

Outline of The 11th International Kuroshio Science Symposium

Future Perspective on Cross-border Network for Research and Education of “Kuroshio Science”: Developing Kuroshio University League Network

July 22-23, 2018 at Kochi University, Kochi, Japan

Day 0: July 22 (Sat)

Evening: Arrival and Check in (“Kochi Palace Hotel”: Filipino and Taiwanese Participants, “Tourist Inn Kochi”: Indonesian Participants)

Day 1: July 23 (Sun)

9:00-12:30: Doctoral Dissertation Presentation including students of “Nurturing Talented People to Establish a Sustainable Society in the Kuroshio Region” Program
12:30-13:30: Lunch and Registration of Foreign Participants
13:30-15:30: (Cont.) Doctoral Dissertation Presentation
16:00-17:00: Cross-Border Education Session: Orientation

Day 2: July 24 (Mon)

9:00-11:30: Cross-Border Education Session: Discussion
11:30-12:30: Lunch and Registration for Kochi University participants
13:00-14:00: Opening Ceremony of “The 11th International Kuroshio Science Symposium”
13:00-13:10: Welcome Address
Hiroshi Wakiguchi President, Kochi University
13:10-13:25: Introduction of International Exchange Initiative by Kochi University
Dr. Katutoshi Sakurai Vice President/Administration Officer, KU
13:25-13:40: Introduction of Participants and Symposium Overview
Sota Tanaka, Head, Kuroshio Science Program, Graduate School of Integrated Arts and Sciences, KU
13:40-13:45: Greeting
Dr. Victor S. Soliman, Vice President, Bicol University, Philippines
13:45-13:50: Greeting
Dr. Milagros C. Morales, Director, Bureau of Fisheries and Aquatic Resources Region 02, Philippines
13:50-13:55: Greeting
Dr. Ching-Nen Nathan Chen, National Sun Yat-sen University, Taiwan
13:55-14:00: Greeting
Dr. Thamrin Usman, Rector of Tanjungpura University
14:00-14:20: Coffee Break
14:20-14:50: Keynote Lecture 1 “Education for Sustainable Development and Sustainable Fisheries”
Hiroyuki Matsuda (Yokohama National University), Hidetomo Tajima, Shin Kakuma (Okinawa Deep-sea-water Research Center), and Juri Hori (Japan Fisheries Research and Education Agency)
14:50-15:20: Keynote Lecture 2 “Marine Protected Areas in Bicol: Two Decades of Partnership”
Victor S. Soliman (Bicol University)
15:20-15:50: Keynote Lecture 3 “Education on ICOM (Integrated Coastal and Ocean Management) for undergraduate students - Background, Needs, and Prospects -”
Kimio Fukami (Kochi University)
19:00-21:00: Banquet (Kochi Palace Hotel)

Day 3: July 25 (Tue)

9:00-10:00: Concurrent Session (Part 1): Marine and Coastal Ecosystem - 1

10:15-11:15: Concurrent Session (Part 2): Fisheries and Marine Resource Management
11:15-12:30: Lunch
12:30-13:30: Concurrent Session (Part 3): Coral Science
13:30-14:30: Poster Session
15:00: Start from Asakura Campus to Monobe Campus of KU
16:00-17:30: Inspection of the Center for Advanced Marine Core Research in Monobe Campus (Introduction/Guidance by Dr. Hidekazu Tokuyama and Dr. Minoru Ikehara)

Day 4: July 26 (Wed)

9:00-10:15: Concurrent Session (Part 4) Terrestrial and Freshwater Ecosystems
10:15-10:30: Coffee Break
10:30-11:30: Concurrent Session (Part 5): Marine and Coastal Ecosystems - 2
11:30-13:00: Lunch
13:00-14:00: Concurrent Session (Part 6): Marine and Coastal Ecosystems - 3
14:00-14:15: Coffee Break 14:15-14:45: Concurrent Session (Part 7): Health and Food Science
15:00-16:00: Concurrent Session (Part 8): Socio-Economics and Other
16:00-16:30: Closing Ceremony
Impression (Dr. Te-yu Liao, NSYSU)
Impression (Dr. Raul Giga Bradecina, Partido State University)
Manifesto (Dr. Teruyuki Shinbo, KU)

