

## Closing the Gap: rebuilding ecological survey skills in the professional sector

**Sally Hayns** joined the Chartered Institute of Ecology and Environmental Management ([CIEEM](#)) as CEO in the summer of 2010, having previously worked for a number of environmental NGOs. Her first job was teaching ecology for the Field Studies Council at Nettlecombe Court on Exmoor. Throughout her career, Sally has been keen to promote greater understanding of the natural world. She sees promoting fieldwork and identification skills as an integral part of ensuring that society has the knowledge and skills to care for the environment we share.

CIEEM is the leading professional membership body representing and supporting ecologists and environmental managers in the UK, Ireland and abroad. Established in 1991 and receiving their Royal Charter in 2013, CIEEM has members drawn from across the employment sectors including local authorities, government agencies, NGOs, environmental consultancy, academia and industry. Sally joined the debate from 4pm to answer questions about CIEEM's ecological skills research findings, their recently launched degree accreditation scheme and Competency Framework.

**Interview by Steve Whitbread with input from Paula Lightfoot Ben Deed, Martin Harvey, Teresa Frost, Sue Townsend and Bex Cartwright.**

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**SW** Welcome, Sally. Many thanks for joining us today

**SH** Hi, Steve. Yes, I have done my finger stretches and warm-up exercises and made a cup of tea so ready for a 2 hour stint!

**SW** I knew I'd forgotten something....

How was it that you originally got involved with ecology, Sally? And did it involve much in the way of recording?

**SH** How I originally got involved was a journey from being inspired by my 'gardener' grandfather who used to point out animals and plants to me on walks as a child, through an inspiring FSC field course when doing A-levels, a decision not to go straight to uni from school but to go and work on a farm (not common for a girl from east London!) which got me further engaged in nature and some inspiring university lecturers. I got particularly interested in marine algae. I went on to work for the FSC and I just loved inspiring young people about ecology - and of course a big part of that was being able to identify things.

I have never been a formal recorder as such but have contributed (and still do) records to local records centres.

**SW** Having one or more inspirational people early in life is often a big part of developing a relationship with the natural world (at least one where you're on first name terms with lots of its occupants). That's a huge step towards having enough interest to learn more about what makes things work or all those myriad different critters, plants and fungi. And having somewhere/someone to help you develop the skills: informally or via training.

**SH** I absolutely agree. I used to work for a Wildlife Trust and it was very noticeable at events that, where we did a 'name that hedgerow plant' activity, it was the grandparents (who often said that they didn't think they would remember the names of anything) that grew in confidence and trotted out most of the correct names watched by their very impressed grandchildren who then wanted to know how they knew the names and could they teach them!

We all need to be inspired and encouraged to learn so informal opportunities are paramount as well as formal ones.

**SW** From the outset, IEEM members presented training courses covering a range of topics from animal handling to giving evidence at public inquiries. General species and habitat survey skills were perhaps assumed to be +/- innate or picked up at an early age. Has that balance changed over the years?

**SH** I think undoubtedly the 'market' for training courses is driven by employers' needs so there is often a focus on ecological impact assessment, evidence at public inquiries etc. Species ID and survey skills have always been popular but, as noted in the previous

#SkillsTalk discussion, this is often driven by protected species requirements. Protected species courses are always popular and well attended, ID courses for other species much less so as employers often won't fund them. Neither will they give staff time to go on training courses during the very busy survey season - which is often when you need to run the courses.

**SH** We took a decision a year or so ago to run some courses for less popular groups, such as some of the lower plants for example, if we thought that there was a gap in the provision. But we are also looking at other less structured ways of encouraging learning around species ID and survey.

**SW** I'll come back to the range of topics covered but...

How much was the decision to support i.d. of less popular 'uneconomic' groups and the other initiatives prompted by IEEM's Skills Gap study published in 2011

**SH** Totally. The Ecological Skills Gaps report (*Closing the Gap: rebuilding ecological skills in the 21st century*) highlighted, amongst other things a worrying decline in specialist species ID skills leading to poor recording, poor habitat assessment and potential species loss. The report identified a number of recommendations, one of which was to try and make sure we (or other providers) are providing training to cover the gaps and to make such training as accessible as possible (e.g. in terms of geographical spread of training and timing). We are also very keen to support funded initiatives, as have already been discussed, which offer training in species ID and survey techniques.

**SW** I'm sure others will be familiar with the report and recommendations [here](#). I was delighted when the Institute put this together. It was part of several steps forward (C)IEEM has taken on behalf the profession. What are the (other) key actions to have come out of it so far?

