

# The 15th International Kuroshio Science Symposium

March 24 - 27, 2023

College of Marine Science, National Sun Yat-sen University (NSYSU),  
Kaohsiung, Taiwan

## Program

### Mar. 24 (Fri)

1:00-2:30PM Registration at the ground floor of College of Marine Sciences, NSYSU campus

2:30-2:45PM Opening Remarks & admin announcement

2:45-2:50PM Group Photo

#### 3:00-3:40PM Theme talk (I):

Ecological impacts of marine plastic debris: Case studies in southern Taiwan

Te-Hao Chen (陳德豪) (National Museum of Marine Biology & Aquarium / Institute of Marine Biology, National Dong Hwa University / Department of Marine Biotechnology and Resources, NSYSU / Institute of Marine Ecology and Conservation, NSYSU)

#### 3:50-4:30PM Theme talk (II):

What can we learn from sessile marine organisms? Take barnacle as an example

Hsiu-Chin Lin (林秀瑾) (Department of Marine Biotechnology and Resources, NSYSU)

4:30 - 7:30 PM Reception party at the college terrace

8:00PM Visit Pier II (駁二) night market

### Mar. 25 (Sat)

9:00 - 10:15AM

**Session I: Marine Protected Areas & related (Chair: Dr. Emma L. Ballad)**

(1) The influence of the Kuroshio Current in designing a transboundary marine protected area network within the Kuroshio triangle

Monique Mercado-Vicentillo (Department of Marine Environment and Engineering, NSYSU),  
Pierre-Alexandre Château (Department of Marine Environment and Engineering, NSYSU),  
Yang-Chi Chang (Department of Marine Environment and Engineering, NSYSU)

(2) Designing a Marine Reserve that addresses ecological and socio-economic tradeoffs using a linear programming approach

Donna Ross Saycon (Institute of Marine Ecology and Conservation, College of Marine Science, NSYSU),  
Pierre-Alexandre Château (Department of Marine Environment and Engineering, College of Marine Science, NSYSU),  
Shui-Kai Chang (Graduate Institute of Marine Affairs, College of Marine Science, NSYSU)

(3) Evaluation of marine protected area effectiveness and its application on improving conservation management in Taiwan.

Shu-Chiang Huang (Graduate Institute of Marine Affairs, NSYSU),  
Yi Chang (Graduate Institute of Marine Affairs, NSYSU),  
Shui-Kai Chang (Graduate Institute of Marine Affairs, NSYSU)

(4) The Social Capital and the Attitudes of Villagers towards Coastal Resource Management: The Case of Gonzaga, Cagayan, Philippines

Joela Mizchelle Aquino dela Vega (Graduate School of Integrated Arts and Sciences, Kochi University, Japan),  
Emma Legaspi Ballad (DA-Bureau of Fisheries and Aquatic Resources Regional Office No. 02),  
Yoshinori Morooka (Professor Emeritus, Kochi University, Japan),  
Teruyuki Shinbo (Graduate School of Integrated Arts and Sciences, Kochi University, Japan)

(5) Strengthening Science-based Approach in the Management of Aquatic Resources in the Northern Pacific Area, Philippines

Emma L. Ballad (DA-Bureau of Fisheries and Aquatic Resources Region 2, Philippines),  
Angel B. Encarnacion (DA-Bureau of Fisheries and Aquatic Resources Region 2, Philippines)

10:15 - 10:45AM Coffee/tea break

10:45 - 12:00AM

**Session II: Marine Ecology, Evolution & related (Chair: Dr. Renan U. Bobiles)**

(1) Diagnostic Applicability of Mitogenomics in Uncovering Intraspecific Carangid Diversifications: Insights into Phylogeny, Divergence Time, and Characterization of Two Cryptic *Selaroides leptolepis* Mitogenomes

Lorenzo C. Halasan (Department of Marine Biotechnology and Resources, NSYSU),

Hsiu-Chin Lin (Department of Marine Biotechnology and Resources, NSYSU)

(2) The feeding habits of vent crab *Xenograpsus testudinatus* correlated to the types of shallow-water hydrothermal vents off Kueishan Islet

Jing-Ying Wu (Department of Oceanography, NSYSU / Department of Aquaculture, National Kaohsiung University of Science and Technology),

Siou-Yan Lin (Department of Oceanography, NSYSU),

Jung-Fu Huang (Department of Aquaculture, National Kaohsiung University of Science and Technology),

Chen-Tung Arthur Chen (Department of Oceanography, NSYSU),

Jia-Jang Hung (Department of Oceanography, NSYSU),

Shao-Hung Peng (National Museum of Marine Biology and Aquarium),

Li-Lian Liu (Department of Oceanography, NSYSU / NSYSU Frontier Center for Ocean Science and Technology, NSYSU)