Day 5: July 27 (Thr) “Excursion/Field Work Tour to Muroto Area (East part of Kochi Prefecture)”

7:00: Start from Asakura Campus of KU via Kochi Palace Hotel toward Muroto Area
10:30-12:30: Initiative of “Muroto UNESCO Global GeoPark” (<http://www.muroto-geo.jp/en/>)
12:30-13:30: Lunch
14:00-15:30: Social Entrepreneurship for local revitalization: Initiative of Seaweed Aquaculture by using underground/deep-sea water and Marketing for local specialty goods
17:30-18:45: Inspection of Power Center Kochi at Takasu

Day 6: July 28 (Fri)

Morning: Home Sweet Home

KEYNOTE LECTURE (14:20 - 15:50, 24TH, JULY) (Chairman: Dr. Yohei Nakamura)

K-01

Education for Sustainable Development and Sustainable Fisheries

Hiroyuki Matsuda¹, Hidetomo Tajima², Shin Kakuma², and Juri Hori³

¹Yokohama National University, ²Okinawa Deep-sea-water Research Center, ³Japan Fisheries Research and Education Agency

K-02

Marine Protected Areas in Bicol: Two Decades of Partnership

Victor S. Soliman

Bicol University

K-03

Education on ICOM (Integrated Coastal and Ocean Management) for undergraduate students Background, Needs, and Prospects -

Kimio Fukami

Kochi University

CONCURRENT SESSION (PART 1) MARINE AND COASTAL ECOSYSTEM – 1

(9:00 - 10:00, 25TH, JULY)

(Chairman: Mr. Jayvee Saco and Dr. Kazuo Okuda)

O1-01

Demonstration project of land-based cultivation of green alga *Ulva prolifera* by saline groundwater

Jun Hachiya¹, Kei Okamura², and Masanori Hiraoka³

¹Kuroshio Science Program, Graduate School of Integrated Arts and Sciences, Kochi University, ²Interdisciplinary Science Unit, Multidisciplinary Science Cluster, Research and Education Faculty, Kochi University, ³Usa Marine Biological Institute, Kochi University

O1-02

Prezygotic and postzygotic reproductive isolation of tropical sea lettuce *Ulva*

Alvin P. Monotilla^{1,2}, Tomohiro Nishimura³, Masao Adachi³, and Masanori Hiraoka²

¹Kuroshio Science Program, Graduate School of Integrated Arts and Sciences, Kochi University, 2-5-1 Akebono, Kochi, 780-8520, Japan, ²Usa Marine Biological Institute, Kochi University, Inoshiri 194, Usa, Tosa, Kochi 781-1164, Japan, ³Laboratory of Aquatic Environmental Science (LAQUES), Faculty of Agriculture and Marine Science, Kochi University, Otsu-200, Nankoku, Kochi 783-8502 Japan

O1-03

Bloom-forming microalgae are exposed to viral attack

Keizo Nagasaki¹, Yoshihito Takano¹, Yuji Tomaru², Shun-ichi Urayama³, and Takuro Nunoura³

¹Kochi University, Kochi, Japan, ²Japan Fisheries Research and Education Agency, Hiroshima, Japan, ³Japan Agency for Marine-Earth Science and Technology, Kanagawa, Japan

O1-04

Comparative ecophysiological studies on oceanic sea skaters, *Halobates* especially about three questions.

Tetsuo Harada¹, Yuki Osumi¹, Takeo Sekimoto¹, Noritomo Umamoto¹, Takahiro Furuki¹, Vladimir Kostal², and Chihiro Katagiri³

¹Laboratory of Environmental Physiology, Graduate School of Integrated Arts and Sciences, Kochi University, Kochi 790-2850, Japan, ²Institute of Entomology, Biological Center, Czech Academy of Sciences, Ceske Budejovice, Czech Republic, ³Tokyo Denki University, Tokyo, Japan

CONCURRENT SESSION (PART 2) FISHERIES AND MARINE RESOURCE MANAGEMENT (10:15 - 11:15, 25TH, JULY)

