



## CURRICULUM VITAE

FIONA M. DEVANEY

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

### EDUCATION

- 2002 – 2008 University College Dublin  
Ph.D. thesis title: “The Alder Marsh: Ecohydrology and Restoration Prospects of a Desiccating Dune Slack”
- 2002 – 2003 University College Dublin  
Postgraduate Certificate in Research Methods
- 1998 – 2002 University College Dublin  
B.Sc. (Botany), (2.1 Honours)

### CAREER HISTORY

#### Consultant Ecologist, BEC Consultants

2009 – present

As a Consultant Ecologist for BEC Consultants, I am primarily involved at all stages of the planning, organisation and implementation of botanical and habitat surveys, including post-survey data analysis and digital mapping. I have special expertise in coastal and semi-natural grassland habitats. Key duties include habitat identification and mapping, botanical survey (vascular plants and bryophytes), Annex I habitat assessment, data quality control, GIS habitat mapping and report writing. Other responsibilities include tender writing, carrying out appropriate assessments, leading survey teams, training associate ecologists and intern students and arranging access for surveys. Projects that I have worked on with BEC Consultants are listed below:

- *National Conservation Assessments (NCAs), 2018* – Project Manager/Lead Ecologist. The main objective of this project is to write the NCAs for ten EU Annex I upland habitats. Tasks include the analysis of large-scale ecological and spatial datasets to produce up-to-date distribution and range maps for each of the habitats, assess the condition of the habitats on a national scale and identify the most significant pressures and threats.
- *Saltmarsh Function and Human Impacts in Relation to Ecological Status (SAMFHIREs), 2016-present* – Work Package 3 Leader. This is a 36-month multi-disciplinary collaboration between BEC Consultants and Trinity College Dublin. Through field survey, collation of existing data, modelling and analysis, the project links anthropogenic pressures to changes in saltmarsh communities and investigates the ecosystem services and ecological functions of saltmarshes in Ireland. By integrating the outputs of this research, it will refine the tool developed by the Saltmarsh Angiosperm Assessment Tool for Ireland (SMAATIE) project. The tool, which assesses ecological status for part of the angiosperm Biological Quality Element in coastal and transitional waters, will be tested in the field and applied to a selection of water bodies. As leader of Work Package 3, I am largely responsible for the refinement and testing of SMAATIE.
- *Vegetated Shingle Monitoring (VSM) project, 2016* – Coastal expert and data analyst. This project involved the mapping and assessment of the EU Annex I habitat 1220 Perennial vegetation of stony banks at 30 sites, and of EU Annex I sand dune habitats at nine sites, around Ireland. My main duties for this project included acting as the team's expert on the EU Annex I sand dune habitats in an advisory capacity, data screening and analysis, and report writing, of which I was sole author of several individual site reports and co-author of the main national report. In addition to these duties, I wrote a review of the Ecological Information within the Natura 2000 Standard Data Forms (SDFs) for the SACs in which the EU Annex I habitats surveyed were located. I

developed a scientific methodology to cross-check the Ecological Information rankings within the Natura 2000 SDFs with the EU Annex I habitat Condition Assessment results.

