



DIWPA: *DIVERSITAS* in the Western Pacific and Asia

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Message from the Chairperson
Keisuke Koba

Fifteen years ago today, on March 11, Japan was struck by a massive and devastating earthquake. The disaster caused immense damage, and the sorrow it brought has not yet faded. We will never forget the warm and kind words of sympathy and the generous support we received from people around the world in the aftermath of that tragedy. I would like to once again express our deepest gratitude and reaffirm our commitment to advancing ecological research in the Western Pacific and Asia.

I am pleased to share encouraging news related to one of DIWPA's central missions: the development of early-career researchers. From January 26 to 30, 2026, the DIWPA International Field Biology Course (IFBC) was held at the University of Sri Jayewardenepura in Sri Lanka under the leadership of Dr. Tanaka. As described in more detail in this newsletter, this course marked DIWPA's first overseas IFBC since the pandemic. It offered highly practical training, including primatology and methods for species identification using DNA barcoding. Set within Sri Lanka's exceptionally rich natural environment, the course wonderfully organized by Dr. Tanaka provided an invaluable opportunity for students and researchers from diverse backgrounds to learn together and deepen their understanding of complex ecosystems.

The future of DIWPA depends on the activities, commitment, and collaboration of our members. Through this newsletter, the IFBC, and other platforms, we hope to further promote the exchange of knowledge and ideas on biodiversity conservation and ecosystem science throughout the Asia-Pacific region. We warmly welcome your opinions, as well as your contributions to future issues of the newsletter.

Let us continue working together to expand the frontiers of ecological knowledge and to strengthen our shared efforts to protect the rich natural heritage of the Asia-Pacific region.



Message from the Secretary General
Atsushi Ishida

In this volume, we present reports from early-career researchers who participated in the DIWPA International Field Biology Course (IFBC) held in Sri Lanka this year. As these reports clearly demonstrate, the IFBC was both highly successful and intellectually rewarding. As this was the first time the course was held in Sri Lanka, we would like to express our sincere appreciation to the researchers in Sri Lanka and Japan for their guidance and support, as well as to the young researchers whose enthusiastic participation made the event such a success. We warmly invite other countries to consider co-sponsoring and hosting future DIWPA IFBC courses.

As of the end of March 2026, I will retire from Kyoto University. In conjunction with my retirement, I will step down from my position as Secretary General of DIWPA, a role I have had the honor of serving since 2013, upon the publication of this volume. During the COVID-19 pandemic, restrictions on travel and personal interaction at times made it difficult to advance DIWPA's activities. Nevertheless, thanks to your steadfast support, we were able to sustain our work. I extend my deepest gratitude to all members of DIWPA. During my tenure, Japan saw the designation of two new World Natural Heritage sites, the Ogasawara Islands and the Okinawa-Amami region. Yet amid ongoing global warming and accelerating development pressures, the conservation of biodiversity is becoming increasingly challenging worldwide. The Western Pacific and Asian region remains one of the world's most significant biodiversity hotspots, and close collaboration among researchers across these regions is essential to safeguard their rich and diverse ecosystems. As a platform that fosters information exchange and collaborative initiatives among researchers who share this commitment, DIWPA will undoubtedly play an ever more vital role in the years ahead. I sincerely hope that, with your continued support, DIWPA will continue to grow and flourish. I look forward to witnessing its future achievements and continued contributions to ecosystem conservation. It has been a great honor to serve as Secretary General of DIWPA. Thank you very much for your support and collaboration over the past 13 years. I wish you all continued success and good health.



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From Field Trails to DNA Tales: Reflections from 2025 DIWPA IFBC in Sri Lanka

Participating in 2025 DIWPA International Field Biology Course (IFBC) held in Sri Lanka from 26–30 January was both an honour and a deeply enriching experience. When I first learned about the programme through my Head of Department, Prof. Kamal Ranatunga, I immediately recognized its value—not only for myself as a lecturer engaged in wildlife research, but also for my students who are actively involved in biodiversity studies. Having known of the longstanding academic friendship between Prof. Kamal, Prof. Charmalie, Prof. Michael and Prof. Tanaka, I was confident that this course would be inspiring and collaborative. It exceeded all expectations.

From the very first day, the organization and energy of the programme were remarkable. The dedication of the resource persons created an atmosphere that was both academically stimulating and warmly collaborative. Although I had briefly met Prof. Mike and Prof. Tanaka on previous occasions, this was my first opportunity to engage with them closely throughout an entire programme. Their humility, enthusiasm, and depth of knowledge left a lasting impression.

A particularly memorable component of 2025 IFBC was the field excursion to Kaludiya Pokuna. Eight of us—including Professors Tanaka, Mike, and Charmalie—set out early in a minibus, filled with anticipation and lively discussion. Even during our first brief stop near Dambulla, where we encountered a troop of macaques but found no usable fecal samples, the learning had already begun. Discussions on primate behaviour unfolded naturally in the field, with participants eagerly posing questions and exchanging ideas. The intellectual energy was constant and inspiring.

Upon arrival at the Primate Conservation and Research Project (PCRP) field station, we were warmly welcomed and treated to delicious local village cuisine. Soon after, we began trekking along a narrow path bordering emerald paddy fields with a dramatic mountain backdrop. It was here that the practical heart of the workshop truly began. Ms. Dilani and her colleague (from PCRP) provided some excellent guidance, informing us about the site as well as their work on primates.