(Chairman: Ms. Emma Ballard and Dr. Keizo Nagasaki)

O1-05

On-farm trials of phytoandrogen for sex inversion of Tilapia

Plutomeo M. Nieves¹

¹Bicol University Tabaco Campus, Tabaco City, Philippines, ²Partido State University

O1-06

Fads and fad-associated capture fisheries in municipal waters with marine protected areas

Theresa Marie F. Ermeje, Harold M. Monteclaro, Emmanuel S. Delloro, Jr., and Armi May T. Guzman

Institute of Marine Fisheries and Oceanology, College of Fisheries and Ocean Sciences, University of the Philippines Visayas, Miagao, 5023 Iloilo, Philippines

O1-07

Habitat assessment: enhancing sustainability of catadromous eel resources in Cagayan Valley

Alejandro Belen¹, Evelyn C. Ame², and Milagros C. Morales²

¹Zoological Society of London, ²Bureau of Fisheries and Aquatic Resources Region 02

O1-08

Cross-border network in Kuroshio's coastal ocean: sustainable resource use and mangrove biodiversity conservation and a proposed CSU-Kochi university research and education initiative for the Philippine Benham Bank seamount or "Kalipungawan", the northern sea waters Catanduanes Island

Asso. Prof. Dr. Jimmy T. Masagca¹, Professor Dr. Minerva I. Morales², Prof. Dr. Aurora E. Araojo , and Kristian Q. Aldea

Catanduanes State University, Virac 4800, Catanduanes, Philippines, ¹Director, University Research & Development Service, ²SUC President III

CONCURRENT SESSION (PART 3) CORAL SCIENCE (12:30 - 13:30, 25TH, JULY)
(Chairman: Mr. Alvin Monotilla and Dr. Kimio Fukami)

O1-09

Trophic structure of reef fishes in West Coast of Albay, Bicol Region, Philippines

Antonino B. Mendoza¹, Jr., Ronnel R. Dioneda¹, Sr., and Christian SD Cabiles¹

¹Coastal Resources Management Section, Bicol University Tabaco Campus, Tabaco City, Philippines

O1-10

Regeneration in coral *Pocillopora damicornis* and the effect of monochromatic lights on tissue

Alex P. Camaya^{1*}, Victor S. Soliman¹, Satoko Sekida², and Kazuo Okuda²

¹Coastal Resource Management Unit, Bicol University Tabaco Campus, Tabaco City 4511, Albay, Philippines, ² Graduate School of Integrated Arts and Sciences, Kochi University 2-5-1 Akebono-cho, Kochi 780-8520, Japan

O1-11

Chromosome study on scleractinian (stony) corals

Takahiro Taguchi^{1, 2}, Erika Tagami², Takuma Mezaki³, Satoko Sekida⁴, Kazuo Okuda⁴, Akira Tominaga^{1, 2}, and Satoshi Kubota^{1, 2, 5}

¹ Division of Human Health and Medical Science, Kuroshio Science Program, Graduate School of Integrated Arts and Sciences, Kochi University, Nankoku, Kochi 783-8505, Japan, ²Department of Molecular & Cellular Biology, Kochi Medical School, Nankoku, Kochi 783-8505, Japan, ³Kuroshio Biological Research Foundation, Otsuki, Hata County, Kochi 788-0333, Japan, ⁴Division of Marine Bioresources, Kuroshio Science Program, Graduate School of Integrated Arts and Sciences, Kochi University, 2-5-1 Akebono-cho, Kochi 780-8520, Japan, ⁵Faculty of Marine Resource Science, Kochi University, 200 Otsu, Monobe, Nankoku, Kochi 783-8502, Japan

O1-12

Research opportunities at Dongsha Atoll

Keryea Soong¹, Yalan Chou¹, and Ching-Nen Nathan Chen¹

¹Department of Oceanography, National Sun Yat-sen University, Kaohsiung City, Taiwan

CONCURRENT SESSION (PART 4) TERRESTRIAL AND FRESHWATER ECOSYSTEMS (9:00 - 10:15, 26TH, JULY)

(Chairman: Mr. Renan Bobiles and Dr. Hiroyuki Yoritaka)

