

## To The University of Edinburgh

### Hikari SEO, 6<sup>th</sup> year

#### 【Highland Wildlife Park】

We went to Highland Wildlife Park to learn about animal welfare of zoo animals. The zoo was far from what I had imagined, and the enclosures for each animal were quite large like parks. I was particularly surprised when I went to see the polar bear and tiger areas. The area was like real nature. Animals can hide in the bush, run in the wide grasslands, and these considerations allow them to behave naturally. Then we saw Japanese macaques and cranes and conducted welfare assessments. As a preliminary lecture, we learned from Ms. Otani, a senior student at Hokkaido University, that in considering animal welfare, it is important to keep the five areas of "nutrition", "environment", "health", "behavior", and "spirit" in good condition. Evaluation criteria were created based on these five areas, and we scored by observing every detail of the animal's health, behavior, and structure of enclosures. When I usually go to the zoo, I only casually look at the animals and have never looked at them in such detail. When I carefully observed the animals, I noticed animals' behaviors that I would have normally overlooked, such as animals sheltering from the wind, drinking water from the pond, and protecting themselves from injuries. This change in perspective gave us many things to think about, such as "this enrichment is good for babies to play with", "more enrichments would be needed", and "won't this injury interfere with foraging?" Furthermore, we saw snow leopards. I was very happy to see the children climbing hard on the rocks and father and mother leopards watching their children from above. The park staff said that "We are so lucky to see the whole family." The reason why we were lucky is that the snow leopard area is extremely large and they rarely come close to us. The enclosure has many enrichments to hide from us, too. Therefore, it is rare that humans can see them. In Japanese zoos, we can see animals because there are smaller enclosures and fewer hiding places. This is because it is natural for us that the purpose of a zoo is to see animals. However, the park staff said that "If animals were living in the wild, it would be very difficult for people to see them. So, I want people to know more about the fact that it is normal for animals not to be able to be seen. If people know that, they will be happier when they can see Animals." That hit me that I have to change my mind about what zoos should like to be.

#### 【Tour of the University of Edinburgh】

On the first day, we visited RSVS Equine Hospital. In the morning, we saw the echo check and x-ray of the horse and participate in palpation and discussion. The final year students were rotating each department. I was surprised that it takes a whole year to complete the entire course, which includes not only internal medicine and surgery, but also a wide range of other departments such as equine, exotics, anesthesiology, and dermatology. In the afternoon, we observed a dental checkup of the horses. There was a veterinarian who specializes in equine dentistry, and he used special equipment to maintain the teeth of horses. In the evening, we attended a class with the students who were rotating equine clinical. The class was very active because students were expressing their opinions quickly in response to questions from the teacher. There were about 20 students in the class, and it seemed that everyone rose their hands in the class. I was moved by the attitude of the students, who were not afraid of making mistakes.

On the second day, we visited the Exotics Department and the Anesthesiology Department. In the exotic department, various animals such as ferrets, turtles, parakeets, and rabbits visited the clinic. I saw students trying to do blood sampling of a ferret for the first time, and it looked so difficult that collect

blood because they are small. The professor asked for a short quiz for students to predict the hematocrit value, and they checked after the blood sample was taken. With the parakeets, to see the condition of their feet and wings the room was closed off and the teacher let him fly around. The exotic animal clinic was a valuable experience for me as it is rare to encounter them at Hokkaido University. In the anesthesiology department, we observed the monitoring of ligament surgery. Resident doctors and students were administering anesthesia, and they discussed it a lot. At lunchtime, while I was hanging out alone in the cafeteria, local students who had taken a class together yesterday invited me and we ate together.

Since we were both in our final year of school, we talked about our career plans and the veterinary licensing exam. They were all very friendly and gave me recommendations for restaurants and pubs in Edinburgh.

#### 【Throughout the program】

Throughout this program, I was able to gain many valuable experiences in animal welfare, wildlife, veterinary education at the University of Edinburgh, and communications in English. Although there were some unfortunate troubles during the trip, I have gained so many precious memories that I cannot write them down here. Now I am in my final year of school, it helped me a lot in thinking about my future career path. Finally, I would like to thank the local teachers including Dr. Neil, the students of

the University of Edinburgh who supported us, the teachers and Ms. Otani who took care of us, Ms. Oikawa who is in charge of IVEP, fellow travelers who became good friends, and all the people involved in this program. Without your support, we would not be able to make this program a fulfilling one. Thank you very much.



