



Hokkaido University Times



President Toyoharu Nawa

Welcome from the new president: Dr. Toyoharu Nawa

Think, act and challenge the future

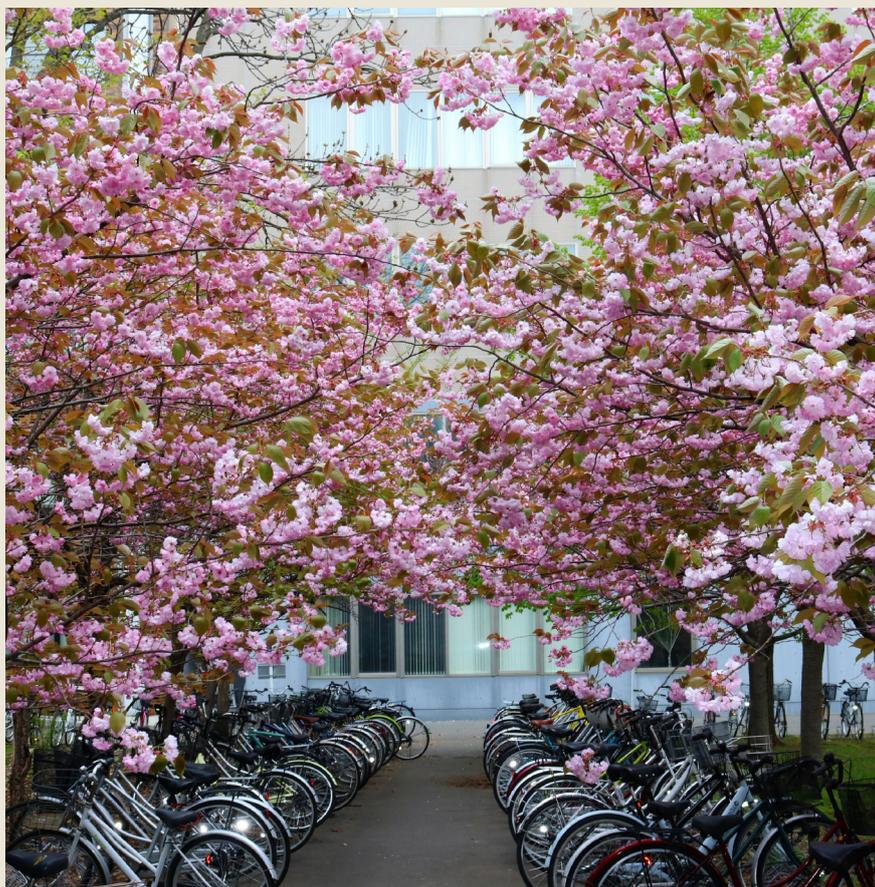
Our world is undergoing a sea of change due to the rapid advance of globalization and growth of the internet, enabling people in any corner of the world to instantly connect with others and obtain information.

The phenomena and changes associated with humans, society and nature occur against backdrops involving a myriad of diverse conditions. The complexity of these advances cannot be simply “unlocked,” particularly when they are closely interconnected. It is difficult, perhaps impossible, to study or solve such problems in the context of conventional learning, because circumstances can change quickly and drastically. Coping with this reality requires an inquisitive mind willing to investigate, understand and unravel the underlying nature and causes of changes and occurrences. In short, individuals need both the ability to think and act autonomously.

“To think” is to question the existing values and methods, and to change or even destroy them if necessary. To truly think, in other words, one cannot be bound by convention. Universities are special because they are places where one can freely engage in the act of thinking. In the over 140 years since the 1876 founding of its predecessor, the Sapporo Agricultural College, Hokkaido University has helped students awaken their autonomy and independence. This is achieved by encouraging them to venture into unexplored areas of learning; to develop an international mindset and flexible approach to diversity; to cultivate themselves in a broad range of areas that will help build character; and to pursue meaningful research so they can grasp the essence of things and use their learning for practical purposes. Following in the spirit of its founding, Hokkaido University strives to be a place where all students can find and foster their innate potential and grasp what their true talents are, so they can develop the ability to think and foster an independent spirit to take on the challenges of the future.

It takes tremendous courage – in addition to an independent mind and autonomous spirit – to venture into an untrodden field. “Boys, be ambitious,” exhorted William S. Clark, the first vice principal of Sapporo Agricultural College, when he departed Sapporo after a short, 8-month stay. In keeping with the Frontier Spirit espoused by Dr. Clark, I would like to make Hokkaido University an educational hub where students and faculty work together to intensely learn and create new wisdom – with the ultimate goal of solving the world’s problems and contributing to the happiness of mankind through a spirit of independence and autonomy.

Toyoharu Nawa
President, Hokkaido University



Doubled flowered cherry blossoms on campus.