O2-01

Do mangrove-rich rivers harbour higher fish diversity than mangrove-free rivers in the Ryukyu

Allyn Duvin S. Pantallano¹, Renan U. Bobiles^{1,2}, and Yohei Nakamura¹

¹Kuroshio Science Program, Graduate School of Integrated Arts and Sciences, Kochi University, 200 Monobe, Nankoku, Kochi 783-8502, Japan, ²Bicol University Tabaco Campus, Tayhi Tabaco City 4511, Albay Philippines,

O2-02

Three-dimensional analysis of benthic invertebrate communities in headwater streams

Mitsuya Inoue and Motomi Genkai-Kato

Kuroshio Science Program, Graduate School of Integrated Arts and Sciences, Kochi University, Japan.

O2-03

Soils and its use for homegarden practices on the beach ridges interspersed with swales in the east coast region of peninsular Malaysia

Khairul Hafiz Mohd Yusoff^{1, 2} and Sota Tanaka³

¹The United Graduated School of Agricultural Science, Ehime University, Japan, ²Universiti Putra Malaysia, Malaysia, ³Kuroshio Science Program, Graduate School of Integrated Arts and Sciences, Kochi University, Japan

O2-04

Scale dependency of two endangered charismatic species as biodiversity surrogates

Motoki Higa¹, Yuichi Yamaura², Masayuki Senzaki³, Itsuro Koizumi³, Takeshi Takenaka⁴, Yoshiyuki Masatomi⁵, and Kunikazu Momose⁵

¹Kochi University, Kochi, Japan. ²Forestry and Forest Products Research Institute, Tsukuba, Ibaraki, Japan. ³Hokkaido University, Sapporo, Hokkaido, Japan. ⁴Fish owl Institute, Sapporo, Hokkaido, Japan. ⁵Red-crowned Crane Conservancy, Kushiro, Hokkaido, Japan

O2-05

The vegetation and biodiversity of Shikoku, southwestern Japan

Shingo Ishikawa¹

¹Kuroshio Science Program, Graduate School of Integrated Arts and Sciences, Kochi University, Japan

CONCURRENT SESSION (PART 5) MARINE AND COASTAL ECOSYSTEMS - 2 (10:30 - 11:30, 26TH, JULY)

(Chairman: Mr. Jonel Corral and Dr. Shingo Ishikawa)

O2-06

Linking bifurcation shifts and eddy propagation to changes at two trophic levels in the Philippine

Aletta T. Yñiguez¹, Iris Bollozos¹, and Cesar Villanoy¹

Marine Science Institute, University of the Philippines, Diliman, Quezon City 1101, Philippines

O2-07

The sea cucumbers of Palawan, Philippines: vital source of living but is now dwindling

Jean Beth S. Jontila^{1, 2}, Harold M. Monteclaro^{*1}, Gerald F. Quinitio¹, Sheila Mae Santander-de Leon¹, and Jon P. Altamirano³

¹College of Fisheries and Ocean Sciences, University of the Philippines in the Visayas, Miagao, Iloilo, Philippines,

²College of Fisheries and Aquatic Sciences, Western Philippines University, Puerto Princesa City, Philippines,

³Aquaculture Department, Southeast Asian Fisheries Development Center, Tigbauan, Iloilo, Philippines

O2-08

Difference in burrow utilization by the *Upogebia* burrow associates

Yumi Henmi¹, Yuya Okada², and Gyo Itani^{1,2}

¹Kuroshio Science Program, Graduate School of Integrated Arts and Sciences, Kochi University, Japan, ²Graduate School of Education, Kochi University, Japan

O2-09

The enigmatic life history of the galeommatoid bivalve *Peregrinamor ohshimai* kleptoparasitic on the burrowing upogebiid shrimps

Gyo Itani^{1, 2, 3}, Ayumi Sato², Runa Murakami³, Yusuke Yoshida³, Akinobu Yuzuriha², Kaoru Kajiwara², Chiharu Yamada¹, Yoshihisa Shirayama⁴, and Makoto Kato⁵

