SAKURA Online International Practical Course 2022 "An Invitation to Marine Biology"

Marine Biological Station, Sado Island Center for Ecological Sustainability, Niigata University (SMBS) has organized the SAKURA Online International Practical Course 2022 entitled "An Invitation to Marine Biology" on 27-28th July 2022. This online event was fully supported by SAKURA Science Program (Japan Science and Technology Agency). Totally 40 participants (29 students and 11 researchers) from 9 different universities were joined as follow.

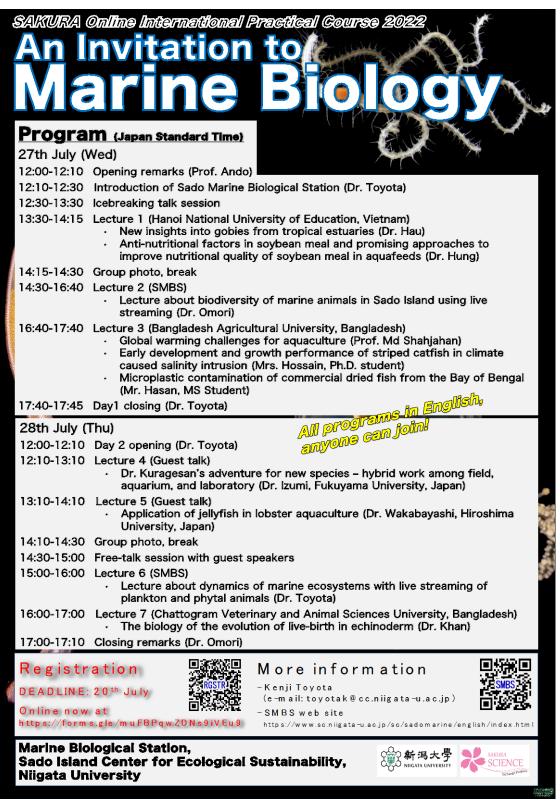
Country	University (alphabetical order)	No. of participants
Bangladesh	Bangladesh Agricultural University	8
Bangladesh	Chattogram Veterinary and Animal Sciences University	7
Japan	Fukuyama University	1
Vietnam	Graduate University of Science and Technology	1
Vietnam	Hanoi National University of Education	8
Bangladesh	Hajee Mohammad Danesh Science and Technology University	1
Japan	Hiroshima University	1
China	The University of Hong Kong	6
Japan	Niigata University	7

Program	* The individual times are in JST time zone (Tokyo, UTC+9).
Day 1: 27 th July	(Wed)
12:00-12:10	Opening remarks
12:10-12:30	Introduction of Sado Marine Biological Station
12:30-13:30	Icebreaking talk session
13:30-14:15	Lecture 1 (HNUE)
	• New insights into gobies from tropical estuaries (Assoc. Prof. Hau)
	• Anti-nutritional factors in soybean meal and promising approaches to improve
	nutritional quality of soybean meal in aquafeeds (Assoc. Prof. Hung)
14:15-14:30	Group photo, break
14:30-16:40	Lecture 2 (SMBS)
	• Lecture about biodiversity of marine animals in Sado Island using live streaming
16:40-17:40	Lecture 3 (BAU)
	• Global warming challenges for aquaculture (Prof. Shahjahan)
	• Early development and growth performance of striped catfish in climate caused
	salinity intrusion (Mrs. Hossain, Doctoral student)
	• Microplastic contamination of commercial dried fish from the Bay of Bengal
	(Mr. Hasan, MS Student)
17:40-17:45	Day1 closing

Day 2: 28th July (Thu)

12:00-12:10	Day 2 opening
12:10-13:10	Lecture 4 (Guest talk)
	• Dr. Kuragesan's adventure for new species – hybrid work among field, aquarium,
	and laboratory (Dr. Izumi, Fukuyama University, Japan)
13:10-14:10	Lecture 5 (Guest talk)
	• Application of jellyfish in lobster aquaculture (Assoc. Prof. Wakabayashi,
	Hiroshima University, Japan)
14:10-14:30	Group photo, break
14:30-15:00	Free-talk session with guest speakers
15:00-16:00	Lecture 6 (SMBS)
	• Lecture about dynamics of marine ecosystems with live streaming of plankton
	and phytal animals
16:00-17:00	Lecture 7 (CVASU)
	• The biology of the evolution of live-birth in echinoderm (Assoc. Prof. Khan)
17:00-17:10	Closing remarks