Medical Treatment of Exotic Department



Edinburgh City Center



Wearing Edinburgh Hoodie

## To The University of Edinburgh

### Ryo KANOMATA, 5<sup>th</sup> year

I would like to report on the IVEP dispatch to Edinburgh. It is difficult to sum up the reasons why I wanted to participate in the program, but I was interested in going to Edinburgh from the moment I learned about the IVEP program and I wanted to learn more about animal welfare. I was concerned about my language skills but decided to take the plunge and apply because it would be the first and last opportunity for fifth-year student. This was also my first experience abroad, so I arrived in Edinburgh not only with the content of study program, but also with the excitement of living abroad.

This year's program consisted of canoeing and other activities in the Highlands, a visit to a wildlife park, a tour of the University of Edinburgh, and a lecture on wildlife conservation lecture by a researcher from the Roslyn Institute. All of the programs were very interesting and I was able to think and learn a lot from them.

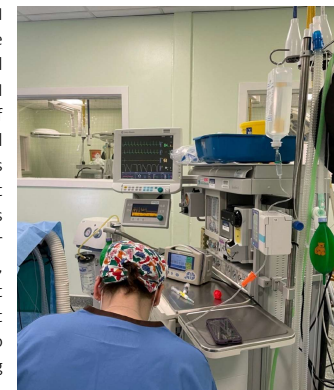
First, we spent three days in the Highlands region from the day after our arrival in Edinburgh, which is a land of abundant nature, with landscapes where many animals graze and forests spread out. I was able to feel close to this nature by walking in the national park and rafting down the Spey River. On the third day, we visited the Highland wildlife park, where we toured the park and assessed the welfare of the animals on display. The animals live in a large area of land that is very close to their natural habitat, and the layout of the park allows them to move around freely in areas that are minimally enclosed so that they cannot be accessed without a car. The herbivorous markhor facilities are located near the carnivorous snow leopard facilities so that the animals can perceive each other as in the wild. In the animal welfare assessment, we evaluated the enclosures of Japanese macaques and Eurasian cranes. The assessment is based on the five domains of animal welfare and is in the form of a score. Until then, I thought that animal welfare in zoo animals was ideal if the animals were kept in facilities with sufficient space and considered healthy, but now realize that it is important for animals to be able to choose their



Assessment of animal welfare

behavior and to have their needs met appropriately through facing the assessment items. I felt that creating facilities with a good understanding of the living environment and ecology of animals in the wild would lead to true consideration for animal welfare. In addition, since the evaluation can only be conducted based on what was seen at the time, there were points which I had questions about facilities and animal conditions that at first glance did not seem to satisfy the needs of the animals. However, during the post-evaluation discussion, the instructor carefully explained the reasons for the current facilities, and I felt that continuing multifaceted evaluation was essential.

Next was a tour of the University of Edinburgh. I visited the equine clinical facility on the first day and the anesthesiology department of the small animal hospital on the second day. At the equine clinical facility, I observed the progress of flexor tendonitis, treated wolf teeth, and participated in a lecture after the practical training. The lecture was in the form of students answering questions from the teacher, rather than just listening to what the teacher had to say. And there was almost no time for silence, with students expressing their thoughts one after another. At the small animal hospital, I observed a TPLO surgery, a CT scan, and the treatment of a cat that had been in a traffic accident. Since I had just finished my clinical practice of surgery at Hokkaido University, I was able to observe the hospital while paying attention to the detailed differences between it and Hokkaido University small animal hospital. In both tours,



Anesthesia equipment used in surgery

there were many situations where students took the initiative in performing procedures while checking and asking questions, and I felt that there were many teachers to support them. I thought that the students were able to conduct this type of practical training because they had acquired a solid understanding of what they had learned to answer the questions in the lecture and perform the procedures by themselves, and in addition, they had a good support system in place by the teaching staff.

Finally, the lecture on wildlife conservation was very interesting from the viewpoint of genetics. I could imagine the topics of reintroduction and crossbreeding from the topic of genetics and wildlife conservation, but it was fresh and interesting to hear that she is involved in the investigation of illegal distribution of ivory, etc. from the viewpoint of genetics. Although some of the content and vocabulary were difficult, I was able to deepen my understanding thanks to the careful attention to detail.