¹ Kuroshio Science Program, Graduate School of Integrated Arts and Sciences, Kochi University, ²Graduate School of Education, Kochi University, ³ Faculty of Education, Kochi University, ⁴ Japan Agency for Marine-Earth Science Technology, ⁵Graduate School of Human and Environmental Studies, Kyoto University

CONCURRENT SESSION (PART 6) MARINE AND COASTAL ECOSYSTEMS - 3 (13:00 - 14:00, 26TH, JULY)

(Chairman: Ms. Yumi Henmi and Dr. Izumi Kinoshita)

O2-10

Comparison of larval growth and development in an estuarine nursery of the seaperch (*Lateolabrax japonicus*) among neighboring rivers in Ariake Bay

Thanh Trung Tran¹, Shotaro Tojima¹, Izumi Kinoshita¹, Shinji Fujita², and Yuichi Hirota³

¹Utsunomiya Institute of Marine Biology, Kochi University, Tosa, Kochi, Japan, ²Nishinohon Institute of Technology, Wakamatsu, Kochi, Japan, ³Onga, Fukuoka, Japan

O2-11

Comparison of tidal changes of the larval and juvenile distribution among endemic gobies in mouth of the river of Ariake Bay
Shotaro Tojima¹, Izumi Kinoshita¹, Thanh Trung Tran¹, Shinji Fujita², and Yuichi Hirota³

¹Usa Institute of Marine Biology, Kochi University, Tosa, Kochi, Japan, ²Nishinohon Institute of Technology, Wakamatsu, Kochi, Japan, ³Onga, Fukuoka, Japan

O2-12

Population connectivity of *Terapon jarbua* (Teleostei, Teraponidae) from the South China Sea

Liao, Te-Yu¹, Chih-Yen Tung¹, Min-Yun Liu², Kwang-Tsao Shao³, Karhoe Loh⁴, Van Quan Nguyen⁵, and Cleto Nanola⁶

¹Department of Oceanography, National Sun Yat-sen University, Taiwan, R.O.C., ²Taiwan Ocean Research Institute, National Applied Research Laboratories, Taiwan, R.O.C., ³Biodiversity Research Center, Academia Sinica, Taiwan, R.O.C., ⁴Institute of Ocean and Earth Sciences, University of Malaya, Malaysia, ⁵Institute of Marine Environment and Resources, Vietnam Academy of Science and Technology, Vietnam, ⁶Department of Biological Sciences and Environmental Studies, University of the Philippines Mindanao, the Philippines

O2-13

A preliminary study on the genetic structure of mega-mouth shark (*Megachasma pelagios*)

Shang-Yin Vanson Liu¹, Wen-Pei Tsai², Kwang-Ming Liu³, and Shoou-Jeng Joung⁴

¹Department of Marine Biotechnology and Resources, National Sun Yat-sen University, ²Department of Fisheries Production and Management, National Kaohsiung Marine University, ³Institute of Marine Affairs and Resource Management, National Taiwan Ocean University, ⁴Department of Environmental Biology and Fisheries Science, George Chen Shark Research Center, National Taiwan Ocean University

**CONCURRENT SESSION (PART 7) HEALTH AND FOOD SCIENCE
 (14:15 - 14:45, 26TH, JULY)**

(Chairman: Ms. Mariani Yeni and Dr. Akira Tominaga)

O2-14

The suppression of endoplasmic reticulum function is a new anti-cancer target

Takushi NAMBA¹, Kayo MACHIHARA¹, and Hidenori TANAKA¹

¹Science Research Center, Kochi University, Kochi 783-8505, Japan

O2-15

Developing food product from indigenous root crop giant swamp taro [*Cyrtosperma merkussi* (hassk.) schott.] to support coastal community diet and coastal tourism

Teresa N. Avila¹

¹Partido State University, Goa, Camarines Sur, Philippines

**CONCURRENT SESSION (PART 8) SOCIO-ECONOMICS AND OTHER
 (15:00 - 16:00, 26TH, JULY)**

(Chairman: Mr. Yusro Fathul and Dr. Yoshiaki Iiguni)

O2-16

Visualizing objects in fourth dimension and above

Mark Anthony A. Castro¹

¹Catanduanes State University Main Campus, Virac, Catanduanes, Philippines

O2-17

Study on background and conditions for the establishment of communities' activity center in Kochi Prefecture

