

I've Got My Degree, Now What...? Becoming a Junior Ecologist

Dan Wales GradCIEEM, Jack Fenwick GradCIEEM and Sarah Emerson GradCIEEM
Naturally Wild Consultants Ltd

It was a conversation with CIEEM President John Box during lunch at this year's North East England Section Conference that spurred the idea for this article. We, as the authors of this article, know from our own experiences, and speaking to those newly graduated ecologists and biologists, that the field of ecology can be a rather competitive one to break into, especially at a junior level. This article will mainly focus on getting into ecological consultancy, purely as that is the background that we hold. It often seems that there is a lack of junior positions; and combined with the number of people trying to get into the sector professionally, this provides a pool of competition that means it is important to be one step ahead of the game in order to make yourself stand out to prospective employers.

Gaining the Right Experience

In a competitive job market, such as ecology, it is important to stand out from other applicants. There are several ways to do this, some of which are almost essential. Crucial criteria for most ecologist positions include a degree in a relevant subject – that's one thing ticked off the list! – and a full, clean UK/EU driving licence. The majority of ecologist positions involve travelling to sites/projects, so a willingness to travel and be flexible with working hours to meet the requirements of the job is a must. Other criteria that are often included in graduate ecologist post advertisements include: membership of CIEEM – although if you are reading this article you are likely to have achieved this; a basic knowledge of the relevant UK legislation, policy and guidance; and experience in undertaking surveys. A postgraduate qualification is often listed as desirable, but we will cover this later in the article.

We would consider ecological surveying experience as the most important factor in getting your foot in the door. Understanding and experience in a range of survey techniques and skills, all of which would be required for the job, are always a gold star on an applicant's CV; this is often most important with bats and great crested newts, which make up a large

percentage of an ecologist's surveying time. For bats, this includes the use of hand-held detectors for in-the-field bat detection and also identification of species in the hand (although this is likely to need the help of a licenced surveyor in order to handle bats). For great crested newts, experience should focus on the main survey protocols; including bottle trapping, torchlight surveys and egg searches, as well as identification of sex and age (again, please ensure that this is undertaken under the supervision of a licenced individual). Phase 1 habitat surveying and plant/tree identification skills are highly desirable in an applicant, especially as this is likely to be a day-to-day skill for an ecologist. There is a wealth of reference material on the internet, as well as floral identification books that can help to increase your knowledge of floral species and Phase 1 techniques.

There are a range of sources to increase your knowledge and experience without spending your life in a library or sat at the computer. Field experience is a much more important skill than textual-based knowledge, and can be obtained from contact with relevant groups including: local Wildlife Trusts; conservation charities (RSPB, WWT, etc.); local species groups (bats, badgers, birds, reptiles and amphibians), and even local authorities and county councils that have their own ecologist and/or countryside conservation team. Volunteering with these groups can give you a huge advantage that will separate you from somebody applying for the same job that hasn't done any relevant ecological fieldwork. However, as part of your preparations for the profession, do familiarise yourself with some of an ecologist's commonly used desktop tools whilst at a computer. These include tools such as the National Biodiversity Network (NBN) Gateway, MAGIC mapping, and even software such as Google Earth and map drawing tools (e.g. CoreDRAW).

So, we have talked about some of the techniques and skills you can start to understand and practice to stand out as an ideal candidate, but many of these survey methods are not covered by university courses or projects – this is especially true of essential bat and amphibian surveying experience. Students hoping to enter the ecological sector should gain these skills as part of extracurricular work experience and volunteering as mentioned above, but how can students tailor their university studies (and even choice of university in the first place) to best prepare them for a career in ecology and the environmental sector?

Fieldwork is key – does the course you are undertaking involve ample opportunities to go out into the field and use various ecological survey techniques? What about extended trips

out on week-long courses, or residential field trips? Choosing university modules which have a great deal of field work can be challenging but extremely rewarding; performing well in these modules will allow you to take in lots of knowledge concerning ecological field work, and will show your aptitude for working in the environment and away from home if you can talk about a range of different fieldwork experiences at an interview. In addition to fieldwork, map editing/creation and report writing capabilities are imperative for your success in an ecology role. Try to choose modules where you will be able to write reports in a manner that is similar to writing an ecology report for a client in the professional world. If this opportunity doesn't arise, try having a look at some different reports from ecological consultancies (these can be found by looking at planning applications on planning portals) and make your own practice report for a piece of land there is public access to using the structure an ecologist would do. In regards to mapping, have a go at plotting survey areas using freely available maps; many, but not all ecologists, use Geographical Information Systems (GIS) – try to choose modules and projects where you can practice using GIS, should you require it in the workplace after graduating.

