

Take the risk – do a FISC!

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Picture forty botanists of various abilities arriving at Preston Montford Field Centre in a sunny week in 2005, not knowing what would be facing them. We had devised a wide range of botanical trials and tribulations for these plucky volunteers. They were told to bring some identification guides and a hand lens – other than that there were no certainties – apart from there being cake, and plenty of it.

Field Identification Skills Certificates started in 2005 when we were given a small research grant by BSBI to see if it was possible to devise a botanical ‘driving test’ – a way of awarding a botanist with a ‘certificate of competence’ – but most importantly, stating on the certificate just how good that botanist was at field identification. We both had plenty of experience in setting and marking botanical identification tests as part of academic assessments – but this tested the learning process rather than how good the student was if parachuted into a botanical site and left to survey it.

We had published a general field skills pyramid at the British Ecological Society conference on the decline in field skills in 2002, so devising a botanical skills pyramid based on this was straightforward. The grant allowed us to advertise for both volunteer botanists and complete beginners – we needed a wide range of (subjective) skill levels. Initially we used two different lab tests. The first – ten species that were relatively widespread and straightforward to identify – were identified without any additional aids such as identification guides. Essentially you either knew the plant or you didn’t. The next twenty species could include national rarities, hybrids, common species, difficult species, and plants from a really wide range of habitats throughout Britain (for example montane or saltmarsh species). These could be identified with any identification guides available, and a microscope was available for participants to use if they wished.

During the FISC trials, we set out a two by two metre quadrat for participants to record – a small ‘field’ area, where they recorded against a ‘gold standard’ botanist recording at the same time. There was a test including five common trees on site and three aquatic species that the participants had to grapnel out of a pond. The brave volunteers certainly earned their cake and lunch. We analysed the results using Excel, initially to see if the marks fell into bands for each of the tests – essentially, which of the tests sorted botanists into some sort of ladder of ability. The tree identification, aquatic plants, and the quadrat test were dropped, as none of these distinguished one botanist from another. The lab tests certainly did sort botanists into ability bands, or levels, and so did the field test; but after refining the field test sufficiently, we realised, with help from Quentin Groom, that false positives were a really important part of how good a botanist is.

What are botanical false positives? Well, in a nutshell, recording what isn’t there – the field test element involved recording against a ‘good’ botanist recording at the same time, under the same conditions, and the score would be a percentage of the gold standard’s total, so there was an incentive to write down as many species as one could, in the hope some of them might be correct! There were also fabulous made-up names too, christened Jabberwockies by Quentin: Burweed, Separated Rush, *Carex glauca* and *Silene jacobaea* are some of the weird and wonderful or just desperate names that came out in some of the field tests (where all participants can use field guides, so no excuse really!).

Participants were awarded one point for each correct species that occurred on the gold standard list – or was at least very likely to be there if the gold standard recorder had missed it. If they recorded cautiously, for example *Carex* sp., then half a mark would be awarded (but only once, irrespective of how many sedge species were present).



FISC participants undergoing field tests at Wigan, August 2022. *Josh Styles*



FISC lab-based identification test at Wigan. *Josh Styles*

As a disincentive to record just anything, and to encourage cautious recording, the false positives were added up, and a score given to reflect how many were recorded. This part of the FISC results ended up being one of the key components for identifying good recorders. Our final scoring method gave equal weight to lab test 1, lab test 2, field survey and false positives (if you are interested in the marking scheme, all of the FISC protocols are openly available on the BSBI website (bsbi.org/field-skills)).

In addition, we got participants to estimate their skill level on the botanical skills pyramid before the tests – it was amazing to see how good botanists were at assessing their own level (certainly for Level 3 and above). Lower skilled botanists tended to overestimate their ability.

Thus we had our marking scheme, and what seemed like a reasonably robust method, so we launched the first full FISC at Preston Montford Field Centre in 2007. Amazingly enough, around twenty people signed up to pay a modest amount for a day of botanical trial and torture! The following year we ran three FISCs in Shropshire, then after that, they really took off. I think when we were devising them initially, we thought local volunteer botanists would be the target audience, but consultants dominate FISC applicants now. We were delighted to work with Sally Haynes from CIEEM so that FISCs were incorporated into their skill standards, and Natural England embraced FISCs fully, and run several FISCs each year for their botanists, and also for the odd external applicant.

In 2017 we held a major review of FISCs and invited academics, consultants and botanical experts to take part and review the protocols and marking structure. It was good to note that although there were some changes, and plenty of clarifications as a result of the review, the marking scheme has pretty much stood the test of time.

This year, we have been delighted to be involved in BSBI's interim FISC working group, chaired by Julia Hanmer, and we have worked with Dr Mary Dean and Anthony Thomas to produce a watertight

set of documents to support FISC providers, and make sure the awards are as robust as possible. We've also developed materials to train up new FISC assessors, so BSBI can widen overall FISC provision. Bringing on board new FISC providers and assessors will take training and time, but it is heading in the right direction and attracting lots of interest. As we are finishing this article, we are signing a deed, handing all intellectual property rights to BSBI, so that FISCs continue to be a BSBI award. More than a thousand botanists have taken a FISC, and in the next *BSBI News* there will be dates for 2023 FISCs and information about how BSBI are working to increase provision in future years. Go on – take a risk – do a FISC!

Acknowledgements

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For further details see the BSBI website: bsbi.org/field-skills