



CURRICULUM VITAE

PHILIP M. PERRIN

B.Sc. (Hons.), M.Sc., Ph.D., MCIEEM, CEnv

EDUCATION

- 1999 – 2002 University of Dublin, Trinity College Dublin
Ph.D. thesis “The ecology of yew (*Taxus baccata*) in Ireland”
- 1997 – 1998 University of Nottingham
M.Sc. Environmental Management (Distinction)
- 1994 – 1997 University of Nottingham
B.Sc. Biology (1st Class Honours)

CAREER HISTORY

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| Director of Ecology, BEC Consultants | Dec 2016 – present (full-time) |
| Principal Ecologist, BEC Consultants. | Oct 2009 – Dec 2016 (full-time) |
| Senior Ecologist, BEC Consultants. | June 2004 – Oct 2009 (full-time) |
| Ecologist, BEC Consultants. | Apr – Sept 2003 (part-time) |

I have been working with BEC Consultants for over 13 years and I am an experienced botanist and bryologist with the main areas of particular expertise being woodlands, saltmarsh and upland landscape ecology. I specialise in the analysis of large datasets of ecological data using univariate and multivariate analysis. I have considerable experience of analysing ecological communities using contemporary techniques including fuzzy analysis, non-metric multidimensional scaling, hierarchical cluster analysis and indicator species analysis. As a Director of Ecology at BEC, I am on the Senior Management Team and am involved in company development and team management. I have excellent report-writing skills and am an experienced project manager. A selection of my projects is listed below:

- *Irish Vegetation Classification (2015-present)*: Project Manager. Wrote funding proposal. Producing overall hierarchy and guiding principles. Incorporated grassland data from the National Vegetation Database into the classification produced by the *Irish Semi-natural Grassland Survey* by means of fuzzy analysis. Expanded classification to encompass saltmarshes and woodlands. Providing associated content for website. Designing web-mounted application, ERICA, for statistical classification of relevés and species lists.
- *Quantification of Blanket Bog Ecosystem Services to Water (QUBBES) (2016-present)*: Botanical Consultant. Providing ecological advice on surveying and mapping of blanket bog communities in relation to impacts on bog hydrology for this EPA project run by Queen's University Belfast.
- *Saltmarsh Function and Human Impacts Related to Ecological Status (SAMFHIREs) (2016-present)*: Project Co-ordinator. Wrote funding proposal for this EPA-funded project which is a collaboration with Trinity College Dublin. We are examining the impacts of livestock grazing and eutrophication on saltmarshes, studying saltmarsh biodiversity and the role of the habitat in flood defence, and assessing saltmarshes for the purposes of the Water Frameworks Directive.
- *Rare plants monitoring project (2016-2017)*: Field Ecologist. Surveyed upland bog and heath sites in Wicklow and Kerry for clubmosses as part of this project which is providing Article 17 reporting on the EU Habitats Directive Annex V *Lycopodium* group for NPWS.
- *Scientific Assistant for Blanket Bogs (2014-2015)*: Field Assistant/GIS Support. Co-wrote tender and secured contract for this NPWS project which provided a scientific basis to the formulation of

management plans for areas of turf-cutting on blanket bogs in SACs. Conducted hydrological analysis of LiDAR data, created digital forms for recording in the field, surveyed bogs.