**SH** We have been able to act on a number of the recommendations. We have, with the help of a number of external organisations, developed a high level generic **Competency Framework** which highlights the technical and transferable competences that those within the profession need and recognises 4 levels of competence. These competences will become the basis of our membership eligibility criteria from the beginning of 2014 and are also integral to the award of **Chartered Ecologist**. We are trying to create a development pathway for ecologists and environmental managers which formally recognises increasing competence. Of course, amongst the technical competence themes are survey skills, species ID skills as well as analysis and interpretation of data.

We have also developed a **degree accreditation scheme** (we announced our first accredited degrees last month) which requires degrees being put forward for accreditation to have a minimum practical fieldwork content including species identification and survey skills. Once a degree is accredited we intend to work with the degree course leaders to find ways for our members to support the course, which could include assisting with species ID and fieldwork-based learning.

We have developed the Chartered Ecologist award in such a way as to recognise specialists, which may include species specialists, through an 'authoritative' route.

We are thinking about ways in which we can, through our Geographic Sections, provide informal learning opportunities, encouraging members to share their knowledge and ID skills with other members, away from the pressure of employer-focused training.

**PL** I think it's great that the Geographic Sections are looking into providing informal learning opportunities and hope this will be done in collaboration with local records centres and local natural history societies. I'm running a marine life ID day for the CIEEM Yorkshire and Humber section and have had a great level of interest already. Some CIEEM members are even travelling from outside the region to take part! The majority are terrestrial rather than marine ecologists so I agree with the comment about the pressure of employer-focussed training - let's not forget that biological recording and improving ID skills is very rewarding and an end in itself! I will encourage other members of our local natural history society to run similar events with CIEEM Y&H section for other habitats or species groups.

**SH** We are looking into development of accredited training courses focusing on the identified knowledge/skill gaps to incentivise learning (but there are risks around this - we don't want to develop accreditation or new qualifications unless they have a real value).

We are also looking into increasing support to people entering the profession after university (or trying to).

**BD** Hi, Sally. I was wondering what work IEEM was undertaking or could undertake to link with those with a responsibility to check the results of an ecological assessment? (e.g. LA planning departments?). Part of the reason for a decline in specialist skills must be that they are being viewed as unnecessary to carry out the work required of a consultant.

If there was a need to recognise more of the un-charismatic, but still designated or action plan species, from planning authorities then it might 'make the business case' for consultancies?

**SW** As you suggest, Ben, there are more than 1000 UK priority species (plus habitats) that should be of material consideration in planning decisions - which is down to the Local Planning Authority. It's decidedly unlikely that all would be surveyed for in detail but perhaps there are proxies/indicators that would repay greater consideration.

And has anyone watching been involved with these or similar initiatives elsewhere? Any comments?

**BD** Not only should these be recognised (they are priority for a reason!) but I think it might be a useful way of driving new skill development that would benefit the biodiversity and the sector as a whole.

**SH** Hi, Ben. We are in a very difficult situation where the decline in the number of local authority ecologists is, in some instances, resulting in less scrutiny at the local planning authority level which in turn is leading to issues such as acceptance of poor quality survey work, poor quality reports or insufficient survey requirements.

If an LPA is not turning away poor quality work then it encourages those who are unqualified or insufficiently skilled to offer their services to clients, undercutting those that do have the skills and will invest the required time and effort to get it right. Of course the converse can happen as well where some unscrupulous people will play on an LPA's uncertainty in this area and do more survey work than is required. All of this is backed up by a Government which is putting pressure on LPAs to allow development.

We, together with the Association of Local Government Ecologists (ALGE), are taking every opportunity we can to press the case for the importance of local authority ecologists as an integral part of the checks and balances of the planning system. We will be making this point again in the forthcoming consultation re biodiversity offsetting. However I think the prospects of LPAs requiring more info on un-charismatic species is low - they won't want to be accused of 'gold-plating' the requirements again.

**TF** Hi, Sally. As someone who interacts with recorders, my impression is the more experienced (and well connected) specialists seem to pick up bits and pieces of work as subcontractors for ecologists – particularly good small consultancies who recognise when it would be appropriate to call in a particular entomologist or lichen specialist etc. but also for conservation bodies and other land managers. This is not usually a full-time job for the specialist.

**PL** Absolutely agree, I know lots of local expert recorders who pick up occasional bits of consultancy work through subcontracts, or simply accept specimens from consultants and provide an ID service. One of them actually donates the payments he receives for his ID work to the natural history society :) It does tend to be the same few consultancies that use this service suggesting that these few are doing more 'holistic' surveys and reports for clients as Ben is advocating, whereas perhaps some are just focussing on the European protected species.

**SH** Absolutely. I particularly want to ensure that we develop our capacity to help people trying to enter the profession and begin a career. I believe that we have a better chance of doing that as a sector if we collaborate as together we can spread our net further and draw people in (sounds a bit spidery that on reflection!)