Collecting primate fecal samples for DNA analysis was a new experience for me (Fig. 1). Under the excellent guidance of Prof. Tanaka, we learned how to identify fresh samples, record metadata, and preserve them appropriately for molecular work. Prof. Charmalie and Prof. Mike also gave us very good insights for this work. The objective was to use DNA barcoding techniques to identify species and explore genetic information embedded within non-invasive samples. The experience reinforced the immense potential of molecular ecology in wildlife and primate research.



Fig. 1. Field work at Kaludiya Pokuna

What stood out most during the fieldwork was the contagious enthusiasm of Prof. Tanaka. His excitement over even the smallest procedural detail transformed routine steps into moments of discovery. Prof. Mike and Prof. Charmalie, despite their seniority, trekked alongside us with the energy of young researchers. By the time we reached the Kaludiya Pokuna archaeological site—an extraordinary landscape of crystal-clear streams that flowed under the canopy, towering monolithic inselbergs, and ancient ruins—we had become more than a group of participants; we had formed a cohesive team (Fig. 2). The site itself was breathtaking, with history, geology, and biodiversity merged into one serene setting. Prof. Charmalie’s insights into the archaeological significance of the area added yet another interdisciplinary dimension to our learning.

The evening was equally memorable. After a long day in the field, Prof. Tanaka’s ukulele would emerge, filling the air with light melodies. These



Fig. 2. IFBC field team at Kaludiya Pokuna

brief musical interludes reminded us that science, while rigorous, is also profoundly human. Shared meals, informal conversations, and cultural exchanges strengthened bonds among participants from different backgrounds, including our international colleague Ms. Sreekkutty, who quickly became part of our close-knit group.

The final two days shifted focus from field to laboratory (Fig. 3). Conducted at the newly established DNA laboratory of the Department of Anthropology, the sessions were a refreshing return to molecular techniques for me. Under Prof. Tanaka’s careful instruction, we conducted DNA extraction, PCR amplification, and discussed sequencing workflows. Although I had prior experience with molecular methods, the detailed explanations and introduction to high-fidelity enzymes such as KOD FX polymerase broadened my technical understanding. The interactive nature of the lab sessions encouraged discussion and critical thinking. There was genuine excitement when PCR amplification proved successful for nearly all samples—a meaningful triumph for the group.

One particularly commendable aspect of the programme was Prof. Tanaka’s continued mentorship. Even after returning to Japan, he conducted an additional online session to explain sequencing results and clarify technical aspects. This gesture reflected the depth of his commitment to ensuring that participants fully understood the scientific process beyond the workshop itself.

The concluding evening was both celebratory and heartfelt. Seki-san and her colleague from Japan joined us, bringing with them ingredients to prepare traditional Japanese cuisine. The collaborative preparation of “**Okonomiyaki**” turned into a lively cultural exchange, and we were delighted by the taste

of this delicious food. It was followed by a music session featuring Sinhala and Japanese songs. It was heart-touching to listen to “*Malata Bambareku Se*” and “*Sukiyaki*” songs. The blending of guitar and ukulele symbolized the spirit of IFBC—different traditions harmonizing in shared purpose. Certificates of the International Field Biology Course were presented to us, recognizing not just participation, but shared intellectual growth (Fig. 4).

Reflecting on 2025 DIWPA IFBC in Sri Lanka, I realize that the programme offered far more than technical training. It demonstrated the power of non-invasive molecular approaches in conservation research, strengthened international academic partnerships, and fostered meaningful personal connections. Exploring Kaludiya Pokuna while uncovering hidden genetic information from primate fecal samples symbolized a broader journey—bridging field ecology with molecular science, local landscapes with global collaboration.

For me as an academic, the experience has already begun influencing both my research direction and my teaching. The integration of conservation genetics, field methodology, and cross-cultural collaboration represents the future of biodiversity research. The IFBC was not merely a workshop; it was a reminder that science thrives on curiosity, humility, and shared passion.

I extend my sincere gratitude to DIWPA, the Center for Ecological Research, Kyoto University, Department of Anthropology/Zoology, USJ, and all organizers and mentors who made this programme possible. The knowledge gained, friendships formed, and inspiration ignited will undoubtedly shape my work in the years to come.



Fig. 3. Lab work for DNA extraction and PCR



Fig. 4. Presentation of the Certificate of Completion



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2025 DIWPA International Field Biology Course - A Week of Scientific Exploration in the Pearl of Indian Ocean

It was a great opportunity to participate in the 2025 DIWPA International Field Biology Course. I had not expected to be selected for the programme, and it was also my first visit to a foreign country. Prior to the course, an online meeting was held via Zoom on 29 December 2025. Prof. Hiroyuki Tanaka, Prof. Michael Huffman, Ms. Akiko Seki (DIWPA Office), and some of the participants joined the meeting. We introduced ourselves and shared details about our research work. The meeting truly helped to ease my fears. It provided an open and supportive platform for interaction, allowing us to communicate freely and comfortably. After the online meeting, I waited nearly one month for the IFBC programme. On 25 January 2026, I had my first-ever flight journey from Cochin International Airport to Bandaranaike International Airport, Colombo. Lifting off from the earth's surface and witnessing the landscape from a bird's-eye view made the journey truly memorable. I arrived in Colombo on 25 January 2026 at 9:00 p.m. I literally felt that I was far away from the people I knew, surrounded by a new landscape, new faces, a new culture, and unfamiliar languages. After a brief wait, Tanaka-san came to pick me up at the airport. I had only seen him during our Zoom meeting; however, I recognized him immediately at the airport and called out his name. At that moment, I realized I had completed my first flight, arrived in a new country, and taken my first steps into a new environment.

