were raised by the audience to the guest speakers about the challenges and progress in the aquatic biology.
After the question and answer, the certificates of appreciation were given to guest speakers by Dr. Francis Magbanua and Dr. Rey Donne Papa.
The afternoon session consists of two separate sessions for the Graduate Oral Competition. Assoc. Prof. Alicia Ely Pagulayan served as moderator and emcee in the first cluster while Cecilia Banag, Dr. rer, nat. on the second cluster of competing graduate students.

In Cluster I, the first oral presenter is Ms. Irisse De Jesus, a graduate student from the University of Santo Tomas. She presented her research entitled “Application of tracer method in the Silang-Sta. Rosa sub-watershed”.
After the first presenter, Mr. Jia Huan Liew from National University of Singapore presented his study entitled “Assessing trends in assimilation of primary production in tropical east asian reservoir communities using stable isotope analysis”.

Then, Ms. Clare Wilkinson from the Imperial College London and National University of Singapore presented her study entitled “There’s something fishy going on: Do oil palm plantations support higher species richness and biomass than logged forest catchments?”
Mr. Joie Matillano from Western Philippine University presented his study entitled “Taxonomy and conservation of the minnow genus *Puntius* (Pisces: Cyprinidae) from northern Palawan, Philippines”.

The last presenter for Cluster I is Mr. Bi Wei Low from National University of Singapore. He presented his research entitled “A complex issue: taxonomic clarification of *Clarias batrachus* in Southeast Asia”.
After each presentation, the panel of judges for Cluster I were given the time to ask questions to the presenter on their research studies. The panel of judges in Cluster I are Prof. David Dudgeon, Ph.D., Dr. Roberto C. Pagulayan and Dr. Jonas Quilang.

In Cluster 2, the first presenter was Ms. Ting Hui Ng from National University of Singapore. Her study focuses on invasive freshwater snails entitled “Missed and misidentified: The Florida serrate crownsnail, a new cryptic invader in tropical asian fresh waters”.
The second presenter is Mr. Leocris Batucan Jr. from Mindanao State University-Iligan Institute of Technology. Mr. Batucan’s study is about the three new Heptageniidae from Mindanao Island, Philippines and a review on Philippine Ephemeroptera studies.

The third presenter, Mr. Mark Louie Lopez from the University of Santo Tomas presented his research on the Species Composition and Ecology of Microcrustacean Zooplankton from Selected Groundwater Ecosystems in the Greater Luzon and Mindoro Faunal Regions (Philippines).
Another graduate student from University of Santo Tomas, Ms. Kristine Idda Pontillas presented her study on Lake Taal’s marine and brackishwater harpacticoid copepods point to its marine origins.

The last presenter, Ms. Mika Ellis Triño, also from the University of Santo Tomas, presented her research on Biodiversity and Stable Isotopes of Zoobenthos in Laguna de Bay, Philippines.
There was a question and answer portion from the panel of judges and also from the audience after every oral presentation. The panel of judges in Cluster 2 are Prof. Augustus C. Mamaril, M.Sc., Dr. Ma. Lourdes Aralar and Prof. Noboru Okuda, Ph.D.

After the question and answer, the certificates of appreciation were given to the graduate students and the panel of judges. After the graduate oral competition, there was an announcement of the organization named as Philippine Society of Freshwater Sciences. From the different agencies and universities are united to be founding committees of this emerging organization.
The awarding of the winners followed after the launching of PSFS. The awards were given to the winners by Dr. Francis Magbanua and Dr. Rey Donne Papa. For the Poster Category, the 1st Place winners are Mark Carascal, Mario Jose G. Del Rosario, Kin Israel Notarte, Fahrul Zaman Huyop, Takashi Yaguchi, and Thomas Dela Cruz, Dr. rer. nat. The winners for 2nd place are Jhoana Garces, Princess Spica Cagande, and Prof. Hendrik Freitag. The 3rd place winners are Jan Kerwin Codiniera, Juan Miguel Lopez Franco, Van Gambalan, JC Maranan, and Assoc. Prof. Sonia Javier.
For the Presentation Category (Cluster 1), the winner is Mr. Bi Wei from the National University of Singapore. And on Cluster 2, the winner for oral presentation category is Mark Louie Lopez from the University of Santo Tomas.
The symposium ended with the closing remarks of the PSFBE 2016 Chair, Dr. Rey Donne Papa and a photo opportunity to have a group picture for all participants.
June 10, 2016 (Day 4)

The last day of the symposium served as a field trip in the famous Taal Lake. A total of 33 participants together with the guests enjoyed the tour around Taal Lake.
Behind the Scenes

Kits being prepared by the committee in-charge with the help of some undergraduate students from the Biology Department

The busy registration booths during the symposium
Some “workforce” behind Taalaman (literally)
Happy faces of the organizing teams after each day of the event