Academic exchange agreement with the University of Otago signed

On May 18th, the signing of an academic exchange agreement and student exchange agreement with the University of Otago in New Zealand was held. Vice-President Richard Blaikie from the University of Otago and six representatives from Hokkaido University including President Toyoharu Nawa, Executive Vice President Masanori Kasahara, Dean of the Faculty of Science Koichiro Ishimori, and Professor Toshiya attended the ceremony.



Vice-President Richard Blaikie and President Nawa after the signing.

The University of Otago was founded in 1869 and is New Zealand's oldest comprehensive university. It has 47 courses in 4 departments, about 20,600 students and about 3,800 faculty and staff. Hokkaido University's Faculty of Science, Faculty of Fisheries Science as well as the Arctic Research Center have been promoting exchanges with the University of Otago. The agreement has been signed to further promote academic exchanges between the universities.

On the day, Bill English, Prime Minister of New Zealand and a graduate of the University of Otago, arrived in Hokkaido for the first time. He witnessed the signing of a Memorandum of Understanding (MOU) between Hokkaido Prefecture and the Embassy of New Zealand in Japan. The representatives of Hokkaido University and the University of Otago were also invited to the venue after signing the exchange agreements between the two universities. During the ceremony, it was announced that the agreements have been signed.

Prime Minister English came to Japan on the 16th to 18th, and had met with Prime Minister Shinzo Abe regarding cooperation concerning the Trans-Pacific Partnership Agreement. Prime Minister Bill English also met Yuriko Koike, the Governor of Tokyo.

Students discuss with Foreign Minister Kishida on how to convey the beauty of Hokkaido



Photographs from the roundtable meeting.

[Far Left] Students (wearing yellow tags) from top-left to bottom-right: Mr. Buntilov Georgy (Russia), Graduate School of Education; Mr. Chan Poh Kam (Malaysia), Graduate School of Engineering; Ms. Moeka Ono (Japan), Nitobe College, Faculty of Agriculture; Ms. Randrianirina Benja Liantsoa (Madagascar), ABE Initiative Scholar, Graduate School of Economics; Ms. Nguyen Quynh Linh (Vietnam), MJSP.

A roundtable meeting was held on April 23rd with Minister Kishida, Parliamentary Secretary Takei of the Ministry of Foreign Affairs, and students representing Hokkaido University to share ideas on how to disseminate the attractiveness of Hokkaido to other countries. The roundtable was a special occasion for students to present their ideas to the Minister of Foreign Affairs face to face.

Presented ideas include:

1. Making promotional videos in English featuring heritage sites, culture, nature, and local food;
2. Utilizing social media;
3. Emphasizing Ainu culture as a Hokkaido-specific tourism resource;
4. Designing engaging activities and social interaction events with the locals;
5. Strengthening the railway network to make Hokkaido easier to access.

As the students are fond of the prefecture, they agreed to actively promote Hokkaido when overseas.

Alumni Spotlight: HU Ambassador C. Hanny Wijaya



Professor C. Hanny Wijaya

Professor C. Hanny Wijaya of Bogor Agricultural University is one of the university's ambassadors and Chairperson of the Hokkaido University Alumni Association in Indonesia. While she was a student at Hokkaido University (HU), she studied agricultural chemistry and was quite active outside of her studies. In addition to taking Japanese and English language courses, she was

she has been making preparations for the opening ceremony of the new HU liason office at the Graduate School of Bogor Agricultural University, Darmaga campus. This office helps ensure that students interested in studying at HU have the available resources to do so. It also stimulates international research collaborations, works toward extending HU's alumni network, and assists in the establishment of double degree programs (and other exchanges) between the two universities. The opening ceremony will be held either this month or the next.

"Be ambitious. Build your dream. Spread your wings, and make this world a better place for tomorrow...big smile." Dr. Wijaya's words encourage students to follow their aspirations and to use their opportunities at university as a stepping stone to something great.

participated in traditional Japanese tea ceremonies (*chado/sado*) and learned the art of flower arrangement (*ikebana*). She was active in the Sapporo International Women's Club and chaired the Indonesian Student Association, North Japan Chapter (PPI Jepang Utara).

Earlier this year, Dr. Wijaya had the privilege of welcoming and giving the congratulatory remarks to the newly appointed HU Ambassadors and Partners in Indonesia. Taking pride in being an HU Ambassador, Dr. Wijaya utilizes her position to expand the positive image of the university as an institution which contributes to creating a better future for everyone. Recently,



Commemorative photo with the new Hokkaido University Ambassadors and Partners in Indonesia.

Representatives from the Philippines Visit



From front left, Ms. Kaye Vergel, Secretary Fortunato T. De La Peña (DOST), Mr. Benjamin Magallon. From rear left Prof. Yukihiro Takahashi (Hokkaido University), Dr. Joel S. Marciano Jr. (DOST), Dr. Gay Jane Perez (University of the Philippines, Diliman).

