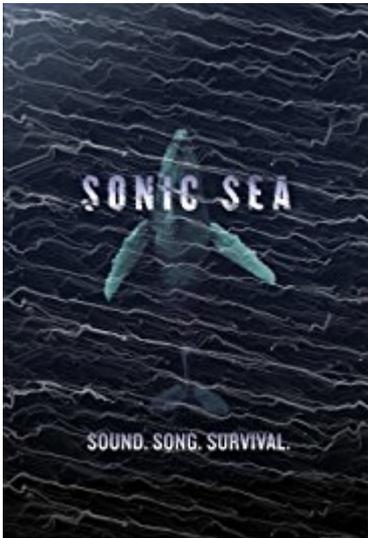


Research Activity Report
Supported by “Leading Graduate Program in Primatology and Wildlife Science”

2017. 11. 22	
Affiliation/Position	Primate Research Institute/ D2/L4
Name	Josue Alejandro Pastrana

1. Country/location of visit	
Kyoto University, Kyoto, Japan	
2. Research project	
12 th Conserv’Session 1 Year Anniversary	
3. Date (departing from/returning to Japan)	
2017. 11. 16 (1 day)	
4. Main host researcher and affiliation	
Conserv’Session Team, Kyoto University/Chandra P. Salgado, CMST, Curtin University	
5. Progress and results of your research/activity	
	<p>On November 16th 2017 we celebrated the one year anniversary of the Conserv’Session, the 12th that have taken place at the Seminar House at the North Campus of Kyoto University. The movement that had started by the initiative of a few students from the Primate Research Institute at Inuyama, Japan has now been steadily meeting meeting every month in Kyoto to present documentaries mainly related to various conservation issues accompanied by experts in the the field to discuss the environmental challenges our earth is going through.</p> <p>In our last session we saw the movie Sonic Sea directed by Michelle Michelle Dougherty and Daniel Hinerfeld which demonstrates the impact of industrial and military ocean noise on whales and other marine life. Like many unexplained events where many marine creatures seems to be in healthy conditions but are washed up on the shore, the movie starts with an event that happened many years ago in the Bahamas where 17 whales were found in the sand, as if trying to desperately get away from a threat in the water. A scientist at the time took some of the bodies pf the whales and discovered that they had ear and brain damaged, most likely caused by the sonic explosions and other noise pollution. The movie then follows to tell us the various ways new technology has negatively impacted the marine ecosystems, and it portrays visually how sonar and other sound is used underwater well, how it can get amplified and how it can have many negative effects, not just in whales, but in most marine life. One of the bigger challenges is that most of our food and goods are transported throughout the world through boats, rather than automobiles or airplanes. In a way, I learned that the sea has the “heaviest traffic” of transports within and between</p>

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continents. Other than transportation of goods, one of the biggest noise pollutants in the oceans are military related vessels. It was very surprising to me to learn that rather than shipping goods or even tourism, boats that may be responsible for harming our oceans are coming from boats that are meant to protect or attack other human populations.

The biggest shocker in the documentary for me was definitely how much of the oil industry creates underground water topographical maps by creating explosions underwater at regular intervals, the sonic waves created by these explosions then bounce back to sensors that give an image of the ocean floor, and more importantly for the industry, places where drilling for oil might seem suitable. I knew about the potential harms of oil spills, I recently learned in an earlier session just how bad plastic is affecting human and non-human health by polluting the sea and the food chain; however, I was unaware that on top of all that, the sea is being bombarded all across the globe every few seconds to find the same material, oil, which is creating an environmental mess both in land and sea. The documentary also showed how some sonar equipment used by industrial fishing, large cruise ships and shipment cargos emit unnecessary noise that can even affect marine mammal’s sensitive hearing and neurological systems.

Luckily, the movie was not all completely negative as it demonstrated some potential solutions in the near future and perhaps with some change is yet to come to mitigate such problem. For instance, the military ships are now turning to less invasive sonar imaging which should significantly decrease the intensity of sonic noise. Also, scientists across the globe are developing new methods to understand the impact and are being able to collect evidence that can demonstrate to various countries and companies around the world that we, as humans, are creating a lot of damage with noise pollution underwater and that we still have the potential to change. The most interesting example was how fish and cetaceans actually thrived after large wars or conflicts where shipping was decreased and the oceans became quiet again underwater.

The movie was also followed by a discussion with our guest panelist, Dr. Salgado a scientist, along with her PhD student, who told us about the many challenges they face trying to study and provide proof to various organizations that we are causing a lot of damage underwater just with noise. Although there is hope for change in the near future, they told us some of the frustrating parts of their job is providing sufficient proof and being able to control for other potential factors that might be contributing to marine wildlife health, where much is still unknown.

As Conserv’Session reached a year old, it was a very useful way to celebrate it by discussing a topic that is barely touched, noise pollution underwater. After the movie and discussion, we helped with a raffle where we gave out books to the guests and hopefully they will spread the word and contribute to creating more awareness, and have other people come and participate in the future, which is what Conserv’Session is all about. I am very grateful to the PWS program for providing me with such an opportunity.

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