- *Upland Site Specific Conservation Objectives (2014-present)*: Ecologist/Project Manager. Wrote tenders and worked on three phases of this project with colleagues to develop Site Specific Conservation Objectives for a range of upland Annex I habitats. These have been applied to a selection of sites including those surveyed during the National Survey of Upland Habitats.
- *National Survey of Upland Habitats (2009-2014)*: Lead Ecologist. Co-wrote tenders and secured contracts. Responsible in the field for coordinating fieldwork, GIS mapping of vegetation, recording of relevés and conservation assessment, updating provisional uplands classification, instruction of fieldworkers in mapping methodology and use of handheld computers. Participated in survey of 15 SACs. Duties in the office include production of Turboveg databases, identification of bryophyte samples and writing of site reports. Methodology published as Irish Wildlife Manuals. Presented at national conferences.
- *National Survey of Native Woodlands (2003-2008)*: Lead ecologist. Co-wrote tender and secured contracts. Responsible for survey of over 250 native woodlands across the country, statistical analysis, soil analysis, production of national classification for native woodlands, liaison with NPWS, bryophyte identification and final report. Presented results at national and international conferences.
- *Irish Semi-natural Grassland Survey (2007-2013)*: Team leader/Data Analyst. Co-wrote tender and secured funding. Responsible for survey and mapping of semi-natural grassland sites in Cos. Cork, Waterford, Cavan, Monaghan and Longford. Produced national vegetation classifications based on relevé data.
- *Saltmarsh Angiosperm Assessment Tool for Ireland (SMAATIE) (2013-2014)*: Project Manager. Wrote grant application and secured funding for this EPA project. Responsible for collation and analysis of relevé data to produced national saltmarsh classification. Supervised development of saltmarsh assessment tool to fulfil national obligations under the Water Framework Directive. Tool development involved modeling LiDaR data within GIS.
- *Galway City Transport Plan (2013-2014)*: Surveyor/Analyst. Conducted mapping and assessment in the field of a range of habitats including limestone pavement, heath, scrub, woodland, fen, blanket bog, transition mire and calcareous grassland. Produced reports and maps. Compiled relevé data and processed bryophyte identifications.
- *EU Red List Habitats (2015)*: Territorial Expert. Provided data for this European initiative on a range of habitats including scrub, heath, bog, cliff, scree, flush, fen and mire habitats.
- *Provisional Inventory of Ancient and Long-established Woodland in Ireland (2009)* and *County Cork Inventory of Ancient and Long-established Woodland (2010)*: Project Manager. Wrote grant application and secured funding. Planned project and methodology and oversaw budget and delivery of project. Identified information sources and conducted statistical analysis of ancient woodlands indicators. Co-wrote final report and published as Irish Wildlife Manual.
- *People's Millennium Forest Transects (2009)*: Project Manager/Lead Ecologist. Wrote grant application and secured funding for resurvey. Organised fieldwork at four sites across country. Responsible for surveying, bryophyte identification, carabid beetle identification, data analysis and report writing.
- *Woodland Monitoring Project (2012-2013)*: Assistant. Co-wrote tender and secured funding. Developed monitoring criteria and assessed three woodland sites.
- *Limerick Tunnel Translocation Project (2005-2014)* and *Aughinish Alumina Translocation Project (2007-2012)*: Assistant. Participated in project planning, fieldwork and report editing. Fieldwork involved translocation and monitoring of populations of *Hordeum secalinum*, *Sanguisorba officinalis*, *Schoenoplectus triquetus* and *Groenlandia densa*.

- *Killarney National Park Habitat Map (2007-2011)*: Assistant. Participated in fieldwork and production of map, reviewed and edited report.
- *National Survey and Assessment of Irish Sea-cliffs (2011)*: Data Analyst. Responsible for production of classification of sea-cliff vegetation.
- *Management Plan for Ballyseedy Wood SAC (2008)* and *Management Plan for Balrath Wood (2007)*: Joint project manager. Responsible for surveying of sites, research, meeting with stakeholders and writing of management plans.
- *Pitcairn Island Environment Plan (2006-2007)*: Editor. Responsible for review of plan objectives and editing of plan.
- *IT officer*. Responsible for acquisition and maintenance of necessary software and hardware for the company.

Post-doctoral Research College, Trinity College Dublin. Mar 2003 – May 2004 (part-time)

People's Millennium Forest Transects: Lead ecologist. Wrote tender and secured funding. Organised fieldwork at four sites across country. Responsible for liaison with Coillte staff, surveying, bryophyte identification, carabid beetle identification, soil analysis, data analysis and report writing.

Estate assistant, Nottinghamshire Wildlife Trust. 1995 – 1999 (part-time)

Volunteer. Conducted practical woodland management as part of voluntary work predominantly based in ancient and secondary woodland of the Sherwood Forest area.

Lecturer, Brackenhurst Agricultural College, Nottinghamshire. Mar – May 1998 (part-time)

Responsible for writing of ecology lectures and teaching students on NVQ Countryside Management courses.

SKILLS & ADDITIONAL INFORMATION

Membership of Professional Organisations

- Full membership of CIEEM and a Chartered Environmentalist.
- Member of the British Bryological Society and Regional Recorder for Cos. Carlow and Laois.

Conference Presentations

- British Ecological Society Winter Meeting, 1999, Leeds University
- Irish Botanists' Meeting, 2002, National University of Ireland, Maynooth
- European Vegetation Conference, 2006, National University of Ireland, Galway
- British Ecological Society Annual Meeting, 2008, Imperial College London
- 25th Irish Environmental Researchers Colloquium (Environ), 2012, University College Dublin
- CIEEM Irish Section Conference, 2013, Red Cow Hotel, Dublin
- CIEEM Irish Section Conference, 2014, Holiday Inn, Belfast
- CIEEM Irish Section Conference, 2016, Glenview Hotel, Delgany, Wicklow
- Irish Uplands Forum Workshop, 2015, Trinity College, Dublin.
- NPWS Annual Conference, 2014, Raddison Blu Hotel, Athlone