On the first day (26 January 2026) of the IFBC programme, I woke up early and, after having breakfast, travelled to the University of Sri Jayawardenepura with Tanaka-san and Mike-san. The programme commenced with a lamp-lighting ceremony. The welcome address was delivered by Prof. Charmalie Nahallage (Senior Professor, Department of Anthropology, University of Sri Jayawardenepura), emphasizing that the programme



Fig. 1. Refreshment time during the IFBC

was the outcome of long-term academic discussions and collaborative planning. The address to the audience was delivered by Prof. Kamal Ranathunga, (Professor, Department of Zoology, University of Sri Jayawardenepura). Then Tanaka-san delivered an introductory speech outlining the objectives and background of 2025 DIWPA IFBC in Sri Lanka. After the inaugural session, the participants introduced themselves. In total, there were ten participants in the programme. The majority were from Sri Lanka, and I was the only international participant (Fig. 1).

After the tea break, Mike-san (Institute of Tropical Medicine, Nagasaki University; Visiting Professor, Department of Anthropology, University of Sri Jayawardenepura) delivered a lecture on "Sri Lankan Primate Behavioural Ecology, Observational Methods, and Applications" (Fig. 2). In his lecture, he emphasized that ecology is not comparable to rocket science, it is a process of understanding nature through systematic observation and critical interpretation. He discussed the challenges encountered during ecological fieldwork, the methodological approaches used in studying primate behaviour, and the standard protocols for behavioural recording. He also presented findings from a study conducted on Japanese macaques, which examined how enclosure environments influence the activity budgets of captive individuals. The study compared vegetated and non-vegetated enclosures, as well as rural and urban monkey groups. The findings indicated that rural groups spent more time engaging in active behaviours



Fig. 2. Lecture by Prof. Michael Huffman



Fig. 3. Kaludiyapokuna Primate Conservation and Research Center

compared to urban groups, whereas urban monkeys allocated more time to resting and grooming. Then he provided an overview of primates in Sri Lanka, noting that the country is home to five species: the toque macaque (*Macaca sinica*), the purple faced langur (*Trachypithecus vetulus*), the gray langur (*Semnopithecus priam*), the red slender loris (*Loris tardigradus*), and the gray slender loris (*Loris lydekkerianus*). Mike-san explained his long-term research contributions in Sri Lanka, particularly in the field of primate behavioural ecology. One interesting study he discussed examined Allen's Rule. In that study, he demonstrated that temperature influences tail length variations in macaques (Huffman *et al.*, 2020).

Following the morning sessions, we had lunch, which consisted of traditional Sri Lankan dishes, wrapped in a lotus leaf. The meal was flavourful, especially the curry prepared with raw mango. After lunch, Tanaka-san delivered a lecture on ecological field training. The primary objective of the session was to provide an understanding of the methodological foundations of ecological and behavioural research. He shared insights from his own field experiences and emphasized the practical challenges and methodological considerations involved in conducting behavioural studies. Then, Prof. Charmalie Nahallage delivered a lecture titled "A Review of the Current Status of Human-Monkey Conflict in Sri Lanka". In her presentation, she outlined the broader context of human-wildlife conflict in Sri Lanka, identifying species such as elephants, wild boar, macaques, giant squirrels, and peafowl as major conflict species. She then focused specifically on human-primate interactions. Primates are widely distributed across Sri Lanka, and species such as the purple-faced langur (*Semnopithecus vetulus*), the toque macaque (*Macaca sinica*), and the red slender loris (*Loris tardigradus*) are endemic to the country. She explained that interactions between humans and primates may be positive, negative, or neutral, depending on ecological and socio-economic

contexts. Crop damage caused by primates is reported to be more significant in forest-fringe areas. Prof. Charmalie also discussed the behavioural characteristics of these primates and their patterns of interaction with humans. Common methods employed by local communities to deter monkeys from agricultural lands include the use of firecrackers, loud noises, and stone throwing. Despite the damage caused by macaques to cash crops, some community members expressed the view that macaques have an ecological right to coexist within shared environments. However, repeated crop loss has also contributed to the development of negative attitudes among affected populations. She emphasized that one of the major challenges in mitigating human-primate conflict is the wide distribution of primates across the country. Existing control measures are ineffective. Therefore, she highlighted the necessity of establishing a national-level coordinating body and implementing a comprehensive management plan that integrates primate biology, behaviour, habitat requirements, local community attitudes, and ecological knowledge to effectively address human primate conflict in Sri Lanka.

Then Tanaka-san delivered a lecture titled "Phylogenetic Relationship of Sasagamine Japanese Macaques (Myoko City, Niigata) to Neighboring Local Populations as Inferred from Mitochondrial DNA: A Preliminary Report". He explained that the study was conducted between October 2022 and April 2025, during which 90 fecal samples were collected from six different sites for genetic analysis. He emphasized that mitochondrial DNA is maternally inherited; therefore, in order to examine phylogenetic relationships among troops, it is essential to analyze mitochondrial DNA from females or from young males born within the study troops. The findings indicated that the Sasagamine troop and the Myoko troop share a common ancestor, indicating a close evolutionary relationship between these populations. The first day of the programme concluded with a series of intellectually enriching lectures delivered by experts in primate studies.