- *Saltmarsh Angiosperm Assessment Tool for Ireland (SMAATIE), 2013-2015* – Lead Ecologist. The main objective of this project was to develop and apply a tool for the ecological status assessment of the angiosperm Biological Quality Element in coastal and transitional waters for the Water Framework Directive. This was a desk-based study where my main roles include investigation of potential metrics for inclusion in the tool, the production of GIS habitat extent maps, development of an Ecological Quality Ratio calculator and production of a technical report and Practitioner's Guide, of which I was lead author.
- *Survey of sand dune habitats at Portrane, Co. Dublin, October 2014* – Project Manager. This project involved the mapping of Annex I sand dune habitats within the Rogerstown Estuary SAC. As project manager, I acted as the day-to-day contact, organised and carried out part of the field survey, completed the habitat mapping and wrote the report.
- *National Platform for Biodiversity Research, October 2014* – Data analyst. As data analyst for this project in its final phase, I assigned research projects, funded within Ireland since 2010 and recorded within the NPBR database, to various enabling actions and urgent research priorities within five research areas (Marine; Agriculture, Grasslands & Soils; Freshwater; Uplands, Peatlands & Wetlands; Invasive Alien Species). This task was carried out to highlight gaps in our knowledge and to assist in the targeting of research in biodiversity in the future.
- *Surveys of possible Marsh Fritillary sites and habitat in Galway, Mayo, Clare and Kerry, August 2014* – Data Analyst. As data analyst, I examined existing datasets to determine how they could be best utilised to further refine the selected target areas for the Marsh Fritillary surveys. After this step, I created a point shapefile of all potential Marsh Fritillary sites identified, ranked the potential sites according to their priority for field survey, selected the survey sites accordingly and digitised polygons representing site boundaries.
- *Assessment of the Conservation Status of the Great Island Channel SAC (001058), June 2014* – Field Ecologist. The main objective of this project was to determine the current conservation status of two Annex I habitats within the Great Island Channel SAC - 1140 Mudflats and sandflats and 1330 Atlantic salt meadows. In my role as field ecologist, I led the saltmarsh assessment for the project. This involved habitat mapping, identification of vascular plants and condition assessments. I was co-author on the report.
- *National Survey of Upland Habitats, 2010-2012, 2014* – Field Ecologist and data analyst. I have worked as part of a large survey team on this project, surveying a number of upland SACs around the country. Main duties included the digital preparation of field maps using aerial photograph interpretation in GIS, vegetation mapping, relevé recording and condition assessments of Annex I habitats within the field, and data quality control checking for consistency and accuracy.
- *Monitoring Survey of Annex I Sand Dune Habitats in Ireland, 2011-2013* – Field Ecologist. This project involved monitoring 39 sites which contain a substantial proportion of the total national resource of eight Annex I sand dune habitats. I surveyed a significant number of the selected sites, produced GIS habitat extent maps, conducted data analysis for the conservation status assessments, wrote and edited a large proportion of the individual site reports and was co-author on the main national report.
- *Irish Semi-natural Grasslands Survey (ISGS), 2009-2013* – Field Ecologist/Team Leader. As a field ecologist on this project, I collected botanical and habitat data from over 200 grassland sites over four years. This entailed recording vascular plant and bryophyte species, mapping Fossitt and Annex I habitats, recording relevés (~725) and Annex I monitoring stops (~200), and noting details of ongoing management / impacts on the habitats. I was lead author on one annual report and co-author on several of the others. I was also co-author on the final synthesis report. I was largely responsible for data accuracy and consistency for the project and managed the data within

Turboveg (a specialised database management system designed for the storage of vegetation data).

