

# VETERINARY SCIENCE

# IVERP

Hokkaido University- The University of Sydney  
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Achieving Global Standards of Excellence in Veterinary Education



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## The University of Sydney

### Yuta Hiroi, 5th year

I have had a strong interest in the relationship between wildlife and humans since early childhood. Growing up, I was constantly fascinated by how human activities influence wild animals, both positively and negatively. At university, while conducting research on sea turtles in the toxicology laboratory to which I belong, I have also participated in sea turtle conservation activities in the Ogasawara Islands in Tokyo, as well as in the rescue of dolphins that were accidentally caught as bycatch in Hakodate, Hokkaido. Through direct involvement in these activities, I was able to observe wildlife not only as research subjects but also as individual living beings affected by human society. Through these experiences, I came to realize that wildlife medicine in Japan is significantly less developed compared to small and large animal medicine. Facilities, educational opportunities, and public awareness related to wildlife medical care remain limited, and rescue activities often depend on the efforts of a small number of dedicated individuals. At the same time, as I deepened my studies and practical experiences, a fundamental question arose within me: *Why do we need to help wildlife?* This question gradually became central to my academic and personal interests.

The Wildlife Health and Conservation Hospital at the University of Sydney is a hospital specializing in wildlife medicine and rescue. In order to learn wildlife rescue medicine that cannot be studied in Japan, and to seek an answer to my own question, I applied for this program. In this report, I briefly introduce how wildlife hospitals are established and operated in Australia, as well as the philosophies held by those involved in wildlife rescue and rehabilitation.

In Australia, wildlife hospitals take various forms, including university-affiliated facilities, private institutions, and small or large animal hospitals that also accept wildlife patients. With the exception of some university-affiliated hospitals that receive government funding, most of these facilities are operated through donations and charitable funds. Animals are typically brought to hospitals by members of the general public, and no treatment fees are charged. This system reflects a social structure in which wildlife protection is regarded as a shared responsibility rather than an individual burden.

During the two days in which I participated in clinical practice, wildlife patients were continuously brought in by citizens. Veterinarians first carefully confirmed the circumstances under which each animal was rescued before initiating treatment. The examinations performed—such as physical examinations, diagnostic imaging, and blood tests—were not markedly different from those conducted in primary veterinary clinics in Japan. However, because the patients were wild animals, procedures involving sedation or invasiveness were carried out with extreme caution, prioritizing both animal welfare and human safety.

Unlike pet medicine, there are significant financial limitations on the amount that can be spent on the treatment of each individual animal. As a result, if a sufficient diagnosis could be made through physical examination alone, it was common not to proceed to imaging studies. In addition, students who had not received specific vaccinations were restricted from approaching flying foxes prior to sedation, demonstrating the strict infection control and safety protocols in place. The hospital was equipped with multiple intensive care units and holding facilities, and inpatient management was conducted rigorously. On the other hand, animals judged to be incapable of returning to the wild—approximately half, based on my impression—were euthanized. This decision was made not lightly, but after careful consideration of animal welfare and ecological balance. Although wildlife veterinary medicine is a highly popular career path among students, it is extremely competitive. I was informed that out of approximately 140 students per year, only three to four ultimately become wildlife veterinarians. This highlighted both the high level of interest in the field and the limited number of professional positions available.

Photo 1: With the Dean of the School of Veterinary Medicine at the University of Sydney



Photo 3: At the Australian Wildlife Sanctuary



Photo 2: With a wombat carer and local students

I would now like to introduce several experiences that left a particularly strong impression on me during interviews conducted on site. The Australian Wildlife Sanctuary, located about two hours by car from central Sydney, is a wildlife conservation facility. The woman who guided us through the facility was a volunteer. Remarkably, all approximately 30 staff members at this facility are volunteers. She works at a travel agency on weekdays, volunteers at the sanctuary on Saturdays, and at a zoo on Sundays, leaving her with virtually no days off. While this lifestyle is not common even among Australians, she continues her activities simply because she loves animals and finds personal meaning in contributing to their protection.