On the second day (27 January 2026) of the Field Biology course, we travelled from University of Sri Jayewardenepura to Dambulla, a place located about 4-5 hours away from the university. The journey was long, but we enjoyed it, and the journey provided an opportunity to observe the diverse

landscapes of Sri Lanka including wetlands, hilly regions, and forested areas. During the journey, Dulan Sir shared several interesting facts about Sri Lanka. We stopped in a forested area to collect fecal samples. Unfortunately, we were unable to find any samples, but we had the opportunity to observe monkeys in their natural habitat. One major issue noted in that area was the accumulation of plastic waste. The monkeys were seen eating food remnants attached to plastic waste. After that, we continued our journey and reached the Kaludiyapokuna Primate Conservation and Research Center (Fig. 3), located near the Kaludiya Pokuna Forest. Ms. Dilani and the other staff members warmly welcomed us to the center. After lunch, we proceeded to the Kaludiya Pokuna Forest to collect fecal samples. Our minibus could not enter the forest, so we continued on foot in search of samples. The pathway was beautiful, surrounded by paddy fields. Tree huts were visible across the fields, indicating night guarding by farmers to protect their crops from wild animal attacks.

The first sample was collected from outside the forest area. Tanaka-san collected a fresh cow dung sample from a nearby field and demonstrated the procedures for fecal sample collection, handling, and labelling (Fig. 4). A total of 13 fecal samples were collected from the Kaludiya Pokuna Forest. All the participants were actively involved in both the collection and labelling processes. Tanaka-san securely stored all the collected samples for laboratory analysis. During the search for fecal samples, we encountered an interesting fecal sample inside the forest. Based on its morphological characteristics, most participants identified the sample as belonging to a civet. While conducting fieldwork, we also visited an old Buddhist monastery



Fig. 5. An old buddhist monastery Fig. 6. Black water pond

located within the forest (Fig. 5). We walked through the site and observed the remains of the ancient structure. A notable feature within the area was a pond, from which the forest derives its name. In Sinhala, “Kaludiyapokuna” translates to “Black Water Pond” (Fig. 6). After completing the sample collection, we returned to the Primate Conservation and Research Centre, and after that, we moved to our accommodation at the Ceylon Amigos Eco Resort, Sigiriya.

In the morning of the third day (28 January 2026), we visited another part of the Kaludiya Pokuna Forest, where we collected four additional fecal samples. Then, we returned to the Kaludiyapokuna Primate Conservation and Research Center, where Ms. Dilani delivered an informative session on the center’s ongoing research activities (Fig. 7). She provided a detailed overview of the primate species present in the landscape, describing their morphological characteristics, behavioural patterns, and ecological specializations. As part of their research, she explained that vocalizations of animals and birds are recorded using a mobile application known as the Wildlife Acoustic Application. She also showed the fecal and blood samples of the monkeys collected for the laboratory analysis to identify individual animals, determine their dietary composition, and detect parasitic infections. She introduced another application, Animal Observer, which is used for systematic



Fig. 4. Fecal sample collection



Fig. 7. Class at the Kaludiyapokuna Primate Conservation and Research Center



Fig. 8. Interview with the villagers.



Fig. 9. Footmarks of the monkeys

observation and recording of animal behaviour. She explained that the center conducts plant phenology studies by selecting plant species that are frequently consumed by langurs. The session concluded with the screening of a documentary video on the Kaludiya Pokuna Forest, which included footage of wildlife captured through camera traps.

After the session, we conducted interviews with villagers residing near the Kaludiya Pokuna Forest area. Dulan Sir was my teammate and he helped me translate Sinhala into English. The first interview was conducted with a woman who had been residing in the area for more than 58 years (Fig. 8). Her primary livelihood was agriculture, and she cultivated crops such as paddy, mango, plantains, lemongrass, and coconut. She reported that elephants cause crop damage. She also identified toque macaques, gray langurs, and purple-faced langurs as the common primate species in the area. She said that monkeys cause crop damage, property damage, food theft, and occasionally exhibit aggressive behaviour towards humans (Fig. 9) and the dry season, particularly mango season, is associated with higher levels of conflict, with most incidents occurring during the morning hours. She further noted that macaques appear to show fear towards men but not towards women. To deter monkeys, villagers use firecrackers, dogs, and dummy guns. Monkey related issues have been reported to the local government authorities, support has been limited to the provision of firecrackers, with no financial compensation for crop losses. She suggested that the establishment of electric fences across villages and agricultural lands, as well as compensation schemes, would provide relief to farmers affected by wildlife damage. She also showed us the physical damage caused by macaques to her house. The second interview was conducted with a man who had been residing in the area for 26 years and whose primary livelihood was daily wage labour. He reported that monkeys are present across various settings, including farms, temples, homes, and forest areas. He indicated that conflict is more

severe during the dry season and that firecrackers are commonly used as a deterrent method. The experiences shared by the two respondents revealed variations in perception and intensity of human-wildlife conflict within the same locality. After completing the interviews, we returned to the university and arrived at approximately 6:00 p.m.

