

David Smith from the Smith College, USA: Semester 1 2019

Where have you come from, and what do you teach?

I grew up in Virginia, received my undergraduate degree in Biology at the University of Virginia, a masters in Marine Science at the University of South Carolina, and my PhD in Zoology at the University of Maryland. I have been teaching at Smith College, a liberal arts women's college in western Massachusetts, since 2001. Prior to that I taught at Northeastern University and, before that, conducted postdoctoral research at the Smithsonian Environmental Research Center in Maryland, Williams-Mystic Maritime Studies Program, and Bamfield Marine Station on Vancouver Island, Canada.

At Smith, I teach one of the introductory courses (Biodiversity, Ecology and Conservation) for the Biological Sciences major, a 200-level lecture and lab in Invertebrate Diversity, and an upper-level seminar in conservation biology. I am also a member of Smith's Environmental Science and Policy Program and regularly teach the senior capstone seminar, entitled Sustainable Solutions.



David and Denise

What interested you in the Erskine Programme/why did you want to come to UC?

My contact with UC and the Erskine Programme arose from my sending many Smith students to the Frontiers Abroad Program at UC and meeting its director, Max Borella. Frontiers Abroad's

relatively new Earth Systems program has been a good fit for our Environmental Science and Policy majors and ecology-minded Biology majors. New Zealand combines a unique flora and fauna with a complex history of land use and conservation efforts by Maori and Pakeha; this combination provides a great learning experience for Smith students and a new lens through which to view social-ecological interactions. My research focuses on marine bioinvasions, so I was broadly interested in seeing how New Zealand has dealt with the problem of non-indigenous species along its coastline and on its lands.

I was also attracted to UC because of its new and growing Environmental Science major. I was director of Smith's Environmental Science and Policy Program for 11 years and helped to design and launch its major. We are currently conducting our first program review, and I was interested to see how UC's environmental program was organized and taught. I also hoped to exchange ideas with UC faculty and meet UC Environmental Science students.

What have you been doing at UC?

My wife, Dr. Denise Lello, and I arrived in New Zealand in late January. She is a terrestrial botanist and I am a marine ecologist. We hit the ground running by joining the Frontier Abroad students and their professor Sharyn Goldstein in Kaikoura two days after our arrival. We spent the next 10 days in Kaikoura familiarizing ourselves with the coastal flora and fauna and engaging with the students. We each gave a lecture on our research and led field modules with subsets of students. Denise led her group to Puhi Peak to examine plant communities and conservation efforts on a large tract of privately-owned land. I had students test for spatial variation in snail shell form at intertidal sites uplifted by the 2016 earthquake. We have each

been supervising a student project this semester that stemmed from our field projects. We also gave seminars in ENVR356 Field-focused Research Methods. Denise talked about climate change and the importance of understanding phenology (seasonal change) in forests, and I spoke about the role of phenotypic plasticity (environmentally induced changes) in marine bioinvasions.

I also gave lectures in the new course ENVR301 Environmental Science: Cities and Coasts. This class was offered to the first graduating class of Environmental Science majors at UC. My topics included estuaries and harbors, space allocation along coastlines, and changing biological diversity. In preparing for these lectures, I learned a great deal about New Zealand's coastal habitats, the challenges they face (e.g., climate change, coastal development, invasive species) and management approaches to meet these challenges. I also sought to introduce the students to system-thinking and resilience-thinking approaches to tackling environmental problems.

When not on campus, Denise and I have relished exploring Christchurch and South and North Islands. We managed to complete four of the Great Walks.

What have you most enjoyed about your time here at UC/Christchurch?

I very much enjoyed teaching the ENVR students; they readily shared their personal knowledge about environmental issues in New Zealand and I learned a great deal from them. My travels around New Zealand have also been incredibly rewarding. Experiencing the landscape and the biota firsthand and learning about New Zealand's geological, evolutionary, and cultural history have been exhilarating. Denise and I met many friendly people at UC and in our travels. For example, Bryce Williamson was generous in sharing his knowledge of tramping, and we met a

park ranger on the Kepler Track who gave us a wonderful background to the Save Manapouri campaign of the late 1960s/early 1970s.

Although no joy was involved, I was deeply moved by the responses of the university, Christchurch community, and nation to the mosque shootings. The prime minister showed tremendous compassion and great leadership in the aftermath. The overarching message of inclusivity and understanding was inspirational.

I am grateful to the Erskine Programme and to those in Geological Sciences, Frontiers Abroad, and Environmental Science who helped me secure this wonderful fellowship.