- *Ecological Survey of the Royal Canal, 2013* – Field Ecologist. This project entailed an ecological survey of the Royal Canal between Talbot Bridge, Dublin and Maynooth train station, Kildare. I was primarily involved in the collection of vascular plant and bryophyte data, together with digital mapping of all habitats within the survey area. I assisted in the production of a full inventory of plant, mammal and bird species, which included a bat survey. I carried out data quality control and was co-author on the report.
- *National Conservation Assessments (NCAs), 2013* – Data analyst. I assisted in the compilation of reports for eight EU Annex I sand dune habitats, four EU Annex I grassland habitats and one EU Annex I upland habitat. This involved the initial assessment and finalisation of the structure and functions criteria for one habitat, analysis of datasets to obtain up-to-date distributions, identification of the most significant pressures and threats to the EU Annex I habitats, calculation of the national range and area for the habitats using GIS, and the writing of backing documents.
- *Galway City Outer Bypass, 2013* – Field Ecologist. The main objectives of this project were to carry out habitat surveys and assessments of EU Annex I habitats occurring in locations within the study area for the Galway City Outer Bypass. My task as field ecologist was to record relevés and monitoring stops in habitats including 6210 Semi-natural dry grasslands and scrubland facies on calcareous substrates, 6410 *Molinia* meadows on calcareous, peaty or clayey-silt-laden soils, 7230 Alkaline fens and \*8240 Limestone pavements.
- *Appropriate Assessment (AA) Screening for variation to Wexford Town Development Plans, 2013* - Analyst. Duties included a desk study, identification of potential impacts upon Natura 2000 sites owing to the implementation of the aforementioned variation, assessment of likely significant effects and report writing.
- *Appropriate Assessment (AA) Screening for a proposed development in Dublin city centre, 2013* – Project Manager. Duties as project manager included costing for the project, acting as the day-to-day contact with the client, organising and carrying out the field survey and preliminary check for bats. I also carried out the desk study, identification of potential impacts upon Natura 2000 sites, assessment of likely significant effects and report writing.
- *Aquatic Ecology Report for the remediation of an unauthorised landfill in County Wicklow, 2013* – Field Ecologist. This project involved the aquatic ecological element of an Appropriate Assessment in relation to remediation of an unauthorised landfill site. Duties included a site visit where information on the habitat at each of the macro-invertebrate sample sites was recorded, as well as signs of otter activity.
- *Tralee Bay and Magharees Peninsula SAC Marine Conservation Objectives, 2013* – Field Assistant. A walkover survey which focused in particular on the Seagrass meadows and mussel beds was carried out to confirm the shapefiles produced from previous surveys. New benthic communities/biogenic reefs not identified from previous surveys were recorded and placed in a suitable community complex to reflect their presence, thereby allowing for the elucidation of conservation objectives. My main duties included the setting up and loading of required GIS files on a handheld Trimble and assisting the lead ecologist in all aspects of the fieldwork.
- *Woodland Monitoring Survey (WMS), 2011-2012* – Field Ecologist. This project involved monitoring over 100 sites supporting two EU Annex I woodland habitats: 91A0 Sessile oak woods and 91E0 Alluvial forests. Key elements included arranging access for surveys, habitat identification and mapping, plant and bryophyte identification, data entry and checking, and conservation assessments for both EU Annex I habitats.
- *The Ancient and Long-established Woodlands of County Cork, 2010* – Data Analyst. As data analyst for this project I created 250 text files displaying the results of the historical research. The text files were subsequently hyperlinked to GIS polygons representing woodland sites, enabling the viewer easy access to the information on which the historical status of each site had been

decided. Creation of the text files involved compiling historical data gathered from a number of sources including the Civil Survey (1654-1656), Down Survey (1655-1657), Books of Survey and Distribution (BSD) (1680s) and miscellaneous historical map and accounts research (16<sup>th</sup> – 18<sup>th</sup> century) for every site.

**Consultant Ecologist, Dublin City Council and University College Dublin** February 2009

I was involved in Phase 2 of the St. Anne's Park Grey Squirrel Management Plan. Duties included the trapping and handling of grey squirrels using IUCN guidelines, the taking of vital measurements and developing public awareness to work towards the re-introduction of red squirrels to the park.

**Consultant Ecologist, Forest Environmental Research and Services (FERS)** 2008

I worked on a voluntary basis with FERS on two projects on various dates throughout 2008:

- *Restoration of riverside habitat* funded by a Heritage Council Biodiversity Grant. My duties included the removal of giant hogweed from the towpath and banks of the River Boyne and informing members of the public on the dangers of this species.
- *A survey of nocturnal macro-moth biodiversity throughout various habitats in County Meath* funded by a Heritage Council Wildlife Grant. My duties included the setting out and collection of moth boxes at various sites in evenings and mornings, identifying the species of moths found and returning them to their habitats after identification.

**Assistant Ecologist, Dr. Ciara Finnegan, University College Dublin** May 2006

Assisted in the initial set-up of a large-scale constructed wetland for Lakeland Diaries, Bailieborough, Co. Cavan. Duties included general wetland plant identification, advising on the suitability of wetland plants for a large-scale constructed wetland and the collection and planting of chosen species in the constructed wetland.