On the fourth day (29 January 2026), we started the laboratory work involving DNA extraction and polymerase chain reaction (PCR) analysis using the fecal samples collected from the forest. In total, seventeen samples were collected during fieldwork, and an additional three samples had been previously collected by Ms. Dilani of the Kaludiyapokuna Primate Conservation and Research Center, resulting in a total of twenty samples for analysis. Initially, Tanaka-san distributed two samples to each participant. I was assigned samples 17 and 18. Before beginning the experimental procedures, Tanaka-san provided detailed instructions on the correct handling and calibration of micropipettes to ensure precision, accuracy and contamination control during laboratory work. Approximately 200 mg of each fecal sample was weighed and processed following standardized procedures. Tanaka-san guided us carefully through each step of the extraction process, including careful



Fig. 10. Agarose gel Electrophoresis for confirmation of PCR products





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Practical Training in Fecal DNA Barcoding and Human–Primate Conflict Studies in Sri Lanka

Introduction

The International Field Biology Course was jointly organized by the Center for Ecological Research (CER), Kyoto University (KU), and the Department of Anthropology and the Department of Zoology, University of Sri Jayewardenepura, from 26 to 30 January 2026. The program commenced with a brief overview of DIWPA–IFBC and an introduction to the CER and the Inuyama Campus, KU, delivered by Prof. Hiroyuki Tanaka, who also presented a lecture titled “Phylogenetic Relationships of Sasagamine Japanese Macaques (Myoko City, Niigata) to Neighboring Local Populations as Inferred from Mitochondrial DNA: A Preliminary Report” and led the Ecological Field Training Program for Graduate Students New to Primatology at the Inuyama Campus. Snr. Prof. Charmalie Nahallage delivered a lecture on “A Review of the Current Status of the Human–Monkey Conflict in Sri Lanka,” while Prof. Michael Huffman conducted a session on “Sri Lankan Primate Behavioral Ecology: Observational Methods and Applications.” The course was conducted for nine participants from the University of Sri Jayewardenepura, Sri Lanka, and one participant, Sreekkutty, from Kerala, India, with the main objective of providing practical training in DNA barcoding using fecal DNA, focusing on the species identification of mammals causing agricultural damage.

Study Site

A field survey was conducted at the Archaeological Forest Site of Kaludiya Pokuna on 27–28 January 2026. The Kaludiya Pokuna Archaeological Forest Site is an ancient monastic forest complex located near Dambulla in Sri Lanka’s dry zone. The area contains ruins of stone buildings, meditation caves, inscriptions, ponds, and pathways built with advanced ancient engineering techniques. Surrounded by dry mixed evergreen forest, the site is also rich in biodiversity, making it important for both archaeological and ecological value.

Fecal sample collection for molecular analysis

All fecal samples were collected in zip-lock bags along forest trails, with the collector’s name, date,

GPS coordinates, size, freshness, and condition recorded over two-day sampling period.

Questionnaire Survey on Human–Primate Conflict

Several questionnaire surveys were conducted among farmers and other stakeholders to assess human–primate conflicts involving gray langurs, macaques, and purple-faced langurs in the study area. Ms. Dilani works as a research assistant in primate conservation at Kaludiya Pokuna. She and her team discovered new primate groups, identified as Groups M and N, while observing their behavior. They conducted fecal analysis, acoustic analysis, and used camera traps to investigate and study these primates.

Laboratory work

The molecular analysis was conducted at the DNA Laboratory, Department of Anthropology. Twenty fecal samples were used for DNA extraction using the QIAamp Fast DNA Stool Mini Kit. PCR was then conducted, followed by gel electrophoresis. Only one sample did not amplify during PCR. This may have been due to the freshness and condition of the fecal material, as old feces or soft stools (e.g., diarrhea) can produce a light brown to brown DNA solution. According to the sampling records, this particular fecal sample was classified as old.

Cultural Feast and Celebration

On the final day, we participated in insightful discussions and presentations, which enriched our knowledge and introduced us to sophisticated techniques. The day was made even more memorable with group singing, especially songs like Sukiyaki and Malata Bambareku Se, creating a joyful and lively atmosphere. We were treated to a variety of traditional foods, including snacks, soups, and beverages, all beautifully presented. The flavors were incredible—vivid, unique, and unlike anything I had ever tasted before—making the experience both delicious and culturally immersive.

Acknowledgments

I would like to express my heartfelt gratitude to Prof. Hiroyuki Tanaka, Prof. Michael Huffman, Prof. Kamal Ranthunga, and Snr. Prof. Charmalie Nahallage for providing me with this incredible opportunity. Their guidance, support, and encouragement throughout the program were invaluable. I am especially thankful for their patience in sharing knowledge, offering practical training, and inspiring me to explore new techniques and perspectives. This experience would not have been possible without their mentorship and dedication, and I am deeply grateful for the opportunity to learn from such distinguished scholars.



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Integrating Field Activities and Molecular Based Approaches: Experience from 2025 International Field Biology Course (IFBC) in Sri Lanka

As a Ph.D student actively engaged in field research and deeply committed to environmental conservation, participating in 2025 DIWPA International Biology Course (IFBC) conducted in Sri Lanka was both a fortunate opportunity and a valuable academic experience. Having the course hosted in my home country allowed me to engage closely with locally relevant conservation challenges while benefiting from international academic expertise. The program significantly contributed to my research perspective by extending my training beyond laboratory-based work to field-oriented biodiversity studies.

The IFBC brought together students and early-career researchers from several countries, fostering a collaborative academic environment focused particularly on primate diversity, habitat conservation, and the growing challenges associated with human-wildlife conflict. The course was structured around lectures, guided field observations, and practical sessions, enabling participants to connect theoretical concepts with real-world conservation issues. Academic discussions and field guidance were led by internationally recognized scientists, including Prof. Michael Alan Huffman, Snr. Prof. Charmalie Nahallage, and Prof. Hiroyuki Tanaka. Learning directly from their research experiences (I really enjoy this) and field-based approaches provided insights that extended beyond conventional classroom instruction and highlighted the interdisciplinary nature of conservation science.