**TF** My question is really naive as this may happen already – could CIEEM do anything to help experienced “amateur” recorders consider this type of micro-scale consultancy work to help plug the skills gap? And could CIEEM and also to raise awareness that this is the right thing for their members to do?

- TF** Is the problem not just one of trying to get big companies to pay for their staff to do specialist training, but that they don't see the need/value for anything other than PS/BAP or know when to call a specialist in (and then there is the question of how to know who to call)? Sorry for naive question from a non-ecologist!
- SH** Hi, Teresa. It is a good question. From a commercial perspective an objective outsider might ask '*How many lichenologists in the country do we need to do all of the lichen survey work required for development/habitat management as opposed to the number of people able to carry out a Phase 1 habitat survey?*' In practice most companies and NGOs will 'buy in' the services of species ID specialists as and when they need them for a particular project. Finding those specialists can be tricky although word of mouth via contacts is invaluable. CIEEM has a professional directory for its members to advertise their services but it will not include skilled amateurs.
- Whether amateurs would want to do micro-consultancy work is up to individual preference. But Local Records Centres and local species' groups also have a good handle on where the expertise is and play a valuable role in helping those in need of specialist advice find the right people.
- PL** In addition to a mammoth central **database of training courses** and events as discussed in the first interview, do we need a mammoth central **database of experts** who are available to share their skills for training, surveying, verification etc. National schemes and local records centres usually maintain lists of county recorders and other experts to whom specimens and records can be sent, but do consultants use this to find individuals to whom they can subcontract work? A consultant friend once asked me for contact details of a lichen expert and a Diptera expert, which suggests she didn't know where to look online to find the info herself...
- BD** It may also be beneficial to engage with LRCs, Local Societies and NHM as it will raise the profile of CIEEM within the wider recording community, many of whom may already be skilled amateur recorders in specialist areas and others who are considering professional careers.
- I know our volunteers would be very keen to join such meetings and see what it's all about!
- SH** I am sure that everybody watching this would agree with you. But we are in an age where paid skills development (i.e. funded by employers) will be driven by the requirements of legislative and policy system, anything else is likely to be down to ecologists voluntarily setting aside time to develop their skills because they are interested, they want to learn and they care about the environment.
- SW** In relation to driving improvement (with benefits for biodiversity) via training, I think accreditation is a very powerful tool. Setting a standard for the provider and also giving the trainee (and employer) a guarantee as to their skill level.
- SH** Yes it is a powerful tool but will necessarily have a cost associated with it so we should only do it if we can be sure it has real value in enabling competence to be recognised, valued and made use of.
- SW** There is a decidedly logical synergy between the two - and it would create other opportunities too...
- PL** Could there be a role for NFBR here? With CIEEM and ALGE and ALERC of course. Just thinking about Nicky Court's excellent presentation at the NFBR conference, "*50 ways to use local biodiversity data*" - those 50 ways were certainly not based solely on records of protected species.
- SW** So are there particular skills gaps (for the UK) which it will be left to the voluntary sector to address (touching on Ben's points and Paula's suggestion)? And where IEEM might play a part in encouraging initiatives?
- BD:** Not wanting to go off topic but, as an example of where I am coming from regarding the 'protected only' outlook... As an LRC we provide information on all designated species of those of conservation concern in our area. However, I have recently been received feedback that even though it makes no difference to cost, some consultancies only want to know about protected species.
- My concern is that there are deeper issues than availability of skills, some professionals just 'don't want to know'. But as mentioned above with LPAs under pressure and a push for development where can the guidance come from?