This is all I have to say about the program I participated in, but for me personally, this dispatch gave me an opportunity to think deeply about animal welfare. I have received lectures on topics related to animal welfare, but by working on the assessment, I noticed perspectives and attitudes that were not apparent from the lectures alone. I would like to be more conscious of animal welfare when I conduct animal experiments and clinical practice in my future student life. I would like to continue to learn more about animal welfare not to be satisfied with just having seen and learned about the state of animal welfare in the UK and having done the assessment once. When I start working as a veterinarian, I would like to continue my efforts so that many people will have a correct understanding of animal welfare and I will be able to change the animal welfare situation in Japan for the better.

Finally, I would like to express my gratitude to the teachers who led us, to the administrative staff who supported us in various ways before and up until now, and to the teachers at Edinburgh University and everyone else who welcomed us warmly and helped to learn many things. Thank you very much.

## To The University of Edinburgh

### Nonoka MASUDA, 5<sup>th</sup> year

During my dispatch to Edinburgh in 2022, I experienced a variety of practical training at the University of Edinburgh and in the Highlands. Among them, the most memorable experience was the visit to the University of Edinburgh Veterinary Hospital, so this report describes the two days I spent at the University of Edinburgh Veterinary Hospital.

At the University of Edinburgh, I spent one day each at the equine hospital and the small animal hospital.

#### Equine hospital

At the time of my visit to Edinburgh, I had not experienced any clinical training with horses, but I was able to use the knowledge I had learned in some lectures. I observed examinations and treatments for horses with Edinburgh students who were on clinical rotation.

#### Facility tour

First, we toured the facility. The hospital is characterized by the fact that all the facilities, including the stalls, the space for gait observation, the treatment space, and the lines between them, are all located in a single building. As for the type of horses, on the day I visited, there were only thoroughbreds or heavy horses in the hospital, and no ponies. The operating room was connected to the observation room by a large window, and there was a camera monitor in the observation room that allowed many students to observe the operation at once.

#### Forelimb echo

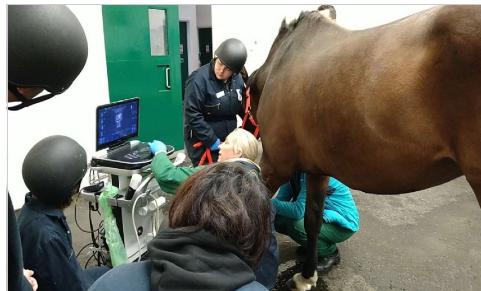
In the morning, the cast was removed from a horse that had been treated for infected deep flexor tendonitis. The degree of inflammation was confirmed by checking the position of the shallow flexor tendon, deep flexor tendon, deep flexor tendon support ligament, connecting ligament, and metacarpal bone using echoes.

#### Dental Treatment

In the afternoon, we observed equine dental treatment for a horse. In the equine dental treatment room, there was a horse skull specimen and a diagram, which were used to check the normal dentition and number of teeth of the horse. After the oral cavity was cleaned, each person put his or her hand into the horse's mouth to check the condition of the teeth. An endoscope was then placed inside the mouth to see which teeth were abnormal. Three teeth were found to be abnormal, so three students treated them with a grinder.

#### Small animal hospital

The small animal hospital at the University of Edinburgh has various departments, and basically each department has its own inpatient rooms, with separate appointments for treatment. The following is a description of the exotic animal department we visited.



Horse forelimb echo

#### The Exotic Animal Department

The patient cages in the Exotic Animal Department were divided into several types to accommodate various animal species. There were rooms for wild animals, cages for small animals, birds (with heaters), amphibians and reptiles (with heaters and infrared lamps), and oxygen rooms. This is the big difference between the University of Edinburgh and Hokkaido University, because there are no cages for exotic animals at Hokkaido University Veterinary Teaching Hospital.

#### Blood glucose test (ferret)

We observed blood glucose test for a ferret in the treatment room. Veterinarians tried to collect blood from the saphena, jugular vein, and anterior vena cava of the ferret, but were unable to collect blood, and finally collected blood by damaging the paw. It was interesting that each person predicted the blood glucose level and wrote it down on a sticky note before performing the test. I felt that by trying to predict the values based on the animal's condition, students who would not be directly involved in blood collection and testing could also participate.