A particularly important component of the course was the hands-on training in molecular techniques applied to biodiversity research. We were introduced to DNA-based methods used for mammal species identification through fecal samples (Fig. 1). This included practical experience in sample collection, DNA extraction, polymerase chain

reaction (PCR), gel electrophoresis, sequencing, and subsequent species identification via BLAST analysis. Understanding how these molecular tools are applied to conservation biology and agricultural problem-solving strengthened my appreciation of their practical relevance. This training closely aligned with my ongoing doctoral research and helped clarify potential methodological directions for future work.

Beyond the scientific components, the IFBC emphasized collaboration and cross-cultural exchange. Working alongside participants from diverse academic and cultural backgrounds encouraged the sharing of research ideas, technical skills, and perspectives. Informal discussions, shared meals, and cultural interactions further strengthened these connections and underscored the importance of international cooperation in addressing biodiversity conservation challenges.

Overall, the IFBC enhanced my understanding (perspective on the environment) of the complex relationships among humans, wildlife, and the environment. The course reinforced the role of science as a foundation for informed conservation decision-making and highlighted the responsibility of researchers to translate scientific knowledge into practical outcomes. This experience has strengthened my motivation to contribute to biodiversity conservation research in Sri Lanka and the wider region and to share the skills and knowledge gained with other students and young researchers. Therefore, I look forward to participating in future IFBC programs and continuing to develop research approaches that support biodiversity conservation at both regional and global scales. Dear DIWPA, Thank you very much for the opportunity.



Fig. 1. Molecular biology laboratory work during the International Field Biology Course in Sri Lanka



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Learning Beyond the Classroom:

My Experience of 2025 DIWPA IFBC

I had the privilege of participating in 2025 DIWPA International Field Biology Course (IFBC), jointly organized by the Centre for Ecological Research, Kyoto University, and the Departments of Anthropology and Zoology at the University of Sri Jayewardenepura (USJ), Sri Lanka. The program began with an online introductory Zoom session three weeks prior to its official commencement, allowing participants and professors to connect before meeting in person. The five-day program was held from 26 to 30 January 2026, with USJ serving as the base institution, where I am currently completing my undergraduate degree.

Day 1 commenced with introductory sessions from all participants, providing an opportunity to learn about each other's research interests and academic backgrounds. The day's highlights were the lectures delivered by Prof. Michael Huffman on Sri Lankan primate behavioral ecology, Prof. Charmalie Nahallage on the current status of human-monkey conflict in Sri Lanka, and Prof. Hiroyuki Tanaka on inferring phylogenetic relationships of Sasagamine Japanese macaques using mitochondrial DNA. These sessions offered deep insights into the complexities of human-monkey conflict in Sri Lanka and demonstrated the immense scientific value of fecal samples in genetic research. Prof. Tanaka's lecture particularly emphasized how much information can be derived from such non-invasive samples.

Days 2 and 3 were dedicated to fieldwork in Kimbissa, near the UNESCO World Heritage Site of Sigiriya in Sri Lanka's dry zone. The site is home to all three diurnal primate species in the country: the endemic toque macaque, the gray langur, and the endemic purple-faced langur. The field component was supported by the Kaludiyapokuna Primate Conservation and Research Center (KPCRC), whose team provided an overview of the study site and the

monkey troops under observation. Participants were trained to identify and collect both fresh and dried fecal samples, gaining hands-on experience in non-invasive sampling techniques.

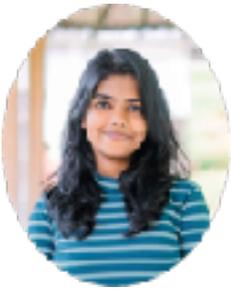
The final day of fieldwork focused on a community-based survey to better understand the human-monkey conflict in the Kimbissa area. Engaging directly with local residents provided valuable insights into the real-life challenges they face due to increasing monkey interactions.

Days 4 and 5 were spent in the Physical Anthropology laboratory at USJ, where participants extracted DNA from the collected fecal samples and amplified it using PCR techniques (Fig. 1). Under Prof. Tanaka's guidance, we learned the DNA extraction process and observed the electrophoresis results. It was remarkable to see that even older fecal samples contained intact DNA, highlighting their significance in wildlife research.

The program concluded with a farewell dinner featuring Japanese cuisine prepared by Prof. Tanaka, along with music performed by the participants. Overall, 2025 IFBC was an enriching experience that strengthened my understanding of wildlife research, non-invasive genetic methods, and the importance of international collaboration, leaving a lasting impact on my academic and personal growth.



Fig. 1. Carrying out the DNA Extraction at the Physical Anthropology Lab at USJ



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(Sri Lanka)

Report of 2025 IFBC in Sri Lanka

Participating in 2025 DIWPA International Field Biology Course (IFBC), held from 26 to 30 January 2026, was one of the most valuable academic experiences I have had so far. The program was jointly organized by the Center for Ecological Research (CER), Kyoto University, and the Departments of Anthropology and Zoology at the University of Sri Jayewardenepura (USJ). The overall objective of the course was to strengthen the capacity of young scientists in applying DNA barcoding techniques for species identification, particularly in relation to animals involved in agricultural damage, while also promoting regional scientific collaboration.

The course opened at USJ with guidance and explanations about the structure of IFBC in Sri Lanka, followed by participant self-introductions. This initial session was important because it allowed us to understand each other's research backgrounds and expectations. A joint lecture session was conducted for both IFBC participants and undergraduate students of USJ, creating a broader academic audience and encouraging interaction across different academic levels.