I also met an elderly woman who single-handedly cares for orphaned premature wombats whose mothers have died. She is well known locally and reportedly travels anywhere to pick up animals whenever she receives a call. Her motivation for continuing this work was strikingly simple yet powerful: she loves animals, and she wants wombats to continue living in Australia. Her dedication demonstrated how individual passion can support wildlife conservation at a grassroots level.

Furthermore, I had the opportunity to speak with Professor Olsson, the director of the Wildlife Health and Conservation Hospital, who kindly accepted my visit. He explained that he has devoted his clinical and educational efforts to establishing clear treatment protocols in a field of wildlife medicine that was previously practiced without consistency. At the same time, he emphasized that the question of how far humans should intervene in the food chain is an extremely difficult one. Injured animals and orphaned juveniles can represent important food sources for wild predators. In Australia, because there are no clear native apex predators other than dingoes, treating injured animals does not result in starvation of higher-level consumers. However, if such predators were present, deciding whether to care for injured individuals would not be a question with an easy answer.

These are the insights I gained during my visit. Although this is only my personal impression, I felt that while many people in Japan tend to be indifferent to wildlife, in Australia—excluding farmers—many citizens have a strong attachment to their native species. This concern extends not only to endangered species but also to common ones. As a result, there is public demand for wildlife medicine, donations are collected, and wildlife hospitals are able to function sustainably. I believe this represents one possible answer to the question of why we need to help wildlife. Personally, I also felt that human intervention in ecosystems may sometimes be excessive. Nevertheless, being able to arrive at my own perspective on this question has become a valuable experience for me and will strongly influence my future academic and professional goals.

Finally, I would like to express my sincere gratitude to Professor Olsson, as well as to the faculty and hospital staff at the University of Sydney, for accepting this visit. I am also deeply thankful to the local students who interacted with us, and to Professor Takiguchi and Professor Ishizuka for guiding us throughout the program. (1137 words)

## The University of Sydney

### Kaoru HIRAYAMA, 4th year

My main goals of studying at the University of Sydney was to learn about the conservation approaches to Australia's endemic species, the practices at a wildlife hospital, and the morphological characteristics of Australia's species. While there are not many clinical practices on wild animals in Japan, Sydney had several opportunities to study them, and I learned about the difference in the approach to conservation between Japan and Australia, and also the uniqueness of the anatomical features of Australian wildlife.

I noticed that people in Australia consider protecting injured wildlife more than in Japan. On the first day, we went to the Australian Wildlife Sanctuary in Bargo and observed many endemic species of Australia. Our guide was a volunteer at the sanctuary, and she told us that she worked five days a week for a different job, then volunteered during the weekends with no time off. I was awed by her love for wild animals, as she told us she has continued as a volunteer for four years. The sanctuary is run by the volunteers, and it was a new idea for me to volunteer to protect wildlife without having a job related to wildlife.

Furthermore, there are many carers in Australia who volunteer to take care of wild animals in their houses until they are able to be released into the wild. We had the opportunity to visit one of the carers, and she showed us her baby wombats. Even though she had to feed them many times a day without rest, she seemed energetic and full of love for the animals she was taking care of. Her passion for protecting and caring for wildlife inspired me and I thought that few people in Japan take care of wild animals in the way that she does.



Figure 2. The baby wombat we practiced thinking of treatments for



Figure 1. The enclosure for Tasmanian devils at the sanctuary

At the Wildlife Health and Conservation Hospital in the University of Sydney, most of the patients are injured or orphaned animals that the public found in the wild. The hospital does not take in zoo animals and other captive animals not intended for release into the wild. I was surprised that the hospital gets many patients even with this restriction, since it is not common in Japan to pick up injured wildlife to take to the hospital. Moreover, I learned that the animals in the hospital are either treated to be released into the wild, or they are euthanized if it is decided that they cannot survive in the wild. I thought it interesting that none of the patients are brought to zoos, since in Japan, we see some injured wildlife brought to zoos and taken care of there. I think that Australia has a well-developed system to protect wildlife by caring for them to be effectively released into the wild. I feel that Japanese people should be more involved in conservation, as the general public of Australia is.