Is Postgraduate Study Essential?

As mentioned previously, a postgraduate degree is more often than not a desirable criterion in job applications rather than essential. However, it can be a valuable way to get your application noticed over the many others likely to be applying for the same positions.

Through our personal experience (one author without a postgraduate degree and two with), we agree that although higher qualifications may look good on paper, they are not necessarily the most important attribute to boost a CV when applying for a junior position. However, the skills gained and contacts made can be great ways to get ahead in this ever more competitive profession.

As mentioned previously, the same as with undergraduate degrees, module choices are essential. Species identification and survey methodology modules are worth their weight in gold and will really help you gain an understanding of what you will be doing in a consultancy setting and a basic proficiency is almost essential. On the other hand, a close look at the core modules is required, as the majority of modules may not actually be that

relevant to your intended career, resulting in a limited range designed with academic relevance at the forefront.

A final thesis project is a great way to gain some valuable experience in survey work and large report writing, universities generally have a large pool of contacts and you could be involved in great projects, gathering useful data for scientific research or for a consultancy company. It is also a great way to work within a subject area that you are passionate about, gaining contacts in the industry and also working towards gaining experience to obtain protected species licenses.

Making Ecology More Prevalent

Our final point is aimed at current ecologists and employers within the environmental sector. From our personal experiences and from speaking with younger people on numerous occasions, it is clear that ecology as a choice of career – especially ecological consultancy – is widely unknown to young people, college students and even final year undergraduates. Often people entering ecology have done so only after realising towards the end of their education that an exciting career is available. By this point, many graduates-to-be may have undertaken various volunteering and work experience opportunities, but not necessarily ones that will help them pursue a role in ecology.

Many career paths are promoted to children at a very young age, and reinforced throughout their educational lives. This is a positive and effective way of getting young people interested in entering careers with a basis in science, technology and engineering. However, jobs of an ecological or environmental foundation often go undetected by younger audiences – this is perhaps due to ecology being a relatively niche subject broadly in the realm of animal sciences, which is also a smaller subject within the overarching field of biology. We feel that ecology can be better promoted to younger people, especially school leavers and college-aged students. This is especially true if we as ecologists hope that ecology is to have a greater presence in the future due to rising pressures on the environment. We can do this through promotion of the sector through university contacts or via active involvement in education promotion bodies such as STEMNET.

About the Authors

Dan Wales BSc (Hons) MSc GradCIEEM – Ecologist:

Dan recently started a career in ecological consultancy this year after completing undergraduate and postgraduate degrees. He gained widespread ecological survey skills undertaking work experience whilst studying and finding employment with an ecological consultancy and a local authority ecologist. Dan completed a Phase 1 habitat survey on a very large sector of land and undertook GIS analysis on habitat data for his postgraduate dissertation. He is now developing his ecology skills and promotes the ecology sector as a STEMNET Ambassador. Dan is a member of the committee for the North East section of CIEEM.

Contact Dan at: dan.wales@naturallywild.co.uk

Jack Fenwick BSc (Hons) GradCIEEM – Senior Ecologist:

Jack graduated in 2011 and has worked in consultancy since finishing his undergraduate course, following a three month position as an assistant ecologist on a marine research project in Tanzania. He is an experienced ecologist and has developed a broad range of skills during his role in ecological consultancy, working with a range of UK and EU protected wildlife and on a wide range of projects; from private residential conversions to large scale residential EIA schemes, industrial developments and BREEAM and Code for Sustainable Homes assessments; and a passion for bat ecology and conservation.

Contact Jack at: jack.fenwick@naturallywild.co.uk

Sarah Emerson BSc (Hons) MSc GradCIEEM – Ecologist:

Sarah began working in ecological consultancy this year after recently finishing her undergraduate and postgraduate degrees. She gained ecological experience through volunteering with a local authority ecologist in between graduating and finding a job in ecology. Sarah undertook many hours of raptor surveys for the Game and Wildlife

Conservation Trust as part of her postgraduate thesis, preparing her for a role in ecology.
She is now continuing to develop her ecological survey skills.

Contact Sarah at: sarah.emerson@naturallywild.co.uk