- PL** Not off topic at all, Ben, this is a very important point - there is a cost to supporting the development of bio recording skills, even if in the case of volunteers it is a relatively low and excellent value cost - and if funders only pay to support the development of skills in species which are perceived as 'important' for one reason or another, we need to ensure there are plenty of opportunities for informal learning (e.g. through local or national societies) so people can develop skills in what interests them and to keep the flow of data coming from them, because it is all 'important' even if not everyone perceives it as such.
- MH** There's also an important role in using records of the non-protected species to build up interest and support in a site - even if this doesn't lead to any statutory protection, it's certainly part of the story when it comes to getting support for site protection and getting people interested in their environment.
- As Martin Hicks pointed out in NFBR's Newsletter ([http://issuu.com/nfbr/docs/nfbr\\_news\\_44/15](http://issuu.com/nfbr/docs/nfbr_news_44/15)), there's lots in the local planning framework that talks about local authorities needing to map ecological networks and have up-to-date information available.
- And we only know what the 'important' species are because there has been enough recording undertaken to prioritise from the whole range - species and priorities change, and data needs to be up-to-date to cope with this.
- But I realise that doesn't always feed through to hard commercial decisions about what consultants get asked to do!
- SH** It's not only what consultants get asked to do (which as you say is based around the commercial need), it is that local planning authorities don't always seem to want to know anything more than the minimum required. And the Government certainly doesn't want them to ask developers for more than the minimum.
- It is very short-sighted - but there are many consultants who are frustrated by the lack of opportunity to gather more data as well.
- TF** (Staying off-topic....) or what LRCs get funded to data manage. We manage to slip everything else in because we know it is important for when a bigger picture is needed, it is impractical to separate effort by designation anyway and most of all because our non-profit reason for being is supporting all recording - but it is only really the statutory protected species, and with the public sector S41 species, that can be used to justify most of our day to day income sadly. This also means of course a rare/notable species isn't considered in planning screening but a widespread BAP species might be.
- I share Martin's concern about what happens when the "important" species lists change if everyone did only record protected species.
- SH** There is often a disconnect between the planning department that wants specific information in a survey report to inform a decision (and will not, or cannot, make decisions influenced by other information) and any real commitment to implementing other policies and plans such as a Biodiversity Action Plan where consideration of additional information could be useful.
- Because, if the local planning authority only wants protected species information and a surveyor includes data on other species then a client may well accuse the ecologists of 'padding out' the work and doing unnecessary stuff to increase the cost.
- BD** Cheers, Sally. That certainly explains a lot... I actually work closely with a service which advises LA planning and development. They have driven the provision of all best available evidence to consultants via the LRC and joined up thinking (including priority species and habitats in development from the offset). However, if the LPAs themselves are asking for something different that might explain some of the feedback.
- SH** I think that it is vital that the voluntary sector and professional sector continue to engage and work together - indeed many CIEEM members have their feet in both camps. CIEEM is working with NBN, ALERC and others to develop a new online system for consultants to share survey data so that it then gets sent to the right local records centre/species recording scheme (some consultants do routinely share data, some don't). By encouraging an ethos that we can make better decisions to protect and safeguard our environment by sharing what we know we can hopefully break down some of the invisible barriers between the voluntary sector and consultants.

**SH** I think that the voluntary sector should continue to provide learning opportunities for all - amateurs and professionals alike - and to foster the 'community of recording' such that the value of knowing more about species distribution to make well-informed decisions is recognised.

And yes I agree with you, Paula, that there is a key role for NFBR here which I am sure it will want to take up.

**BD** I think it might also be useful to recognise that the perception of importance or actual importance can change rapidly while developing the skills themselves can take a long time. Although how that can be accounted for in today's rapidly changing world, I have no idea!

**SH** You are right Ben. And we have to look after our special 'specialists' who have the real depth of expertise that is so invaluable to the rest of us who rely on them.

**BD** I wonder if partnership and job sharing type arrangements might be useful? For example, between a consultancy and planning authority and vice versa? Or an LRC and consultancy/planning authority etc. - seeing the sector from more than one side can really open eyes and promote the crossover of understanding and skills?

**SH** That's a good idea Ben. I think it would certainly be of interest to CIEEM members.

**SW** Various consultancies have made a point up skilling-up young trainees in the past, Sally. Is this likely to feature in the appraisal/accreditation of companies (rather than individuals)?

**SH** CIEEM is starting to consider some form of recognition of companies/organisations that includes criteria such as commitment to CPD, appropriate working conditions (especially during survey seasons when junior staff are often expected to work several 12-15 hour days and drive long distances day in day out) and support for trainees. But this is in its early stages and there is no commitment to a scheme for companies and organisations.

We are also looking at how we can encourage more apprenticeships/internships which include a structured trainee programme in skills over and above that which an employer might routinely provide - so not just in protected species survey!

**SW** That sounds promising, particularly for the young, would-be consultant keen to build up their skills set (and get some sleep in summertime). It will be interesting to see if some companies make a commitment on a voluntary basis.

**SH** I'll keep you posted!

**SW** Thanks, Sally. And to close...

From your viewpoint, what do you think NFBR could most usefully do to support the development of skills in species ID and biological recording in the professional sector?

**ST** I think we are building a case here for there to be an element of the 'all round naturalist' in our good ecological consultants - this is something often embraced well by the volunteer community. That does not negate the need for specialists and I agree with Sally - we all benefit when 'amateurs' and professionals work together.

**SH** I think NFBR can do (and is doing) a lot to support current initiatives to improve the sharing of data by the professional sector but could also be helping to signpost towards affordable training, especially in poorly recorded groups, and encouraging volunteer recording groups to make links with the professional sector in their area - a role for CIEEM as well!

**SW** I think this is something we'll particularly look forward to. It's important in many ways and to many people - not least to young girls and their granddads.

Thank you very much for your time everyone - and for all your thoughtful answers today, Sally.

**SH** My pleasure. Thank you for the opportunity to take part.