While driving in Hokkaido, I sometimes see injured animals on the road, probably hit by a car. I had wished then that Hokkaido had a place to bring them to be treated. However, I also wondered to what extent should we protect wild animals that are not invasive species but have a population size too big for the environment, such as Hokkaido sika deer. In the lecture we listened to at the University of Sydney, we learned that there are many views on how much we should intervene and protect each species. Some people say that we should take action for injuries caused by humans such as car accidents and entanglements. I agree with this opinion. In addition, I think that we should at least have a system to euthanize the animal if it is in too much pain, whether or not it is an invasive species. I felt ashamed that Japan does not have this for wild animals.

In the wildlife hospital, I was also able to learn the unique morphologies of the Australian animals, as well as some common diseases for each species. For example, I learned that wombats have hard plates on their backsides for defending against predators, and that they get mange. I realized that I did not know anything about the specific features of the wild animals, and that in clinical practice we need to have a basic knowledge of each specific animal in addition to general veterinary knowledge. As my research topic will be on the anatomy of wild animals, specifically cetaceans, I will focus on the species differences in morphology. On the last day, we went to the SEA LIFE Sydney Aquarium and the WILD LIFE Sydney Zoo, and we were able to observe many species including those we did not see in the hospital during the time we were there. I



Figure 3. The unique pouch of the kangaroo

was awed by the uniqueness of each species and I hope to learn further about the different animals around the world, and their unique characteristics. By learning them, I will be able to consider treatments and care that fit each species, as well as teach others about how interesting wild animals are.

Through this program, I was able to learn that there are different approaches to wildlife conservation, and it was a great opportunity for me to think about my future and consider the many ways I can contribute as a veterinarian. I have not decided on my specific career path yet, but I felt more determined than ever to use my knowledge and skills to do what I can for wild animals. I also found my interest for anatomical differences in endemic species, and will further my research on the topic.

Finally, I would like to express my deepest gratitude to Dr. Takiguchi, Dr. Ishizuka, and Ms. Kawashima of Hokkaido University, as well as Dr. Annabelle Olsson and all the teachers and staff at the University of Sydney and the Wildlife Health and Conservation Hospital who made this program not only possible but also a super fun and fulfilling experience for me. I would also like to thank the students of Hokkaido University who traveled to Sydney with me, and all the students we met at University of Sydney who welcomed us kindly and showed us the student life abroad. I enjoyed everything at Sydney, and wish to visit again as well as hope this program between the University of Sydney and Hokkaido University will continue on from next year.

## The University of Sydney

### Toshiki JINNOUCHI, 4th year

Through this program, I gained a deeper understanding of how each country's unique characteristics influence approaches to veterinary medicine and clinical education. In particular, I was impressed by the differences in career paths after graduation from veterinary school and how these differences are reflected in university educational policies and curricula.

In case of Hokkaido University, only about 30% of veterinary students pursue careers as a companion animal clinician after graduation. The remaining students follow diverse career paths, including research positions, employment in private companies, and civil servants. In contrast, in Australia approximately 80–90% of veterinarians work as clinical veterinarians, and relatively few graduates choose non-clinical careers. In fact, many of the students at University of Sydney with whom I interacted including Japanese expressed their intention to first pursue clinical practice after graduation. This suggests that veterinary careers in Australia are largely centered on clinical practice. This tendency is also reflected in the structure of university curricula. Compared with Hokkaido University, the veterinary curriculum at the University of Sydney appears to place greater emphasis on clinical training. In the final year of the faculty, students participate in clinical rotations lasting almost entire year, gaining a total of 42 weeks of practical experience in clinical settings both on and off campus.

Furthermore, during our training at the wildlife hospital, many procedures and examinations involving patient care were performed by students on clinical rotations under the supervision of veterinarians. Students were assigned cases and were responsible for assessing the patient's condition, monitoring its progress, and developing treatment plans, which were then reviewed and refined with guidance from supervising veterinarians. While Hokkaido University's clinical rotations also use logbook-based clinical training, the clinical rotations at the University of Sydney appeared to provide students with more opportunities to actively participate in patient care. This educational system likely enables students to graduate with substantial clinical experience, and I felt these features relate to the difference between Japan and Australia, where there is no national exam for veterinary qualifications, which means graduation alone grants veterinary licensure.

