



Natural Talent Case Study Template

Name: Rebecca Cairns

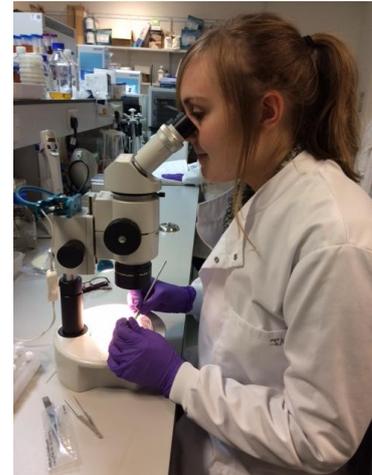
Age: 24

Traineeship: Entomology traineeship with SASA
(Science and Advice for Scottish Agriculture)

Dates of traineeship: 25th January 2016 – 24th January 2017

About your traineeship;

**Can you give an overview of your Natural Talent UK traineeship?
(What organisations are you placed with/type of work you will be involved in?)**



My Natural Talent Traineeship is based with SASA (Science & Advice for Scottish Agriculture). SASA provide scientific services and advice in support of Scotland's agriculture and the wider environment through: ensuring the quality of seeds, keeping crops free of damaging diseases, and keeping serious pests of plants out of Scotland. The entomology department of SASA identify and provide advice on invertebrates, such as aphids - which are serious pests of potatoes. This is where my Natural Talent traineeship comes in...

My placement will be directly involved in ongoing research at SASA on aphid populations collected through an established network of insect traps. I will be learning how to combine aphid molecular biology with classical taxonomy to help in the identification of different aphid species. The research that I will be helping with will: provide up to date records of current aphid species present within Scotland, will aid in the advice given to farmers to control the aphid numbers, and therefore will help to stop the spread of devastating potato viruses which the aphids carry.

Why did you apply for a Natural Talent traineeship?

I have always been interested in conservation and environmental issues and aspire to pursue a career within this sector by further developing my ecology knowledge and skills. Since I was young, I have been intrigued by the natural world: particularly invertebrates. I have been really lucky and fortunate so far to have had the opportunity to learn more about biodiversity and nature through my university degree and through my previous work with TCV. I applied for this particular Natural Talent traineeship because I really wanted to learn more about invertebrates and work on my identification skills. I also know that Natural Talent is a fantastic and unique programme that allows each trainee to develop specialised knowledge and skills on a particular subject, which is such a rarity in the current job market. I was particularly excited to learn how entomology research on aphid populations can assist in advising the Scottish agricultural sector.

What kind of employment were you in before undertaking a Natural Talent traineeship?

Before undertaking this Natural Talent traineeship, I was a Discovering Nature Trainee funded by Clackmannanshire Council and placed with TCV in Stirling. Being placed with TCV gave me invaluable experience in conservation and taught me how to engage with communities on biodiversity and nature topics.



My time with TCV really boosted my confidence and engagement skills and really helped me think about what else I would like to learn and where I would like to see my career go. Everything that I learnt at TCV also enabled me to take on the last 4-5 months of a Natural Communities traineeship based solely with the City of Edinburgh Council. Prior to my time with TCV, I volunteered for a year after graduating with: the environment department at East Lothian Council, and with Buglife – The Invertebrate Conservation Trust. My time volunteering gave me great experience and helped to increase my awareness and knowledge of conservation issues and identification skills.

What voluntary experience had you done prior to your traineeship?

Prior to this traineeship, I took part in a range of different volunteering opportunities. I started volunteering while studying biology at university in Stirling. This began with helping to locate bumblebee nests on the campus for a camera trap study. I also volunteered as a data entry assistant for PhD research students whose studies involved South African bat populations, and British Bumblebee distributions. I volunteered as a laboratory assistant over one summer, where I assisted with ongoing research on the evolutionary ecology of *Drosophila* fruit flies, which I found really interesting.

As briefly mentioned in the previous question, I volunteered with East Lothian Council and with Buglife – The Invertebrate Conservation Trust after graduating. With the Council, I was responsible for overseeing an ecological project at Gullane Bents beach. My main role was to assess and map the site for Sea Buckthorn (a non-native introduced plant that in recent years has taken over the site, out-competing native dune plants) using GIS and GPS technology. I also helped out with other tasks at the Council, like sorting and analysing the Council’s wetland bird survey count data.

At the same time, I began volunteering for Buglife as a Project Scotland volunteer to learn more about conservation and entomology. My main role focused on outreach and communication work through producing monthly news updates for members, creating leaflets about Buglife’s conservation work and helping to produce and edit two editions of their biannual newsletter “Scottish Invertebrate News”. I also helped to create a citizen science project called ‘The Scottish Seashell Survey’.

What are you most looking forward to during your traineeship?

I am most looking forward to learning and developing classical and molecular invertebrate identification skills and techniques, and learning about the exciting research work that SASA do.

What skills do you anticipate this traineeship will give you?

I am confident that this traineeship will provide me with a whole host of different skills that will greatly enhance my employment prospects including: molecular biology and classical invertebrate taxonomy, field sampling techniques, laboratory skills, data analysis and learning about Scottish agriculture and the problems associated with pests and diseases. I think the traineeship will also give me people engagement skills, particularly in communicating the findings and research to Scottish farmers and to the wider public.



How do you feel your traineeship benefits the conservation sector in the United Kingdom?

My traineeship will be looking into the identification of both native and non-native aphid species to monitor local populations and detect invasive species. The work that I will be helping to do will be benefiting Scottish agriculture by aiding in the control of non-native invasive species, and in helping to protect plants and crops that are susceptible to viruses spread by aphid pests.

What career path do you see yourself pursuing and how will this experience will help you?

I aspire to pursue a career within the environmental/conservation sector. More specifically though, I would really like to be able to specialise in the conservation and research of invertebrates. I would also like to be able to tie in some environmental education into this, as from my previous experience with TCV, I have found that I really enjoy teaching others the interesting facts that I have learned. This traineeship therefore is a fantastic opportunity for me, and one that I am so grateful and excited to have. The experience I hope to gain from it will equip me with the skills and knowledge that I need to follow this career path.