The university had the pleasure of conducting the graduation ceremonies which included our first batch of Filipino students of the Micro-satellite Project, and to welcome several prestigious guests: the Honorable Fortunato T. de la Peña, the Secretary of the Department of Science and Technology (DOST), Dr. Joel Marciano, a Hokkaido University Ambassador and also associated with the Advanced Science and Technology Institute of DOST, and Associate Professor Gay Jane Perez from the University of the Philippines, Diliman. The abovementioned guests are collaborative partners involved with the Micro-satellite Project and visited the university to congratulate the new batch of graduates by attending a number of ceremonies. Secretary de la Peña said he would like to encourage graduates to pursue careers related to science and technology and to become active in research or teaching.

The guests spent the day speaking with students, touring the university, and meeting with collaborators of the Micro-satellite Project. Led by Professor Yukihiro Takahashi, the director of the Space Mission Center at Hokkaido University, the Micro-satellite Project is a collaboration between 9 Asian countries which has promoted fluid communication and the development of science in the involved countries. When asked about the impact of the project in the Philippines, Secretary Fortunato de la Peña stated:

"Well, first of all, I think it has created some kind of awareness with ordinary Filipinos that this sort of thing [science and technology] can be useful. This satellite can help us monitor the environment, especially important since we are a disaster-prone country. Secondly, this is very important technology for monitoring and managing our natural resources. Finally, in addition to creating business opportunities, the Micro-satellite Project has generated interest related to space technology in our top-level decision makers."

The Secretary is referring to the approved 10-year Space Development Program in the Philippines and plans to create the Philippine Space Agency. "We will continue our collaborations with Hokkaido University to make sure that the research projects we have started will continue," he remarked in conclusion.

Spotlight on Research



Glaciers are sensitive and complicated creatures

Dr. Podolskiy on the complications in studying glaciers and his research on a glacier in New Zealand.



A step towards preserving the Ainu language

An introduction to the Ainu and their language, and Dr. Sato's latest research on the Ainu language.

Recent Press Releases



Japan's largest complete dinosaur skeleton discovered

An 8-meter-long duck-billed dinosaur has been unearthed from 72-million-year-old marine deposits at Mukawa in Hokkaido.



Bamboo inspires optimal design for lightness and toughness

Mimicking the lightness and toughness of bamboo may be useful in the development of advanced materials.



Identifying species from a single caviar egg

Scientists are now able to accurately identify high-end caviar of Beluga sturgeons, helping ensure fair trade and species conservation.

Featured Press Release: Nice moves: First dancing, then mating in songbirds



Photo taken by Nao Ota

Java sparrows are more likely to mate after dancing together, according to a study from Hokkaido University, contradictory to the belief that songs are the primary sexual signal.

Songbirds are well-known to sing duets for various purposes such as mutual mate guarding and joint resource defense. For Java Sparrows, songs are performed only by males for courtship, but both males and females dance in a duet-like manner. The male's song is thought to play an essential role in attracting female mates but the role of dancing has been unclear until now.

In a new study published in the journal *PLoS ONE*, Associate Professor Masayo Soma and Midori Iwama at Hokkaido University in Japan examined how duet-dancing influences the mating success of pairs during a first encounter.

The researchers found that although both duet-dancing and male-singing are associated to a higher rate of mating success, the former played an essential role in mating. Females often gave a copulation solicitation display (CSD), meaning they are ready to mate, before the males started to sing, or after listening to the introductory notes. These results suggest that dance is more important than the males' singing.

Masayo Soma says "It is surprising that females select mating partners without hearing the main song. The main song varies greatly among individuals and is thought to be important for selecting a mate in similar species."

They also found that duet-dancing could be initiated by either sex, confirming the existing knowledge that courtship is a bilateral process in this species. Duet-dancing might also be part of a "matchmaking" process since males and females performed it on their first meeting. Solo-dancing by either the male or female did not result in a higher mating success in their study.

"Our current research didn't look at how well their dances fit together. Future studies should look into the duration and degree of coordination in duet-dancing to better understand the role of dancing and its relative importance to singing. We are also interested in how dance routines change among pairs over time," Masayo Soma added.

Original article:

Soma M, Iwama M., Mating success follows duet dancing in the Java sparrow. *PLoS ONE*, March 8, 2017.

[Movie of Java sparrows duet-dancing](#)

Spotlight on Research: The world is our oyster - unearthing a new parasite in shellfish



Wakeman and a student scuba diving in Okinawa, Japan.

Dr. Kevin Wakeman with the Department of Biological Sciences/ Institute for International Collaboration can still vividly recall his first diving experience. "It was so surreal. It blew my mind," he said regarding how he felt breathing underwater for the first time. Wakeman continues to scuba dive but now for conducting research on marine parasites.