#### Discussion and X-rays prior to testing (tortoise)

A tortoise came to the clinic in poor health and with limbs that no longer fit into its shell. Rather than immediately proceeding with the examination by the instructor, he first gathered the students together and discussed what the possible causes were and what tests were to be performed for what purpose. Compared to Hokkaido University, there seemed to be more time available, which is why I felt that they were able to spend more time teaching the students. After the X-rays were taken, he gathered the students together again to discuss what was suspected. I was surprised by the cost for the X-ray. It costs £200, with an additional £100 for anesthesia. This price was more than 50,000 Japanese yen as of October 2022, which was expensive compared to Japan.



A tortoise who can't retract her limbs into the shell

#### Consultation by students (Pyrrhura conure)

I also participated in consultations. At the University of Edinburgh, students and a resident enter the examination room at the same time. First, the student on rotation takes the consultation, and the other student types it into the electronic medical record. Then the resident would inquire what was the student's interview. The resident explained the examination and treatment plan for the owner. After that, the owner decided to leave him once because a physical examination was needed. When taking care of the parakeet, the resident asked the owner if it was okay for the student to handle the parakeet, and I was impressed by the owner's cooperation in providing veterinary education.

#### Physical examination (Pyrrhura conure)

During the physical examination of the Pyrrhura conure, we first checked his legs, and then let him walk to check its gait. During the examination, the parrot flew away, and the veterinarian jumped and grabbed it. When I observed bird examinations in Japan, if a bird flew away, the veterinarian would turn off the light in the room and wait for the bird to come down to the ground before catching it, so it was shocking to see him jump and grab it.

I was able to observe the exotic animal clinic at the University of Edinburgh, which I was most interested in, and it was a great learning experience. I felt that the facilities and educational system of the University of Edinburgh were excellent. In particular, I had a strong impression that there is plenty of time for education of students.

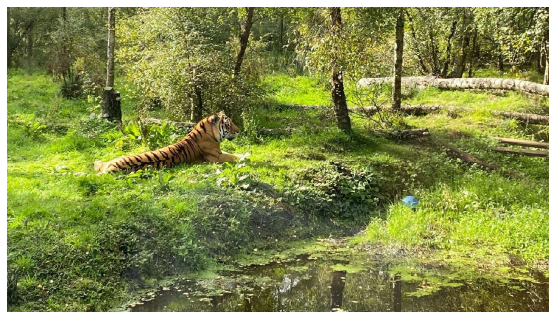
Finally, I would like to thank the teachers who led us and everyone else who supported our dispatch to Edinburgh despite the irregular schedule. Thank you very much.



## To The University of Edinburgh

### Kazuki MIZUTA, 5<sup>th</sup> year

Through this program, I have learned mainly about animal welfare and how great educations in the University of Edinburgh are. First, I visited a zoo in Highlands, which is the north part of Scotland. The zoo, Highland Wildlife Park, has huge areas for large animals like polar bears and snow leopards, and we assessed the situation of captive animals from the perspective of animal welfare.



Highland Wildlife Park

What surprised me was how relaxed and healthy the polar bears were. They were walking around the vast area of grassland and their body conditions were great. In Japan, animals in zoos often show stereotypical behaviors. On the other hand, a zookeeper of Highland Wildlife Park said that polar bears there had never showed such a behavior indicating the feelings of boredom before. I found that interesting, and I thought it was one of the ideal zoos in the point of animal welfare. After the tour of polar bears' area, we moved to sections of Japanese monkeys and cranes, then assessed their bleeding environments. We watched their behaviors, conditions of their bodies, food, the enrichment of environments, and so on. I realized that Japanese macaques lived in a grass field without trees, and I thought we should provide the environment which resembles forests, which is their natural habitat. I asked the zookeeper if there are any reasons why they don't plant trees, then he told me that "There used to be enough trees in their cage, but the monkeys have destroyed them by playing with branches. While wild herds of macaque can move to other forests so that they don't damage the environment,



A polar bear in Highland Wildlife Park

animals in zoos are kept in one space. That's why it's very hard to maintain forests in zoos." I have learned the difficulty to offer natural environments to animals in zoos and that it is impossible to attain the perfect animal welfare for them. That experience was a kind of my turning point of how I think of animal welfare. That made me realize that it's important to provide animals as better welfare as possible. Now I understand that animal welfare is not pursuing the perfect conditions and environments for only animals, but trying to make a way where we human

and animals are both satisfied.