## **SKILLS & ADDITIONAL INFORMATION**

### **Field Skills**

- Expertise in the identification of a range of native Irish vascular plants, bryophytes, nocturnal macro-moths and butterflies
- Experienced in use of field equipment including digital data recording devices and GPS technology
- Excellent knowledge of field survey techniques
- Skilled in habitat mapping using the Irish Heritage Council classification system and EU Annex I habitat classification system
- Practised in carrying out conservation status assessments of EU Annex I habitats

### **Driving**

- Full clean driving licence; own vehicle

### **Computing and Word Processing**

- Proficient in the use of the Microsoft Office Suite (Microsoft Word, Excel, PowerPoint, Access)
- Skilled in the set up and recording of field data using MS Excel Mobile, Turboveg CE and ArcPad
- High level of proficiency in data management using Turboveg and MS Excel
- Experienced in the use of GIS software (ArcMap 9.3, ArcMap 10, QGIS)

### **Communication and Interpersonal Skills**

- Excellent report-writing and editing skills
- Experienced public speaker, having presented at national and international conferences

### **Teaching Experience**

- **Training** (2009 – present). Responsible for training Associate Ecologists and intern students in BEC Consultants field surveying methodology. Topics covered include habitat identification (Phase

1 and 2) and mapping using hand-held GPS devices, relevé recording, plant and bryophyte identification and post-survey GIS mapping.

- **College Practicals** (2002 – 2006). Demonstrator to 1<sup>st</sup> year science and agricultural science students – Botany and Zoology; Demonstrator to 2<sup>nd</sup> and 3<sup>rd</sup> year science students – Botany; Ecology Laboratory Co-ordinator to 1<sup>st</sup> year science students – Botany and Zoology. General duties included the supervision of students in a field and laboratory environment, demonstration of practical techniques to undergraduate students at all levels, correction of laboratory assessments and ensuring laboratory and field health and safety standards were adhered to.
- **Student Mentor** (2002 – 2006). Duties included the design, set-up and supervision of two final year student projects and the supervision and guidance of two Applied Master students.

#### **Courses & workshops attended**

- BSBI Spring Conference with seminars on horsetails, *Viola* and *Trichophorum* species 2018
- Uses and application of the software Personal Reference Manager Zotero (BEC) 2018
- Uses and application of the software QGIS (BEC) 2018
- Eutrophication – structured E-learning course – Open University 2017
- Managing Coastal Environments - structured E-learning course – Open University 2017
- Uses and application of the software R – BEC Consultants (in-house training) 2014
- Bat detection and surveying – Dr. Tina Aughney 2013
- Restoration of a raised bog – Irish Peatland Conservation Council (IPCC) 2013
- Marine ecology – Dr. Roisin Nash 2013
- British Bryological Society Field Meeting (Ballina, Co. Mayo) 2012
- *Sphagnum* identification – Denyer Ecology 2012
- Invasive Species Workshop – National Biodiversity Data Centre 2011
- Occupational First Aid – St. John's Ambulance 2011
- SafePass – FÁS 2011
- Identifying Irish butterflies – National Biodiversity Data Centre 2010
- Bryophyte workshop – Dublin Naturalists' Field Club (DNFC) 2010

#### **PUBLICATIONS & REPORTS**

Martin, J.R., Daly, O.H. and **Devaney, F.M.** (2017) *Survey and assessment of vegetated shingle and associated habitats at 30 coastal sites in Ireland*. Irish Wildlife Manuals, No. **98**. National Parks and Wildlife Service, Department of the Arts, Heritage, Rural and Gaeltacht Affairs, Ireland.

**Devaney, F.M.** & Perrin, P.M. (2015) *Saltmarsh Angiosperm Assessment Tool for Ireland (SMAATIE) (2013-W-DS-10) Practitioner's Manual*. Research Report Number **163**. Report prepared for the Environmental Protection Agency, Wexford.

**Devaney, F.M.** & Perrin, P.M. (2015) *Saltmarsh Angiosperm Assessment Tool for Ireland (SMAATIE) (2013-W-DS-10) EPA Research End of Project Report*. Report prepared for the Environmental Protection Agency, Wexford.

O'Neill, F.H., Brophy, J.T., **Devaney, F.M.**, Nash, R. and Barron, S.J. (2014) *Assessment of the Conservation Status of the Great Island Channel SAC (001058)*. Report for Cork County Council.