(3) Evaluate the fish resources in Lambai Island by diver operated stereo video system

Tsz-Ching Leung (Institute of Marine Ecology and Conservation, NSYSU),

Chih-Wei Chang (Marine Ecology and Conservation Research Center, National Academy of Marine Research),

Meng-Hsien Chen (Department of Oceanography, NSYSU)

(4) Fishery-induced Change in Age at Maturity of Seagrass Siganids *Siganus canaliculatus* in Lagonoy Gulf, Philippines

Renan U. Bobiles (Bicol University Tabaco Campus, Philippines)

(5) Infection of cultured oysters *Crassostrea angulata* by shell-boring organisms in Ci-gu lagoon, Taiwan

Chung-Wei Yang (Department of Oceanography, NSYSU),

Chih-Ching Lin (Department of Oceanography, NSYSU),

Li-Lian Liu (Department of Oceanography, NSYSU / NSYSU Frontier Center for Ocean Science and Technology, NSYSU)

12:00AM - 1:30PM Lunch break (lunch boxes, coffee, tea)

**1:30 - 2:45PM**

**Session III: Fishery & related (A) (Chair: Dr. Mina Hori)**

(1) Maturity and spawning period of shortfin scad, *Decapterus macrosoma* (Bleeker, 1851, Perciformes: Carangidae) in Babuyan Channel, Philippines

Melanie C. Villarao (DA-Bureau of Fisheries and Aquatic Resources Region 2, Philippines),

Angel B. Encarnacion (DA-Bureau of Fisheries and Aquatic Resources Region 2, Philippines)

(2) Application of the generalized depletion model to the recruitment of American eel elvers (*Anguilla rostrata*)

Yu-Jia Lin (Institute of Marine Ecology and Conservation, NSYSU)

Brian M. Jessop (Department of Fisheries and Oceans, Bedford Institute of Oceanography, Canada)

(3) How to support female fisher employment: Case study from Ooshiki-ami set net in Muroto city, Kochi

Natsuko Inoue (Faculty of Humanities and Social Sciences, Kochi University, Japan)

Mina Hori (Graduate School of Kuroshio Science, Kochi University, Japan)

(4) Resource opportunities and marketing analysis of *Nematopalaemon tenuipes* (Palaemonidae) found in Aparri, Cagayan, Philippines

Evelyn C. Ame (DA-Bureau of Fisheries and Aquatic Resources Region 2, Philippines),

Fatima B. Laeno (DA-Bureau of Fisheries and Aquatic Resources Region 2, Philippines),

Angel B. Encarnacion (DA-Bureau of Fisheries and Aquatic Resources Region 2, Philippines)

(5) Community Structure of Herbivore Reef Fishes in Lagonoy Gulf, Eastern Philippines

Antonino B. Mendoza (Bicol University Tabaco Campus, Philippines)

2:45 - 3:15PM Coffee/tea break

**3:15 - 4:30PM**

**Session IV: Coral and related (Chair: Dr. Satoshi Kubota)**

(1) Transcriptome Analysis of Japanese Precious Coral *Corallium japonicum*: evidence of gene expression difference between sexes during gametogenesis

Ma. Marivic C. Pepino (Kuroshio Science Program, Graduate School of Integrated Arts and Sciences, Kochi University, Japan),

Sam Edward N. Manalili (Graduate Program, Faculty of Agriculture and Marine Science, Kochi University, Japan)  
Satoko Sekida (Kuroshio Science Unit, Multidisciplinary Science Cluster, Kochi University, Japan)  
Takuma Mezaki (Kuroshio Biological Research Foundation, Otsuki, Kochi, Japan),  
Satoshi Kubota (Kuroshio Science Unit, Kochi University, Japan)  
Tomoyo Okumura (Center for Advanced Marine Core Research, Kochi University, Japan)

(2) A procedure for cloning and proliferating symbiotic microalgae from corals

Tze Ching Yong (Department of Oceanography, NSYSU)  
Ching-Nen Nathan Chen (Department of Oceanography, NSYSU)

(3) Effects of seagrass meadow to coral reef ecosystem – a mesocosm study

Hewa Pathirannahelage Athri Thathsarani Weerakoon (Graduate Institute of Marine Biology, National Dong Hwa University),  
Pi-Jen Liu (Graduate Institute of Marine Biology, National Dong Hwa University),  
Kwee Siong Tew (Graduate Institute of Marine Biology, National Dong Hwa University / International Graduate Program of Marine Science and Technology, NSYSU / Institute of Marine Ecology and Conservation, NSYSU / National Museum of Marine Biology & Aquarium)

(4) Comparison of the Bleaching Susceptibility of Coral Species by Using Minimal Samples of Live Corals