Communication and Interpersonal Skills

- Experienced in writing and editing of reports and peer-reviewed scientific publications.
- Reviewer of manuscripts for peer-reviewed journals including: *Plant Ecology*, *Journal for Nature Conservation*, *Forest Ecology & Management*, *Proceedings of the Royal Irish Academy B: Biology and Environment*, *Dendrobiology*, *Journal of Mountain Science*, *Forest Systems* (formerly *Investigación Agraria: Sistemas y Recursos Forestales*).
- Skilled in teaching both undergraduates and mature students through lectures and as a laboratory demonstrator.
- Trained numerous ecologists in vascular plant, bryophyte and habitat identification.

Computing and Word Processing

- Highly experienced in the use of a wide range of computer packages. These include standard applications such as Microsoft Word, Excel, Access and PowerPoint, GIS applications such as ArcMap, ArcPad and QGIS, statistical packages such as R and SPSS, and specialist packages for ecological data analysis including PC-Ord, Hyperniche and TurboVeg.

Identification Skills

- Expertise in vascular and bryophyte identification.
- Experience in carabid ground beetle identification.

Training

- *Sphagnum* identification course with Denyer Ecology.
- Bird biology course with Eric Dempsey.
- Construction site safety course (Safe Pass) with FAS.
- Occupational first aid course with St John Ambulance Brigade.
- Mountain Skills 1 and Mountain Skills 2 navigation courses with Footfalls.

Online profiles

Google Scholar profile: <http://scholar.google.com/citations?user=hDVAjYYAAAAJ&hl=en>

Researchgate profile: https://www.researchgate.net/profile/Philip_Perrin/?ev=hdr_xprf

Publons profile: <https://publons.com/author/590078/philip-perrin#profile>

SELECTED PUBLICATIONS

Rodríguez-Rojo, M. P., Jiménez-Alfaro, B., Jandt, U., Bruelheide, H., Rodwell, J. S., Schaminée, J. H. J., **Perrin, P. M.**, Kaçki, Z., Willner, W., Fernández-González, F. and Chytrý, M. (2017). Diversity of lowland hay meadows and pastures in Western and Central Europe. *Applied Vegetation Science* **20**: 702–719

Perrin, P.M. & Mitchell, F.J.G. (2013). Effect of shade on growth, biomass allocation and leaf morphology in European yew (*Taxus baccata* L.). *European Journal of Forest Research* **132(2)**: 211-218

Roche, J.R. & **Perrin, P.M.** (2011) A new county record for alpine clubmoss (*Diphasiastrum alpinum*) from the Comeragh Mountains, Co. Waterford (H6). *Irish Naturalists' Journal*.

Perrin, P. M., Mitchell, F. J. G. & Kelly, D. L. (2011). Long-term deer exclusion in yew-wood and oakwood habitats in southwest Ireland: Changes in ground flora and species diversity. *Forest Ecology and Management*. Vol. **262**: 2328-2337.

Perrin, P.M. & Daly, O. (2010) A provisional inventory of ancient and long-established woodland in Ireland, Irish Wildlife Manuals, No.46. National Parks and Wildlife Service, Department of Environment, Heritage and Local Government, Dublin.

Perrin, P.M., Barron, S.J., Roche, J.R. & O'Hanrahan, B. (2014) Guidelines for a national survey and conservation assessment of upland vegetation and habitats in Ireland. Version 2.0. Irish Wildlife Manuals, No.79. National Parks and Wildlife Service, Department of Arts, Heritage and the Gaeltacht, Dublin.

Perrin, P.M., Martin, J.R., Barron, S.J., O'Neill, F.H., McNutt, K.E. & Delaney, A.M. (2008) National Survey of Native Woodlands 2003-2008: Volumes I and II. Report submitted to National Parks & Wildlife Service, Dublin.

Perrin P. M., Kelly D.L. & Mitchell F.J.G (2006) Long-term deer exclusion in yew-wood and oakwood habitats in southwest Ireland: Natural regeneration and stand dynamics. *Forest Ecology and Management*. Vol. **236**: 356–367.

Perrin P. M., Martin J.R., Barron S.J. & Roche J.R. (2006) A cluster analysis approach to classifying Irish native woodlands. *Biology and the Environment: Proceedings of the Royal Irish Academy*. Vol. **106B**: 261-275.

Perrin, P.M. (2000) Activity of pipistrelle bats (*Pipistrellus pipistrellus*) and Natterer's bats (*Myotis nattereri*) over lowland heathland. *Journal of Practical Ecology and Conservation* **4**: 27-36.