Osaki Suguru¹ and Yoshiaki Iiguni²

¹Kuroshio Science Program, Graduate School of Integrated Arts and Sciences, Kochi University, Japan ²Multidisciplinary Science Cluster, Research and Education Faculty, Kochi University, Japan

O2-18

Disaster risk reduction/climate change adaptation good practice options for rainfed and upland agro-ecological zones in Bicol

region, Philippines

Luis O. AMANO, Viola L. AMANO, Angelo P. CANDELARIA, and ARNULFO M. MASCARIÑAS

O2-19

The biological and socio-economic characteristics of the fine meshed net fishery in western central Philippines

Harold Monteclaro¹, Edna Abunal¹, Yrla Mey Santander¹, Caridad Jimenez¹, Armi May Guzman¹, and Rodelio Subade²

¹College of Fisheries and Ocean Sciences, University of the Philippines Visayas, Miagao, Iloilo, ²College of Arts and Sciences, University of the Philippines Visayas, Miagao, Iloilo

O2-20

Status of Rural Fisheries and Current Directions of Fish Processing Industry in the Philippines: With Focus on Riverine and Coastal Ecosystems and Communities

Raul G. Bradecina¹

¹Partido State University, Goa, Camarines Sur, Philippines

**POSTER SESSION
(13:30 - 14:30, 25TH, JULY)**

P-01

Language varieties for understanding key resource management concepts in selected marine protected area (MPA) communities in Lagonoy Gulf, Philippines

Josenia M. Penino and Raul G. Bradecina, PhD

Partido State University, Goa, Camarines Sur

P-02

Fish species associated with gebiidean and axiidean shrimp burrows: a review with new observations in Amami Islands, Japan.

Yumi Henmi¹, Yujiro Sotohata², Ryutei Inui³, Gyo Itani¹, Akihisa Iwata⁴, and Makoto Kato⁵

¹Kuroshio Science Program, Graduate School of Integrated Arts and Sciences, Kochi University, Japan, ² Faculty of Agriculture and Marine Science, Kochi University, Japan, ³Graduate School of Sciences and Technology for Innovation, Yamaguchi University, Japan, ⁴Graduate School of Asian and African Area Studies, Kyoto University, Japan, ⁵Graduate School of Human and Environmental Studies, Kyoto University, Japan

P-03

Prevalence and parasitic effect of bopyrid isopod *Megacepon goetici* on the varunid crab, *Gaetice depressus* (Crustacea: Decapoda) on the tidal flat of Hirokawa Beach, Wakayama Prefecture.

Jonel M. Corral, Yumi Henmi, Yuto Shiozaki, and Gyo Itani

Kuroshio Science Program, Graduate School of Integrated Arts and Sciences, Kochi University 2-5-1 Akebono, Kochi, 780-8520, Japan

P-04

Latitudinal diversity gradient: influence of winter waters in structuring patterns of reef fishes

Janice C. Leriorato¹, Wilfredo H. Uy², and Yohei Nakamura¹

¹Kuroshio Science Program, Graduate School of Integrated Arts and Sciences, Kochi University, Japan, ²Institute of Fisheries Research and Development, Mindanao State University at Naawan, Naawan, Misamis Oriental, Philippines

P-05

A trade-off between brood size and egg size in the hermit crab, *Diogenes nitidimanus*

Yuto Shiozaki^{1,2} and Tsunenori Koga²

¹Kuroshio Science Program, Graduate School of Integrated Arts and Sciences, Kochi University, Japan, ²Faculty of Education, Wakayama University, Japan

P-06

Effects of the facultatively symbiotic goby on the burrow morphology of the host alpheid shrimp

Sota Kirihara¹, Chiho Fujiwara², Yumi Henmi³, and Gyo Itani³

¹Graduate School of Education, Kochi University, ²Faculty of Education, Kochi University, ³Kuroshio Science Program, Graduate School of Integrated Arts and Sciences, Kochi University

P-07

Morphometry, embryonic development and fecundity of freshwater shrimp *Caridina gracilirostris* De Man, 1892 from Laguna de Bay, Laguna, Philippines