The second experience which was the most interesting for me was visiting University of Edinburgh. I attended to a clinical rotation at Hospital for Small Animals and the Dick Vet Equine Hospital for one day each. Since I'm interested in veterinary medicine for dogs or cats, I really enjoyed watching around the hospital. There were much more specialized courses than Hokkaido University, and many veterinarians and staffs were working. I was surprised at that the students spent four weeks for each course as the clinical rotation and that more than 90% of them were women. One of the students told me that the veterinarian is now one of the popular jobs for especially girls. What impressed me was the quality of the education for veterinary students. In Japan, students just follow residents and watch what they are doing, and we have a few chances to practice veterinary practice or to consult with owners. On the other hand, 5th grade students in the University of Edinburgh talked with owners alone to know the situation of their pets, and residents were ready to help their students if necessary. I was shocked at the difference of the levels of veterinary students in Japan and Edinburgh. The residents and teachers were very interested in the education for students: for example, they frequently asked the students about what diseases were suspected, what were the treatments for them, what kind of testing were needed for diagnosing, and so on. They always cared about students and tried to improve their skills and knowledges. I thought this was how to rear students to make them independent skilled veterinarians.

In the hospital, I shadowed a student in a clinical rotation of internal medicine course. One of the cases I saw was a cat with hyperthyroid, and I was able to see the treatment using a radio isotope for the first time. In Japan, the usual treatment for hyperthyroid is surgery, and using radioactive drugs is not allowed. However, the student of Edinburgh said the gold standard therapy for hyperthyroid of cats in the UK was using I 131, which is an isotope of Iodine. I didn't know that 4 weeks separation is required to avoid radioactive contaminations of veterinarians or owners, which means there is nothing to do but just watching patient cats from outside even if they are in critical conditions. I was glad that I was able to learn about the treatment that can't be seen in Japan.

Finally, I talk about my experiences at the Dick Vet Equine Hospital. I joined in the clinical rotation with students as well as at Hospital for Small Animals. I had a short tour around facilities of the Equine Hospital, then learned about how to use ultrasound to diagnose cardio diseases of horses. The hospital was much larger than Obihiro University, and there were many advanced facilities for horse medicine such as surgery rooms and ICUs. I found it interesting that a fake horse was possessed in front of a horse in the ICU because he was feeling so lonely that he needed the statue as his friend. I thought that animal welfare was considered quite well not only at zoos but also clinical hospitals in the UK. Using coke to dissolve a stomach stone was also one of the treatments I had never seen in Japan. I also realized that the students looked much more familiar with dealing with horses than me. They had spent four weeks as a part of a clinical rotation and had night shifts at the Equine Hospital, so I think there is a big difference between Hokkaido University and the University of Edinburgh in how long students spend learning about horses.



the Dick Vet Equine Hospital

This tour in Edinburgh was quite exciting for me, and I was able to learn and experience many things that I couldn't in Japan. I want to be an international veterinarian in the future, drawing on my experience from this trip.

## To The University of Edinburgh

### Shiori ABE, 3<sup>rd</sup> year

Unlike previous years, this year's dispatch included a workout on animal welfare and a lecture on conservation genetics by a Rosslyn researcher. The activities were all very interesting and made me realize how little I knew. The most memorable activities were learning about animal welfare assessment, and environmental protection at Highland Wildlife Park and visiting the University of Edinburgh's veterinary hospital. I would like to describe them here.

Highland Wildlife Park is a zoo that works with Edinburgh Zoo and it's feature is keeping many cold-weather animals on a large site. Thanks to the size of the park, there is enough space for each animal, and we were able to observe them in action. It was also impressive to see animals of different sizes, such as a przewalski's wild horse and a European bison, kept on the same site.

In addition to exhibiting animals, the center was also engaged in breeding endangered animals for environmental protection. Among them, they are focusing on the breeding of wildcats, and 22 wildcats were born this year. The problem in Scotland is that wildcats and domestic cats have become intermingled, and the number of pure wildcats is declining. Therefore, the newborns will be released into Scottish forests where there are few domestic cats, after adapting them to their natural environment by learning how to feed them.

In the animal welfare assessment activity, the Japanese monkeys and European cranes were given a score based on animal welfare. Animal welfare refers to the physical and mental condition of animals and is based on five areas: environment, diet, health, attitude, and spirit. In Japan, the concept of these five areas had not been introduced very often, so it was a fresh way of thinking for me. Since the concept of welfare was prevalent in the zoo this time, the animals had a place where they could be fully active, were provided with a place to hide from humans, and had toys in their room, which scored high as welfare.