Wakeman is starting a 2-year project with the Cawthron Institute in New Zealand this summer to examine parasites, specifically apicomplexans, that infect shellfish. "The idea is to expand both of our laboratories' expertise and skills. It's like a marriage of ideas and techniques," he commented. The collaboration also gives students opportunities to do domestic and international fieldwork, as well as collaborate with an international team of scientists.

Apicomplexans were found in shellfish in New Zealand, but research has not yet been done on whether these parasites infect shellfish in Japan. Wakeman and a group of researchers and students from both countries will initially investigate the coastal ecosystems in Hokkaido before expanding to include other areas of the country. Since the target parasite, referred to as Apicomplexan-X (APX), is a new lineage of apicomplexan they will need to start from the ground up so to speak, addressing fundamental questions related to the parasite's life cycle and basic characteristics.

Samples of apicomplexans are extracted primarily via scuba diving, but can also be found along the coast. After they're taken, there is a relatively small window in which Wakeman and his team can extract DNA and study the parasite's morphological characteristics. This allows for a comprehensive study of the parasite's nature, particularly concerning what it's doing in the host, what part of the host's body it's infecting, and whether it's harming the surrounding tissues. The data on APX can then be compared to the data of the lineage in New Zealand to see how their behaviors differ and how different ecosystems affect variation. If APX isn't found, questions related to why this parasite is only found in New Zealand need to be addressed. Thus, regardless of whether APX is present in shellfish in Japan, this research provides further insights into biodiversity, biogeography, and evolution.

Oysters are a popular food all over the world, so understanding a parasite that can potentially cause mass die-offs worldwide is of major economic interest. From an academic perspective, this work is important for furthering our understanding of evolution and documenting a new lineage of apicomplexan, pushing the field of marine biology to new depths. And from a personal perspective, Wakeman can continue scuba diving and exploring the seas.

New International Graduate Schools

With the start of the new school year in April also came the establishment of three new graduate schools: the Graduate School of Biomedical Science and Engineering, the Graduate School of Infectious Diseases, and the Graduate School of Global Food Resources. These programs were created to capitalize and expand on the academic strengths of the university.

Graduate School of Biomedical Science and Engineering

Through the combination of the fields of medicine, engineering, hygiene, biology, and science, this graduate school focuses on studying and developing treatments for cancer. The graduate school offers both a master's and doctoral program, and specializes in radiation therapy and biomedical imaging. By the end of the program, students are expected to be competent researchers and engineers capable of developing new medical technologies and treatments.

Graduate School of Infectious Diseases

This doctoral course was created to train specialists and the next generation of global leaders on understanding and controlling infectious diseases in humans and animals. Graduates will possess advanced knowledge of the subject and have a broad vision so that they may exercise their talents to help society on a global level.

Graduate School of Global Food Resources

To effectively address the various crises related to food, water, and land resources worldwide, a master's program was set up integrating the humanities, social sciences, and the sciences. This ensures graduates come out with sufficient technical knowledge alongside having a deep cultural awareness. The program also contains an overseas fieldwork component so students get practical experience.

Visit their websites (linked above) to find out more about the new grad schools.

Event Photos



International Student Farewell Party



Start of the new school year



2017 Graduation Ceremony



Japanese tea drinking party



OIAS 15th Sci-Tech Talk by Dr. Alex Pettitt



International Food Stalls at the Hokkaido University Festival

Follow us on:



Upcoming Events

[Hokkaido Summer Institute \(HSI\):](#) May 29th-Sept 11th

[Hokkaido University Symphony Orchestra 133rd Regular Concert:](#) Jul 2nd

[Transferable Skills Seminar - Personal Branding:](#) Jul 7th

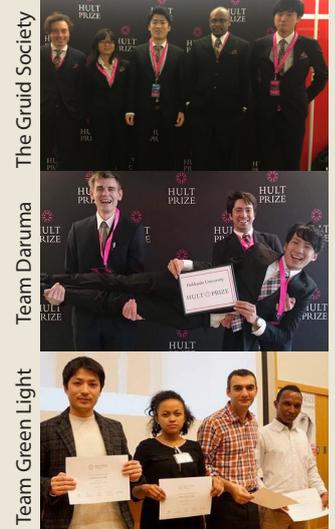
[Open Seminar - Strategy for the Control of Zoonoses:](#) Jul 8th

[GI-CoRE GSQ, GSB & IGM Joint Symposium - Quantum, Informatics, Biology & Medicine:](#) Jul 10th

[Sustainability Weeks:](#) Jul 15th-Aug 25th

Throwback

In Issue 1, we featured the results for the Hult Prize Campus Competition. These three teams (to the right) then went on to compete to regional competitions, which were held all around the world. Want to find out how our teams performed? [Click here](#) for a summary of the results and thoughts for next year's competition.



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