Sandy Rey B. Bradecina¹

¹Bicol University Tabaco Campus, Tabaco City, Philippines

P-08

Plasticity in shell weight choice of the land hermit crab *Ceponobita rugosus*

Y. B. Liang¹, **K. Soong**¹

¹Department of Oceanography, National Sun Yat-sen University, Kaohsiung, Taiwan

P-09

Identifying nest predators of the grassland birds in eastern Taiwan

Shun-Jen Cheng¹ and **Yu-Cheng Hsu**¹

¹Department of Natural Resources and Environmental Studies, National Dong Hwa University, Hualien 97401, Taiwan

P-10

Recruitment process in the endangered fiddler crab, *Tubuca arcuata* in Kodono-gawa river, Kochi Japan

Atsushi Minoh^{1,2}, **Ryu Asaoka**², **Teruyuki Yamasaki**², and **Gyo Itani**¹

¹Kuroshio Science Program, Graduate School of Integrated Arts and Sciences, Kochi University, ²Toyodenka Techno Research Co. Ltd.

P-11

Comparative eco-physiological study on temperature hardiness of oceanic, shore and fresh water species of Gerridae species

Takehiro Furuki¹, **Noritomo Umamoto**¹, **Wataru Ohoka**², **Hiroki Fujita**¹, and **Tetsuo Harada**¹

¹Laboratory of Environmental Physiology, Graduate School of Integrated Arts and Sciences, Kochi University, Kochi, Japan; ²Department of Medical Nursing, Medical School, Kyoto University, Kyoto, Japan.

P-12

Evaluation of soil environment under tea gardens in special tea production area of Vietnam

Hoang Huu Chien^{1,3}, **Sota Tanaka**¹, **Kozo Iwasaki**², and **Dang Van Minh**³

¹Kuroshio Science Program, Graduate School of Integrated Arts and Sciences, Kochi University, ²Faculty of Agriculture, Kochi University, Japan, ³Thai Nguyen University of Agriculture and Forestry, Vietnam

P-13

Mainstreaming the “eyes and mind” of women and children in coastal conservation

Mark Anthony A. Castro¹, **Sonia R. Vargas-Sapico**¹, **Kristian Q. Aldea**¹, **Moreno D. Tabios, Jr**¹, and **Felinor B. Sapico**²

¹Catanduanes State University Main Campus, Virac, Catanduanes, Philippines, ²Center for Sustainable Community Resource Development Innovations, Inc.

P-14

Application of wave spectra partitioning method

Cheng-Jung Hsu, **Yang-Yih Chen**, and **Hsuan-Shan Chen**

P-15

A novel fluorescence assay for β -lactamase activity and rapid screening of antibiotic-resistant bacteria based on mesoporous silica nanoparticles

Wei-An Huang and **Yen-Peng Ho***

Department of Chemistry, National Dong Hwa University, Hualien 974, Taiwan

P-16

Biological Aspects of Berried Coconut Crab (*Birgus latro*, Linnaeus, 1767) from the Islands of Batanes Province, Philippines

Melanie A. Calicdan¹, **Cheyserr A. Perucho**¹, **Angel B. Encarnacion**¹, **Evelyn C. Ame**¹, and **Milagros C. Morales**¹

¹Bureau of Fisheries and Aquatic Resources Region 02, Carig Tuguegarao City, Cagayan Valley 3500 Philippines

P-17

A fundamental study on intestinal flora in yellowtail *seriola quinqueradiata*

Kazuki Oguro¹ and **Syun-ichirou Oshima**¹

¹Kuroshio Science Program, Graduate School of Integrated Arts and Sciences, Kochi University, Japan

Characteristics of Modern History of Social and Cultural Exchange in Kuroshio Region -in the Light of Immigrant Fishers Village in NanFang-AO, Taiwan during the Japanese Rule

Hiroshi Yoshio¹, Mina Hori¹, and Akira Matsuura²

¹Kuroshio Science Program, Graduate School of Integrated Arts and Sciences, Kochi University, Japan, ²Kansai University, Japan

Editorial Policy and Instructions for Authors

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