Jih-Terng Wang (Department of Oceanography, NSYSU),  
Chi-Wei Chu (Department of Oceanography, NSYSU),  
Keryea Soong (Department of Oceanography, NSYSU)

(5) Possible interspecies differences of repetitive sequences number in specific regions of the *Acropora* genome

Rei Kawakami (Agriculture and Marine Science Program, Kochi University, Japan),  
Takahiro Taguchi (Department of Nutrition, Faculty of Health Sciences, Kochi Gakuen University, Japan / Kuroshio Science Unit, Multidisciplinary Science Cluster, Kochi University, Japan),  
Takuma Mezaki (Kuroshio Biological Research Foundation, Japan),  
Joshua Vacarizas (Kuroshio Science Unit, Multidisciplinary Science Cluster, Kochi University, Japan)  
Satoshi Kubota (Kuroshio Science Unit, Multidisciplinary Science Cluster, Kochi University, Japan)

5:30 - 7:30PM Seafood feast (旗津海産)

8 - 9PM Visit 旗津 cannon fort monument and city night view

## Mar. 26 (Sun)

9:00 - 10:30AM

**Session V: Fishery & related (B) (Chair: Dr. Pluomeo M. Nieves)**

(1) Assessment of the Socio-Economic Sensitivity and Adaptive Capacity of Fishers' in San Miguel Island, Tabaco City, Philippines.

Pluomeo M. Nieves (Retired Professor, Bicol University Tabaco Campus, Philippines),  
Antonino B. Mendoza Jr. (Fisheries Department, Bicol University Tabaco Campus, Philippines)  
Michael Borejon (Fisheries Department, Bicol University Tabaco Campus, Philippines)

(2) Study of the Efficacy of Butyl-Cyanoacrylate Nanoparticles, NP30 and D60, in Controlling Infection of Rainbow Trout (*Onchorhynchus mykiss*) with Streptococcal disease (*Streptococcus iniae*) in Land-based Aquaculture.

Mawuko G. Ahiabile (Laboratory of Cell Structure and Function, Kochi University, Japan),  
Kouki Matsunaga (Laboratory of Cell Structure and Function, Kochi University, Japan), Mao Hokin (Laboratory of Cell Structure and Function, Kochi University, Japan)  
Syun-Ichirou Oshima (Laboratory of Cell Structure and Function, Kochi University, Japan)

(3) Investigation on the morphological and elemental composition of the statolith microstructure: some insights on the biomineralization of the tropical squid, *Uroteuthis duvaucelii*

Jessica M. Legaspi (Kuroshio Science Program, Graduate School of Integrated Arts and Sciences, Kochi University, Japan),  
Tomoyo Okumura (Center for Advanced Marine Core Research, Kochi University, Japan),  
Wilfredo L. Campos (Division of Biological Sciences, College of Arts & Sciences, University of the Philippines Visayas, Philippines),  
Annabelle del Norte-Campos (Division of Biological Sciences, College of Arts & Sciences, University of the Philippines Visayas, Philippines)

(4) Life history relationships and population structure of branchial ectoparasite *Bopyrus squillarum* infesting the caridean shrimp *Palaemon serrifer* (Caridea: Palaemonidae)

Lorelie A. Burgos (Graduate School of Kuroshio Science, Kochi University, Japan),  
Gyo Itani (Graduate School of Kuroshio Science, Kochi University, Japan)

(5) Taxonomic review of the genus *Johnius* (Perciformes; Sciaenidae) from South China Sea, with a note on zoogeographical distribution

Norhafiz Hanafi (Department of Oceanography, NSYSU)  
Meng-Hsien Chen (Department of Oceanography, NSYSU / Institute of Marine Ecology and Conservation, NSYSU)

(6) Geochemical constraints on origin of fluids involved in the Matsushiro earthquake swarm

Zahra Zandvakili (Kochi University),  
Yoshiro Nishio (Kochi University)

**11AM - 6PM**

**Excursion to 屏東三地門 (By invitation, taking a university bus, seats are limited), Lunch on the bus (小籠包, water, snacks)**

**Mar. 27 (Mon)**

**9AM – 6PM**

**Excursion to monuments in Tainan (by train and walking).**



Group photo of the participants in the opening session, March 24, 2023



Snap of the session, March 25, 2023



Group photo of the participants in the excursion, march 26, 2023

Following the completion of the 15th Kuroshio Symposium on March 26, 2023, participants had the opportunity to immerse themselves in the rich cultural heritage of Taiwan's indigenous tribes. This activity took place at the Taiwan Indigenous People Cultural Park in Majia Township, Pingtung County, Taiwan, where attendees had the chance to wear traditional tribal costumes, providing a tangible connection to Taiwan's diverse tribal cultures.