

## INTERVIEW WITH JSPS FELLOW IN THE U.S.

### SATOSHI TOMANO

2017- JSPS Postdoctoral Fellow for Research Abroad

2014-2017 Ph.D. student at Graduate School of Biosphere Science, Hiroshima University

2015-2017 JSPS Research Fellow (DC2)

2012-2014 Master student at Graduate School of Biosphere Science, Hiroshima University

2008-2012 Undergraduate student at Faculty of Applied Biological Science, Hiroshima University

Satoshi Tomano is a JSPS postdoctoral fellow researching abroad. He has been working on a marine conservation ecology project advised by Dr. Paul Barber in the department of Ecology and Evolutionary Biology (EEB) at The University of California Los Angeles (UCLA). Satoshi's research utilizes marine ecology to understand the processes shaping marine biodiversity, with implications for marine conservation planning and management. His interest in marine conservation and sustainable fishing has been shaped by his family businesses of fishing and oyster farming. He had a great experience working in a fishery science lab (Dr. Tetsuya Umino) for seven years and decided to become a researcher. He has been investigating geographical patterns of biodiversity in economically important fishery species.

Marine resources contribute to food security and provide adequate nutrition for the global human population, supplying protein to about 3 billion people with at least 15 percent of their average per capita animal protein intake. However, global fish stocks have declined over the past 40 years, possibly

due to overfishing and environmental change such as rising water temperature. In order to satisfy an increasing global demand for protein the squid catch has increased 4 fold over the past 40 years.

Currently, Satoshi is using genetic approaches to understand dispersal and connectivity of reef squid, one of the most expensive and delicious squid in Japan (see the picture below), and throughout the West Pacific Ocean.



*My target species Big-fin reef squid caught in Yakushima Island in Japan*

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### **Q1. Why did you choose the U.S. to conduct your research?**

I chose the US to conduct research because this is the only way to survive in science.

When I was second year of PhD student in Hiroshima University in Japan, a research paper had been published by Dr. Barber's group in UCLA EEB. I'll never forget the shock of reading this paper because they researched the same species with the method I was planning to use for my PhD research. They conducted genetic analysis to understand the evolution and population dynamics of reef squid, which was more robust and in-depth than my research. I didn't have any idea how to work better. I felt my life in research would require a shift. There were two ways to continue my research career; one is to change my research project, the other is to work for their project.

In order to start a research relationship with someone, I would have to provide something the other side would want. Fortunately, they didn't collect squid from Japan so I felt that I could begin to contribute to their project by providing samples from Japan.

Generally, when we offer to collaborate, most professors don't respond because they receive similar emails from hundreds of other people. I sent an email to Dr. Barber to explain my idea and proposed my vision to collaborate on a squid project. He replied to me in a few days and said, 'Please send me your CV and proposal.' I got the chance of a lifetime! Finally, I was selected as a JSPS fellow for research abroad and came to the United States. I appreciate the JSPS for giving me an opportunity to continue my project.

### **Q2. What is your impression of the research environment in the U.S.?**

The research environment is exciting. I am writing some opinions from my impressions of the research environment in the US, compared to my previous laboratory in Hiroshima University. Dr. Barber's lab has two postdocs, five PhD students, one master student. Although each member is working their own project, we focus on projects that uses molecular genetic techniques in the study of ecological and evolutionary questions in marine environments (see website <https://barberlab.eeb.ucla.edu/>). Working with people from different backgrounds and nationalities retrained me to have different ways of approaching tasks and human interaction. I learned that it is important to be respectful of their differences, which can bring the workplace to better state of professional collaboration. An example of a contrast is that most students don't do a PhD program at the same place as their undergraduate. My friend told me that it is beneficial to get out of my comfort zone and work with other groups, otherwise no growth and no connection can be formed.



UCLA

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*Q3. How do you take advantage of your experiences in the U.S. and apply it to your research or career?*

In terms of the advantage, research experience in the U.S. has been a great chance to further my career. This experience in the US will provide several opportunities, such as. 1) A chance to step out of my comfort zone. I realize that I am significantly less mature than PhD students and postdocs in our lab. Improving my research skills is essential. 2) I currently have a very small set of collaborators. Collaboration is an important part of furthering research and science careers. I am working towards expanding my network of researchers in the US, which will make future collaborations easier. I am building relationships that will continue even after I return back to my country. 3) Research abroad is a good opportunity to see the world and experience of different cultures. I learned that cultural differences between Japan and U.S. research also provide an opportunity to expand my way of thinking into a longer-term and more worldwide perspectives. In the future, I want to be a professor in Japan who can give opportunities for

future students to also see the world. To young researchers in Japan, I can't tell you what is best for you, but if you think you are in the best place, I strongly recommend going abroad. Here is the famous story paraphrased from "Surely You're Joking, Mr. Feynman!"

"I want to go to MIT because it is the best school in the country"

"That's why you should go to some other school. You should find out how the rest of the world is."

Finally, I would like to thank everyone who supported me in Japan and LA, especially JSPS for giving me an opportunity to do research abroad and Dr. Barber for his acceptance and mentoring of my research. Please find me on Facebook!

*Dr. Barber lab is in TLSB*