Poster

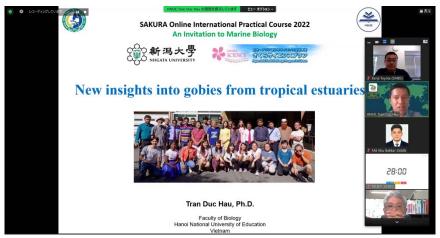


Report

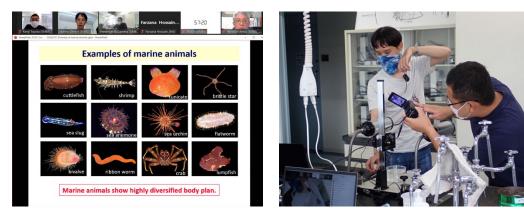
Although the International Marine Biological Course (IMBC) is held every summer, it was held online last March due to COVID-19. This year's one was scheduled to be held in face-to-face style, but it was also held online as last year. Unlike the previous event, two-days event included slots for students and researchers from Bangladesh Agricultural University (BAU; Bangladesh), Chattogram Veterinary and Animal Sciences University (CVASU; Bangladesh), and Hanoi National University of Education (HNUE; Vietnam) to introduce their latest researches. Additionally, we also invited two young marine biologists from Japan to introduce their taxonomic research on cnidarians and aquaculture research on lobster.

On the Day-1 (27th July 2022), we had "Icebreaking talk session" to chat among participants. This session used Zoom's breakout room function to divide participants, including all teaching staff and students, into three groups of about 15 participants, and each group will have 20 minutes to introduce themselves for about a one-minute/participant.

Then, as a Lecture 1, Dr. Hau (HNUE) talked his latest research topics entitled "New insights into gobies from tropical estuaries".



As a Lecture 2, Dr. Omori (SMBS) provided the lecture about biodiversity of marine animals in Sado Island using live streaming of animals that caught around SMBS.



Snapshot of Dr. Omori's lecture

Live streaming of animals

As a final slot of Day-1, members of BAU provided three different research topics focused on impacts of global warming on aquaculture, impacts of salinity on early development of striped catfish, and surveys of microplastic contamination in the commercial dried fish from the Bay of Bengal.

On the Day-2 (28th July 2022), we prepared two special lectures by guest speakers: Dr. Takato Izumi (Fukuyama University) and Dr. Kaori Wakabayashi (Hiroshima University). Dr. Takato Izumi provided a special lecture entitled "Dr. Kuragesan's adventure for new species – hybrid work among field, aquarium, and laboratory". This lecture introduced the process of describing "undescribed species focusing mainly on cnidarians " through persistent researches in an easy-to-understand talk.



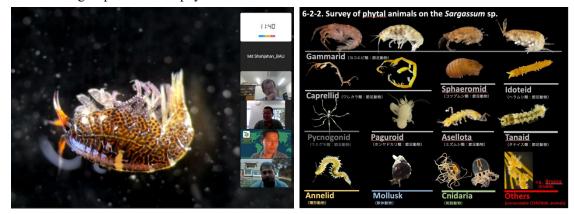
Snapshot of Dr. Izumi's lecture

Next, Dr. Kaori Wakabayashi provided special talk focused on lobster aquaculture. Her research approach is a quite unique because larvae of lobster (phyllosoma) grow by feeding on jellyfish. Her talk included such unique ecology of phyllosoma of Japanese fan lobster.



Snapshot of Dr. Wakabayashi's lecture

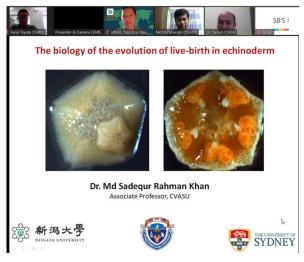
As a Lecture 6, Dr. Toyota (SMBS) provided basic lecture about dynamics of marine ecosystems with live streaming of plankton and phytal animals.



Live streaming of phytal animal (gammarid)

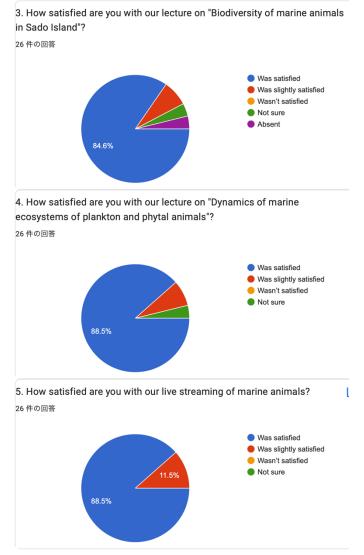
Catalog of phytal animals

As a final slot Day-2, Dr. Khan (CVASU; Bangladesh) introduced his latest research entitled "The biology of the evolution of livebirth in echinoderm".



Snapshot of Dr. Khan's lecture

A survey taken after this program showed that the two live-streamingbased lectures we prepared were well received. Students' comments included the request that they would definitely like to visit Sado Island next time to directly experience various marine animals. We would like to welcome students/researchers from all over the world to the next face-to-face marine practical course.



Questionnaires of this online event