The lecture sessions were conducted by Prof. Charmalie Nahallage, Prof. Michael Huffman, and Prof. Hiroyuki Tanaka. Prof. Charmalie delivered a lecture on the current status of human–monkey conflict in Sri Lanka, highlighting both ecological and social dimensions of the issue. Prof. Michael Huffman spoke on primate behavioral ecology, particularly focusing on observational methods and how to systematically collect behavioral data in the field. Prof. Tanaka introduced the ecological field training framework at the Inuyama Campus of Kyoto University and also presented work related to mitochondrial DNA and phylogenetic relationships of the Japanese macaque populations. These sessions clearly demonstrated how behavioral ecology and

molecular genetics can complement each other in wildlife research.

Field activities took place over the next two days in Kimbissa, near Sigiriya, in collaboration with the Kaludiyapokuna Primate Research and Conservation Center (KPCRC) (Fig. 1). We traveled by van to the field site, where we observed areas affected by human–wildlife interactions, especially by primates, conducted interviews with local farmers, and collected fecal samples for genetic analysis. It made me realize that research is not only about data collection, but also about understanding the lived experiences of people sharing landscapes with wildlife.

The laboratory component was conducted at the Department of Anthropology, USJ. We performed DNA extraction from the collected samples and carried out Polymerase Chain Reaction (PCR) amplification.

On the final day, electrophoresis was used to confirm successful amplification of the target DNA fragments. Prof. Tanaka also explained the subsequent steps of analysis, including sequence comparison through BLAST analysis for species identification, and a follow-up Zoom session was conducted to continue this work.

The course concluded with a farewell gathering where participants and lecturers played music and sang together. Beyond technical training, 2025 IFBC strengthened academic connections among young researchers in the Western Pacific and Asia region. Personally, the experience enhanced my confidence in integrating ecological fieldwork with molecular laboratory techniques and broadened my perspective on collaborative approaches to biodiversity research.



Fig. 1. Group photo



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Bridging Field and Science: My IFBC Experience

In January 2026, I had the valuable opportunity to participate in the DIWPA International Field Biology Course (IFBC) held in Sri Lanka. The program was jointly organized by Kyoto University and the University of Sri Jayewardenepura, bringing together academics, researchers, and students to strengthen regional collaboration in ecological and molecular research. As a researcher from the Department of Zoology currently working on the ecology of Sri Lanka's diurnal primates, this course was closely aligned with my academic and research interests. The primary objective of the training was to integrate ecological field techniques with molecular approaches such as DNA barcoding, while also enhancing interdisciplinary scientific cooperation.

The program commenced with introductory sessions and academic lectures that provided a strong conceptual foundation for the field and laboratory components. These sessions covered topics including human-primate conflict, behavioural observation methods, and the application of mitochondrial DNA analysis for species identification and phylogenetic studies.

The field component was conducted at the Kaludiya Pokuna Forest Reserve and surrounding areas (Fig. 1), where we carried out systematic ecological surveys and collected non-invasive fecal samples from monkeys and other mammals. This hands-on experience enhanced my understanding of primate distribution, habitat use, and field sampling techniques (Fig. 2). We also conducted structured community surveys to better understand local perspectives on human-primate interactions, highlighting the importance of integrating socio-ecological knowledge into conservation planning. The laboratory component was conducted at the University of Sri Jayewardenepura in collaboration with the Department of Anthropology. We extracted DNA from collected samples and performed Polymerase Chain Reaction (PCR) to confirm species identity.

Beyond the scientific training, one of the most memorable aspects of the course was the opportunity to work closely with Prof. Tanaka, Prof. Charmalie, Seki-san, and Prof. Mike. Their guidance, encouragement, and openness created a dynamic and supportive learning environment. Scientific discussions extended beyond formal sessions, often continuing over shared meals. We enjoyed a variety of delicious Japanese dishes, experiencing authentic flavors and learning about culinary traditions. Sharing Japanese food together was more than just dining; it became a space for exchanging stories, research ideas, and cultural perspectives.

It was truly a pleasure to share cultures with them. Conversations about ecology, conservation, traditions, and daily life allowed us to appreciate both similarities and differences in our backgrounds. These moments of cultural exchange strengthened our collaboration and reminded me that science is not only about data and analysis but also about human connection and mutual respect.

Additionally, our structured community surveys around the forest reserve provided insights into human-primate interactions, particularly identifying the most troublesome monkey species from the local perspective. This socio-ecological dimension reinforced the importance of integrating community understanding into primate conservation.

The DIWPA International Field Biology Course was not only an academic enrichment but also a transformative experience. It deepened my scientific skills, broadened my interdisciplinary outlook, and strengthened my commitment to advancing research on Sri Lanka's diurnal primates through an integrated ecological, molecular, and community-based approach.



Fig. 1. Field Day



Fig. 2. Collecting a fecal sample



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From Field to Genes: Enhancing Research Pathways through Molecular insights from 2025 IFBC

I am pursuing my MPhil degree in Zoology, focusing on the habitat-use changes of elephants in Sri Lanka. I am truly delighted to announce that I have completed the DIVERSITAS in the Western Pacific and Asia (DIWPA) International Field Biology Course organized by the Center for Ecological Research, Kyoto University, and hosted by the Department of Anthropology, University of Sri Jayewardenepura (USJ).

I believe this program has greatly improved my knowledge of the ecology of primates in Sri Lanka. Additionally, the program provided me with valuable exposure to both field and molecular techniques in biodiversity research. The program was my first in-depth experience working in mammalian genetics in my academic career. I was able to improve my understanding of DNA barcoding techniques using fecal samples and enhance my ability to identify mammalian species responsible for agricultural damage (Figs. 1 and 2).