The concept of welfare is also used for other animals, and in the snow leopard exhibit, a herbivore called a merchor is sometimes placed in the snow leopard exhibit while they are in their quarters. This, they say, acts as a kind of enrichment by stimulating each other's scent. In addition, by asking neighbors to donate branches from trees they have cut down, they are able to provide a variety of branches to the animals, whose staple food is tree branches, so that the animals do not get bored.

I had not seen this kind of animal welfare concept in Japanese zoos, but as I saw the animals so lively, I realized that it is a concept that needs to spread to Japan as well. Also, the staff's awareness was based on the concept of welfare. "I can say that the current environment in which the animals live is good, but I cannot say that it is the best. Therefore, it needs to be constantly improved." This was a zookeeper's word which I was impressed. I believe that Highland Wildlife Park is a good zoo because of zookeepers



Assessment of Japanese Macaque

who think and act sincerely about the animals.

At the veterinary hospital at the University of Edinburgh, I visited the equine hospital and the anesthesiology department of the small animal hospital.

What was impressive about the veterinary hospital for horses was that it existed as a facility that was different from a veterinary hospital for livestock. Since horses are treated as pets, they are not examined in veterinary clinics for livestock. This point was interesting and different from Japanese people's perception. Also, there was a horse who was standing with a harness to prevent irritation of the treated area. It was interesting that a model of a horse was placed in a visible place for him as a friend and music was played to help him relax.

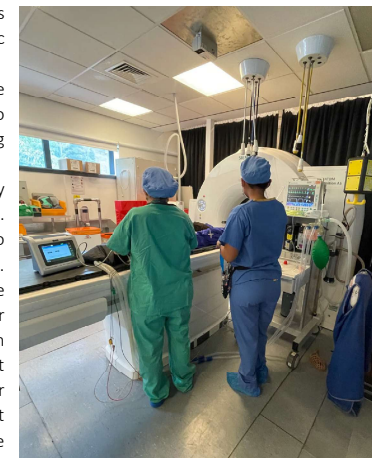
In the small animal clinics, we went to the anesthesiology department, so we were able to observe surgical procedures and CT scans being taken.

What I felt during my visits to these veterinary hospitals was the positive attitude of the students. The students at the equine hospital were quick to ask questions of the doctor if they had any doubts. The students in the anesthesiology department were making their own decisions on how to administer anesthesia to the animals. This may have been because there were more teachers per student. At equine hospital, there were only three students per teacher, and the anesthesiology department taught one-on-one. Perhaps because there was more leeway on the teacher's side, the students were able to actively participate in clinical practice. When I asked if the patients do not feel uncomfortable with the students treating their pets, they replied that they may feel uncomfortable, but the owners also understand that the university hospital is a place for education, so they allow the students to experience various things. Japanese people do not seem to think in such a dry way. I thought this was the difference between Japan and the U.K., where the Japanese have a unique sense of patronage.

I also experienced various other things at both veterinary hospitals.

During this training program, I was able to learn many different ways of thinking from many different perspectives than in Japan. I also learned for the first time that there is a discipline called conservation genetics, although I could not go into detail in my report. The content was interesting and something I would like to delve into on my own. In addition, it was the first time for me to live abroad without the help of adults, so I could feel my own personal growth. All of these learnings were things that I could use in my future studies. On the other hand, there were things I gained, but I was also confronted with my own immaturity, such as my English proficiency, narrowness of knowledge, and questioning.

At the end, I would like to thank everyone who supported this program: the teachers who led us, the local teachers who gave lectures, the local students, and all the administrative staff. Thank you very much.



Taking CT of a dog

## To The University of Edinburgh

### Keika KISHIMOTO, 3<sup>rd</sup> year

The following is a report on the dispatch to Edinburgh, focusing on the content of the training and what I actually felt.

The day after arriving in Edinburgh, we headed to Aviemore, a suburb rich in nature. We went canoeing on the River Spey (the teacher's canoe capsized!). The next day, we visited Highland Wildlife Park.



Highland Wildlife Park's vast ground

The European bison, deer, and other herbivorous animals were kept in a vast grassland. What was particularly impressive was the many ways in which the animals were kept stimulated and kept from becoming bored. For example, although it is possible to feed herbivores with pellets, this does not stimulate them, so they seemed to be kept from becoming bored by gnawing on trees as food. In addition, the breeding area for snow leopards and the breeding area for markhor (a herbivore belonging to the bovine family Goatidae) are located next to each other, and it is said that they are stimulated by each other's smells.

