

Summary Report

15th APBON Web Seminar

1. Date: February 2nd, 2023

Time: 14:00-16:00 in Japan, South Korea

12:00-14:00 in Cambodia, Thailand, Indonesia, Vietnam

10:45-12:45 in Nepal

13:00-15:00 in Malaysia, Philippines, China

19:00-20:00 (1st February) in Hawaii

2. Location, Participants

Onsite venue: W-1-Lecture Room 202, ITO campus, Kyushu university.

Online: ZOOM Meeting (Hybrid)

- Total participants: 29 participants from 7 nationalities
- On-site participants: 24 participants (20 participants and 4 secretariats)
- On-line participants: 5 participants
- MC: Dr. Yayoi Takeuchi (NIES), Mr. Sou Tomimoto (Kyushu University)

3. Program:

Dr. Takeuchi firstly introduced the 3 undergraduate students as volunteer participants.

Session 1:

Moderator: Dr. Yayoi Takeuchi (National Institute of Environmental Studies)

Presentation1:

Mr. **Wataru Nakamizo** (Kyushu University)

“Environmental drivers of the Great Orange Tip population dynamics in different regions”

Summary of presentation

Mr. Nakamizo introduced their research progress on the environmental drivers of the population of Great Orange Tip Butterfly in different regions in Okinawa. Mr. Nakamizo especially focused on the environmental factors regulating the population dynamics, the

population on Ishigaki and the main island of Okinawa exhibit different periodicities and fluctuations. Mr. Nakamizo pointed out that the population on each island were regulated by different environmental factors and exhibit different fluctuations, the main drivers were annual cycle of temperature in mainland Okinawa Ishigaki although it was maximum wind speed and rainfall in Ishigaki.

Presentation2:

Mr. Shogo Noguchi (Kyushu University)

“Prey compositions and predatory behavior of Japanese tiny ant-eating spiders”

Summary of presentation

Mr. Noguchi introduced the details of predatory behaviors in hadrotarsinae spiders which are scarcely known, especially the prey compositions and predatory behavior in some Japanese hadrotarsinae because the hadrotarsinae spiders do not build webs for prey capture except for *Dipoena* spp., which are different from other spiders. Based on the research, he explained that the species fed only ants except some species, which fed other prey taxa except for ants, and introduced predatory behaviors how to captures the ants with throwing sticky silks or biting.

Presentaton3:

Mr. Sou Tomimoto (Kyushu University)

“Somatic mutation may contribute to the genetic diversity of the tropical tree population”

Summary of presentation

Mr. Tomimoto mainly discussed the accumulation of somatic mutations due to the longevity of trees. Based on the hypothesis that somatic mutations within trees may contribute to genetic diversity of the tree population, he discussed how accumulation of Somatic mutations differs between slow- and fast-growing species with different lifespans and different tree architecture. He concluded that Accumulation of Somatic mutations are associated with the age of tree, rather than its height, and Genetic diversity of tree population is also stored among branches within a single long-lived tree.

Presentation 4:

Ms. Chihiro Myotoishi (Kyushu University)

“What factors effect the bryophyte species richness?.”

Summary of presentation

Ms. Myotoishi mainly introduced the recent research done in Mt. Iwara, which recorded elevation and all bryophyte species in the quadrats and its substrate type, rock, living tree, decayed tree, soil, leaf. She suggested two points as study summaries, Bryophyte species richness is more influenced by substrate and water availability than elevation within 268 - 869 m, and the species richness growing on rocks is influenced not only the relative rock area, but also by the relative water surface area. This may be due to the heterogeneity of micro-habitats on the rock surface, which is further increased by the high water availability.

Presentation 5:

Mr. Takeru Kodama (Kyushu University)

“The calling song of *Meimuna Opalifera*; difference of the functions between the former and the latter part of the song”

Summary of presentation

Mr. Kodama first introduced his research topic on acoustic communication in which only males vocalize by focusing on the structure of Cicadas' tymbal muscles. Exploring the hypothesis that the song patterns of the cicadas, *Meimuna opalifera* changes in the middle, those divided two patterns seem to contain different information or functions, he emphasized that it was the first study which showed that the two parts of the calling song of *M. Opalifera* had different functions though it is still an open question to be researched.

Session 2:

Moderator Mr. Sou Tomimoto (Kyushu University)

Presentation 1:

Dr. Sunita Chaudhary (ICIMOD)

“Impacts of changing cryosphere on biodiversity and ecosystem services: case study from Langtang National Park”

Summary of presentation

Dr. Chaudhary mainly reported the impacts of changing cryosphere on biodiversity and ecosystem services from her recent research work on Langtang National Park. After explanations of the importance of ecosystems which strongly connected to the indicator of cryosphere such as snow, glacier, ice and permafrost, she generally introduced how the temperature rise seriously affected the Himalaya region due to the water increase causing flood and landslides. Dr. Sunita especially pointed out that the tree covered areas in Himalaya region is remarkably increasing in recent 20 years, and tree canopy cover (TCC) shows negative changes especially in high elevated corridor area. She also emphasized we can see many species even at 4000m elevated area which never seen in 2000s, the treeline itself is shifted to the upper side remarkably and it seriously affected to the habitat of mammals and bird as well.

Presentation2:

Dr. Alice Hughes (Hong Kong University)

“Frameworks to identify and protect ecosystem services,

Summary of presentation

Dr. Hughes mainly focused on the methodological aspect and discussed how to take balance among key ecosystem services focusing on the factors; Ecological and conservation redlines, Target setting and Landscape scale solutions. In target setting factors especially, Dr. Alice introduced the method for assessing biases and developing accurate maps of species diversity through the bees as a major pollinator group crucial for food security. She also emphasized the importance of translating science to policy landscape wide and converting data into policy. She concluded that we should target a policy to provide services based on scientific evidence such as accurate data, appropriate targeting in order to provide long-term effective solutions.

Closing remarks from APBON co-chair Yongyut Trisrat and Hiroyuki Muraoka

Dr. Yongyut briefly introduced the recent activities of biodiversity conservation such as COP27 on last October and COP CBD 17 on December where there were many potential opportunities for APBON to approach policy makers. He also thank Dr. Yahara and Kyushu university for hosting this 15th APBON web seminar.

Photo Session