Perrin, P.M., Roche, J.R., Barron, S.J., Daly, O.H., Hodd, R.L. & **Devaney, F.M.** (2014) National Survey of Upland Habitats (Phase 4, 2013-2014), Site Report No. 15: Slieve Mish Mountains cSAC (002185), Co. Kerry. Draft report submitted to National Parks and Wildlife Service, Dublin.

Perrin, P.M., Roche, J.R., Barron, S.J., Daly, O.H., Hodd, R.L. & **Devaney, F.M.** (2014) National Survey of Upland Habitats (Phase 4, 2013-2014), Site Report No. 16: Caha Mountains cSAC (000093), Cos. Cork and Kerry. Draft report submitted to National Parks and Wildlife Service, Dublin.

- Delaney, A., **Devaney, F.M.**, Martin, J.R. & Barron, S.J. (2013) Monitoring survey of Annex I sand dune habitats in Ireland. *Irish Wildlife Manuals*, No. **75**. National Parks and Wildlife Service, Dublin.
- Devaney, F.M.**, Martin, J.R., O'Neill, F.H. & Delaney, A. (2013) *Irish Semi-natural Grasslands Survey Annual Report No. 4: Western seaboard counties (Clare, Galway, Kerry, Limerick, Mayo) & County Tipperary*. Report submitted to the National Parks & Wildlife Service, Dublin.
- Martin, J.R., **Devaney, F.M.**, O'Neill, F.H. & Delaney, A. (2013) *Irish Semi-natural Grasslands Survey Annual Report No. 5: Leinster (except Offaly, Longford, Dublin & Kildare)*. Report submitted to the National Parks & Wildlife Service, Dublin.
- O'Neill, F.H., Martin, J.R., **Devaney, F.M.** & Perrin, P.M. (2013) The Irish Semi-natural Grasslands Survey 2007-2012. *Irish Wildlife Manuals*, No. **78**. National Parks and Wildlife Service, Dublin.
- Brophy, J. & **Devaney, F.** (2013) *Ecological Study of the Royal Canal between Talbot Bridge and Maynooth Train Station*. Report submitted to the National Transport Authority, Dublin.
- Devaney, F.** & Barron, S. (2013) *Appropriate Assessment Screening Report for a proposed six storey development*. Report submitted to John O'Neill & Associates, Architects & Interior Designers Ltd., Dublin.
- Brophy, J. & **Devaney, F.** (2013) *Appropriate Assessment Screening Report for the Variation to the Wexford Town and Environs Development Plan 2009-2015 with regard to the Joint Housing Strategy 2013-2019*. Report prepared for Wexford County Council, Wexford.
- Devaney, F.M.**, O'Neill, F.H., McNutt, K.E. & Martin, J.R. (2012) *Progress Report on the Consolidation of the Irish Semi-natural Grasslands Survey data (2007-2011)*. ArcGIS attribute table, Microsoft Access ® and Turboveg for Windows databases. Report submitted to the National Parks & Wildlife Service, Dublin.
- Delaney, A., Martin, J.R., **Devaney, F.M.**, McNutt, K.E., Barron, S.J. & O'Neill, F.H. (2011) *Interim report for the survey and conservation status monitoring of Annex I sand dune habitats in Ireland*. Report submitted to the National Parks & Wildlife Service, Dublin.
- O'Neill, F.H., Martin, J.R., **Devaney, F.M.**, McNutt, K.E., Perrin, P.M. & Delaney, A. (2010) *Irish Semi-natural Grasslands Survey Annual Report No. 3: Counties Donegal, Dublin, Kildare & Sligo*. Report submitted to the National Parks & Wildlife Service, Dublin.
- O'Neill, F.H., Martin, J.R., Perrin, P.M., Delaney, A., McNutt, K.E. & **Devaney, F.M.** (2009) *Irish Semi-natural Grasslands Survey Annual Report No. 2: Counties Cavan, Leitrim, Longford & Monaghan*. Report submitted to the National Parks & Wildlife Service, Dublin.
- Devaney, F.M.** (2008) The Alder Marsh: Ecohydrology and Restoration Prospects of a Desiccating Dune Slack. Ph.D. thesis, University College Dublin.