In the afternoon, we evaluated animal welfare of Japanese monkeys and European cranes according to a worksheet. There are five domains as the important aspects of animal welfare: "Diet, Environment, Health, Behavior, and Mental". These five domains are further subdivided into items, each of which is scored on a 5-point scale. For example, the item "Utilised" would be evaluated on "All areas and features of the environment are accessible and are used". Through this activity, I became aware of details that they normally did not pay attention to, such as "Is it good that there are no trees at all in the monkey breeding area?" and "Are the bushes in the crane breeding area being used effectively?" It also led us to consider how "Diet, Environment, Health, and Behavior" affect the mental state of animals. Furthermore, it seems that Highland Wildlife Park has a team dedicated solely to education in addition to keepers and veterinarians, and I was surprised at how different this is from Japan. I felt that this kind of initiative would lead to an increase in the public's awareness of animal husbandry.

Returning to Edinburgh, we spent two days in the University of Edinburgh's Faculty of Veterinary Medicine observing the small animal and equine hospitals. In the small animal clinic, I observed internal medicine with fifth-year students (final year). First, the professor and about four students had an hour-long discussion about how to respond to an animal with a certain symptom (polyuria in this case). After that, I observed the process from the arrival of the animal to the diagnosis: a fifth-year student alone interviewed the owner about the symptoms, talked with the doctor about what was missing, and then the doctor interviewed the owner and decided on a treatment plan, and I was surprised that undergraduate students could be so involved in the diagnosis process.

In the clinical care for horses, I was able to experience an educational environment not found at Hokkaido University, such as a hospital dedicated to horses and rotations concentrating exclusively on horses. In the morning, I visited the clinicals with a team of fifth-year students, where we saw the ICU,

operating rooms, and other well-equipped facilities dedicated to horses. I was lent a stethoscope for the first time to listen to the heartbeats of the horses. I had learned in class about listening to the heartbeat under the armpit, but this was the first time for me, a third-year student to actually listen to the heartbeat, and it was a very good experience for me. When I told the fifth-year student the heart rate, he asked me if I thought it was fast or slow, and what I thought of the horse's symptoms. The answers to the questions were too difficult for me to give, but I was amazed at the depth of understanding of the



A treatment method with cola

fifth-year students. The fifth-year students were also very skillful in injecting sedatives into the external jugular vein, which showed the amount of practice and awareness they had. An interesting part of the clinical work with horses was the treatment of a horse that was unable to digest grass because it had hardened in its stomach due to overeating. I was very surprised when the doctor passed a tube into the horse's stomach and poured cola into it. The doctor said that the acidity of cola dissolves the contents of the stomach. He also said that cola is actually stocked

as a medicine, and I was able to learn about this interesting treatment method.

In the afternoon, we listened to a presentation of case reports by students in the equine clinical rotation. They presented on equine symptoms, treatment methods, future prospects, and problems. I felt that it was wonderful to not only observe and participate in the clinicals, but also to have a good amount of time to gather thoughts and discuss them with the professors, which was excellent for improving understanding.

The National Museum of Scotland, which I visited on a holiday, was very interesting. It was so full that I could not visit all of the exhibits in one day, including various animal specimens, stuffed Dolly, the famous cloned sheep, and even cultures from around the world, as well as a hands-on corner where you can learn as if you were playing a game. And I was impressed that admission was free. I also had a lot of fun interacting with the University of Edinburgh students who came to Hokkaido University, having dinner with them at a restaurant they recommended and being told about Japanese restaurants that were not so terrible.

Through this dispatch to Edinburgh, I was able to learn about the concept of animal welfare and advanced clinical education. In addition, I became more motivated to learn English through the communication in English. On reflection, I think I would have gained more if I had learned more English vocabulary for veterinary terminology. I think students often skip over English words in class materials, but I think it would be very useful if you could understand them when you hear them.

Finally, I would like to thank all the teachers and students who taught me so much in Edinburgh, the teachers who led us, and all those who supported our dispatch to Edinburgh. Also, thanks to all who responded promptly to the irregular situation under the COVID-19, we were able to complete the training safely and very fruitfully. Thank you very much.



Along the River Spey