The workshops and discussions were well organized (Fig. 3), and we gained hands-on practice from the experts. The combination of ecological field techniques and molecular tools provided me with a comprehensive understanding of the application of wildlife research and conservation today.

I am thankful for this enriching academic experience and for the opportunity to work with experts and fellow researchers in a supportive academic environment. I look forward to applying the knowledge and skills I gained during the program to my future academic and research endeavours.



Fig. 1. DNA extraction from a fecal sample



Fig. 2. The IFBC participants at the DNA laboratory of the Department of Anthropology, USJ



Fig. 3. "Okonomi-yaki" workshop at the farewell party



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2025 DIWPA International Field Biology Course in Sri Lanka

The DIWPA International Field Biology Course (IFBC) is usually held in Japan, inviting young researchers from the Western Pacific-Asia region to participate in fieldwork sessions conducted by the DIWPA members of the Center for Ecological Research. However, in fiscal year 2025, the IFBC was held at the University of Sri Jayewardenepura (USJ) in Sri Lanka.

Over the past decade, I have been visiting Sri Lanka for collaborative research on primate phylogeography. In 2015 and 2018, I participated in the International Training Program on Terrestrial/Aquatic Wildlife and Primate Conservation held in Sri Lanka. The program was first conceived and initiated by Prof. Charmalie Nahallage at the University of Sri Jayewardenepura (USJ) and Prof. Michael Huffman, then faculty at the Primate Research Institute of Kyoto University. During these two trips, together with other faculty members, staff, and students from USJ, we led an international group of graduate students from the Primate Research Institute and the Wildlife Research Center at Kyoto University. We traveled across the country, meeting with leading Sri Lankan researchers and conservationists to gain firsthand experience about conservation and research-related issues. Based on these experiences, I planned the IFBC. Thanks to the cooperation of Professors Nahallage (USJ), Ranatunga (USJ), and Huffman (currently at Nagasaki University), and all the participants, this IFBC was also highly productive.

In Sri Lanka, wildlife damage to agricultural crops and homes is a major problem. Prof. Nahallage and colleagues are conducting research to solve these human-wildlife conflict issues. For this reason, at this IFBC, we aimed for a practical session that bridges the field and the lab. Actually, we visited areas affected by agricultural damage and collected

the feces of the wildlife responsible for the damage. Then, we analyzed DNA samples extracted from the feces and conducted species identification.

The IFBC began with an orientation on the first day, followed by lightning talks where participants introduced themselves and lectures related to the theme. On the second and third days, we conducted field surveys for collecting fecal samples from wildlife, and interviews about agricultural damage. Days 4 and 5 involved lab work, where participants performed DNA extraction and PCR of mitochondrial 16S ribosomal RNA for DNA barcoding. Electrophoresis confirmed that all participants successfully amplified their samples. At the farewell party on the final day, as planned, everyone enjoyed the flavors of Japan.

Since DNA sequencing was not possible at USJ, I brought the PCR products back to Japan and performed DNA sequencing. I sent the DNA sequence data to the participants and had each perform BLAST analysis. We discussed the results in a Zoom meeting on February 21. Cattle, porcupines, purple-faced langurs, toque monkeys, and the common palm civet were identified. The most surprising result for me was that DNA sequences obtained from the leopard feces collected by local researchers were identified as those of the toque monkey. Regarding this feces sample, one participant and I each conducted separate experiments. Both of us obtained the toque monkey sequences. Recalling the lab work, I believe the possibility of contamination is low. It was considered that we may have detected a toque monkey that had been preyed upon by a leopard.

The IFBC was not only an opportunity to teach skills and knowledge, but also a deeply enjoyable experience for me, filled with discoveries. Reading the participants' reports, I believe they inspired each other and gained new experiences that will shape their futures. This outcome exceeded my expectations. I extend my gratitude to all participants and everyone who supported IFBC.

The IFBC of the fiscal year of 2026 has also been determined to be held in Sri Lanka. The timing is tentatively scheduled for around October. Information such as the application guidelines will be posted on the DIWPA website at the appropriate time. We look forward to receiving applications from many people.

From DIWPA Office

We are pleased to announce that the 2026 DIWPA International Field Biology Course (IFBC) will be held once again in Sri Lanka in October 2026.

The application details will be available on this website soon. Please stay tuned for updates. We look forward to receiving many applications and to seeing you in Sri Lanka.



Message from
the **Incoming** Secretary General
Akira Yamawo

Starting in April 2026, I am honored to serve as the Secretariat for the Diversitas in Western Pacific and Asia (DIWPA) at the Center for Ecological Research, Kyoto University. Throughout my career, I have explored the intricate mechanisms of animal-plant interactions, inter-plant communication, and the resulting Eco-Evo Feedbacks that shape forest and grassland ecosystems. My research across diverse biomes, from Japan to tropical China, has

consistently integrated individual-level traits with broader ecosystem-scale processes.

A key priority of my tenure will be empowering early-career researchers. Having experienced the profound impact of collaborative studies across diverse climatic zones in Asia, I am passionate about creating opportunities for the next generation to engage in high-impact research. I hope to inspire young scientists to bridge the gap between evolutionary insights and ecosystem functions, ensuring that Asia's vibrant biodiversity is understood and preserved through the lens of modern ecology.

I look forward to serving as a bridge between researchers and institutions, contributing to the sustainable development of biodiversity research and cultivating a vibrant, inclusive community for the future of ecology.

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