During the clinical training at the wildlife hospital, I was also fascinated by the treatment approaches, which differ greatly from those in companion animal clinics. One defining characteristic of wildlife rescue is that the "client" is not the animal's owner but the "carer," who is involved in rescue activities. Although obtaining a medical history remains important for understanding the background and condition of the case, the owner's preferences rarely influence the treatment plan. In many cases, the ultimate goal is the successful return of the animal to the wild, and therefore the possibility of reintroduction becomes the most important factor when determining the course of treatment, or whether we should treat them or not.

Also, in Australia, hands-on experience is required to rescue wildlife as a carer.

While there is no specific qualification, since the required care methods and environments differ by species, it seems necessary to obtain state permission for carer to rescue each species individually.

This system is also distinctive in that it prioritizes rescue efforts based on the ability to provide appropriate captive environments rather than simply saving as many wild animals as possible. I felt their approach is characteristic of Australia, a country rich in wildlife, prioritizing animal welfare throughout the entire process—from rescue to release back into the wild—precisely because they need to rescue so many wild animals.

Before the program, I didn't have much of an impression of Australia regarding animal welfare; I thought Europe was particularly advanced in this area. However, I learned that it's emphasized in faculty education, and I got the

impression that it's become quite important in each state—for example, you can no longer hold koalas. Another striking difference from companion animal practice in Japan was the relatively high frequency of euthanasia. Many animals brought to wildlife hospitals are injured wild animals, and euthanasia is ultimately selected in approximately half of the cases. The reasons include not only cases in which recovery is unlikely due to fatal injuries, but also cases in which life could potentially be saved but functional recovery would be difficult, making a return to the wild impossible. This latter criterion reflects an ethical perspective specific to wildlife medicine and is rarely seen in the treatment of companion animals.

Moreover, I felt the impression that euthanasia is relatively accepted in Australia as an option to provide relief from an animal's suffering even in small animal clinical scene. In Japan, treatment is often continued even when the prognosis is poor. In contrast, in Australia euthanasia is more readily considered a realistic option from the perspective of animal welfare. I felt that these differences in owners' values are clearly reflected in clinical decision-making.

Finally, an important outcome of this program for me was a change in my own perspective regarding my future career. Through this experience, I began to consider working and living overseas as one of my options. Fortunately, I had the opportunity to interact with Japanese students currently enrolled in the Faculty of Veterinary Science at the University of Sydney. Hearing about their experiences and daily lives helped lower the psychological barrier I had previously felt toward living abroad, and this became a valuable insight for my future.

Moreover, everyone involved in this program was really kind for us, so it really made me appreciate the warmth of Australians. I strongly wish to visit again, and I realized there's no need to be overly wary of foreign countries. While this probably applies beyond Australia, at least for the University of Sydney, I think you should feel free to apply.

In closing, I would like to express my sincere gratitude to Dr. Annabelle, everyone at the University of Sydney Wildlife Hospital, and our supervisors, Professor Takiguchi and Professor Ishizuka, for their generous support throughout this program. This program provided me with an invaluable opportunity to directly experience veterinary education and wildlife clinical practice overseas. I intend to apply the experience and knowledge gained during this program to my future studies and activities as a veterinarian. I am deeply grateful for this experience. (1016words)



Figure 1. routine work for wombat

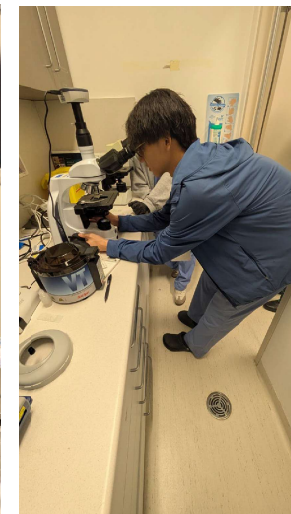


Figure 2. Fecal analysis