

Fishing for invasive species

She walked with penguins, fished for invasive alien fish and she sees every experience as a learning experience. Alexis Olds, an Ecological Coordinator with CapeNature Scientific Services, understands that you need to spend time outside if you want to understand nature.

Alexis was first introduced to invasive alien species during her BSc (Hons) in Conservation and Biodiversity. However, it was during her postgraduate studies at the DST-NRF Centre of Excellence for Invasion Biology (C-I-B) that Alexis was lured to the world of ichthyology. She enrolled for a master's degree with C-I-B core team member, Dr Olaf Weyl, at the South African Institute of Aquatic Biodiversity (SAIAB). The focus of her research was to determine the extent of invasion of four freshwater alien fish species (Mozambique tilapia, mosquito fish, largemouth bass and common carp) in the Wilderness Lake system in the Western Cape. Alongside the sampling of the fish (native and alien), she also looked at the establishment success of these alien species – what environmental factors helped or curbed their establishment.

Her career started when she was offered an estuarine internship with the South African Environmental Observation Network (SAEON). From there she joined CapeNature as Programme Manager for their Marine Protected Areas, Islands and Estuaries Programme and moved on to become the Ecological Coordinator for the De Hoop Nature Reserve, De Mond Nature Reserve and Dyer Island. In her position as Ecological Coordinator, she facilitates and coordinates the collection and interpretation of biodiversity data, and ultimately informs biodiversity management planning and decision-making for the reserves that she manages. She works closely with reserve staff and scientists to make sure that the necessary research and monitoring gets done.

From a very early age Alexis knew that she wanted to work



Alexis and penguin friends. Image: Alexis Olds

outdoors, in nature and with animals. 'Passion led me down this path. Not pursuing a career in biology never crossed my mind, and the scientific field provides endless opportunities to make a meaningful difference,' says Alexis. Her position as programme manager often takes her for long hours out of the office and into the field. Alexis explains, 'You need to be able to handle long hours in the field, in sometimes terrible conditions and still keep your sense of humour. Being a field scientist can be a tough job, you need to leave your inhibitions at the door and be willing to work hard'.

Introducing invasive plants for biofuel: weighing up the pros and cons

Ryan Blanchard is a researcher at the Council for Scientific and Industrial Research (CSIR) in Stellenbosch. His research interest focuses on the invasion potential of plants that are used for the production of biofuel. *QUEST* asked him a few questions about the importance of his work.

What did you study?

I completed my Bachelors, Honours and Master's degrees at the University of Cape Town. For my PhD I was awarded a studentship from the CSIR and registered at DST-NRF Centre of Excellence for Invasion Biology (Stellenbosch University).

What is important about your work?

My research on biofuels is important in a developing-world context where governments are aiming to increase the socio-economic status of the rural poor by increasing agricultural production. Growing biofuels is one of the mechanisms identified by governments to reach this goal. My research will help decision-makers to consider the consequences of using plants that could have negative impacts on the environment, despite their economic benefits. For example, many of the plants that are used to produce biofuels are invasive in many parts of the world. By following guidelines from my research, it should be possible to mitigate or avoid their potential impacts.

Not many youngsters look at invasion science as a career, what led you down this path?

For me, there was initially an aspect of fun and passion. It was during my undergraduate studies that I learnt how invasive alien



Ryan Blanchard. Image: Ryan Blanchard

species survive in new areas that they invade and how they are able to replace native species. I was really fascinated because this phenomenon was not limited to one habitat or one group of species. Also, many of our current problems are caused by the historical movement of species to new locations. Despite new information about the pathways and impacts of invasive alien plants, species are still being moved around for several reasons. In my view, there are still many opportunities to improve our current invasive alien species policies to avoid future negative impacts. My initial interest in science coupled with a desire to learn about how systems work and to be able to ask questions about these systems was rather intriguing.

The most important lessons you've learnt during your career?

It is important to surround yourself with peers who share a common interest in your work. Never be afraid to ask for help, but always show that you have put the effort in to get as far as you can. It is important to manage your time and to be aware of the core things that you need to learn to complete your research.

On a lighter note, what do you do to unwind?

I like to cycle and I love the ocean. My dad runs a boating company and I help on weekends when needed. This gives me the chance to go to out sea, which can be very relaxing.