

## CURRICULUM VITAE: Alison Donnelly

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### ACADEMIC QUALIFICATIONS

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**PhD**, October 1994–April 1998, Trinity College Dublin

Thesis title: 'The interactive effects of elevated CO<sub>2</sub>, elevated O<sub>3</sub> and nitrogen availability on spring wheat'. This research involved the:

1. Co-ordination and management of a 3-year field experiment at Oak Park, Agricultural Research Centre, Carlow, Ireland.
2. Statistical analyses of data and interpretation of results.
3. Publication of scientific papers, posters and reports as well as oral presentations at both national and international conferences.

**MSc**, Environmental Science, October 1991–October 1993, Trinity College Dublin

This MSc involved both taught coursework and a research project. Thesis title: 'A comparison of epicuticular wax of *Pinus sylvestris* needles from three sites in Ireland'.

**B.A. (Mod)**, October 1984–June 1988, Trinity College Dublin

Grade achieved: II-1, Natural Sciences, Geography (Major).

### EMPLOYMENT HISTORY

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Aug 2015–Present: **Associate Professor** Department of Geography, University of Wisconsin-Milwaukee, USA.

Aug 2012–Aug 2015: **Visiting Assistant Professor** Department of Geography, University of Wisconsin-Milwaukee, USA. Instructor on four geography courses: introduction to environmental geography, biogeography, human impact on the environment, and climates of the past and climate change, in addition to some phenology research and graduate student advising.

Jan 2008–May 2012: **Research Assistant Professor/Research Lecturer** School of Natural Sciences, Trinity College Dublin. Principal Investigator on Environmental Protection Agency-funded large-scale project. Supervisor of 2 PhD students, 3 MSc students, 2 research assistants and 2 research fellows.

Nov 2007–Dec 2008: **Environmental Consultant** Employed by the Dublin Docklands Development Authority to conduct a Strategic Environmental Assessment of the Dublin Docklands Development Plan.

Oct 2007–Sept 2008: **Broad Curriculum Lecturer** School of Natural Sciences, Discipline of Botany, University of Dublin, Trinity College. Preparation, delivery and assessment of broad curriculum course on Global Environmental Change to 42 second- and third-year students. Course co-ordinator for 'Seminars, Tutorials and Workshops' in Botany.

Oct 2006–Mar 2007: **Temporary Lecturer** in Botany, University of Dublin, Trinity College. Responsibilities as for Broad Curriculum Lecturer above.

Oct 2004–Sept 2007: **EPA Research Fellow** University of Dublin, Trinity College.

This project was funded by the Environmental Protection Agency and involved the development of environmental indicators and other methods for the provision of information as required under the EU Strategic Environmental Assessment (SEA) Directive. Duties included:

1. Establish data sets and develop indicators for use in the SEA.
2. Run workshops and develop a website to disseminate the findings of these workshops on SEA indicators (<http://coe.epa.ie/SEA/>).
3. Publish and present findings in national and international journals and at various conferences.

Nov 2000–Oct 2004: **Research Fellow** University of Dublin, Trinity College.

EPA-funded projects on climate-change indicators and the impact of climate change on the natural environment in Ireland. Duties included:

1. Management and co-ordination of data collection.
2. Analysis and interpretation of data, including presentation and publication of results.
3. Collaboration with modellers to construct, parameterise and validate models.
4. Co-supervision of a postgraduate student.

Feb–Apr 2003: **Temporary Lecturer** in Botany, University of Dublin, Trinity College.

For this position, I prepared and presented a course on ‘Plants and People’, to 150 second-year students. Duties included:

1. Design and present lectures to students on the ‘alternative uses of plants’.
2. Set examination questions and grade examination papers.

Jan–Mar 2002: **Temporary Lecturer** in Biogeography, National University of Ireland–Maynooth.

This position involved the preparation and presentation of a new 16-lecture course in biogeography to final-year students. Duties included:

1. Design, develop and present a course in Biogeography to 100 students using an integrated programme of lectures, web-based research and practical application of the subject matter.
2. Running of ‘workshops’ on report writing and presentations.

Nov 2001–Jul 2002: **Research Fellow**, University of Dublin, Trinity College.

EPA-funded literature review on the potential of using lime as a method of mitigating against increased acidification of surface waters. Duties included:

1. Assessment of current techniques used to address the problem of acidification.
2. Provide recommendations for the implementation of the reviewed techniques in Ireland.

Mar 1999–Jul 2000: **Research Associate**, University of Nottingham, UK.

UK project manager of an EU-funded experimental and modelling programme on climate change and its potential impact on potato yield and quality. Duties included:

1. Management and co-ordination of field experiments.
2. Analysis and interpretation of data, and presentation and publication of results.
3. Networking with scientists having similar research interests.
4. Collaboration with modellers to construct, parameterise and validate models.
5. Supervision of undergraduate and postgraduate students.
6. Organisation and co-ordination of an international conference.

May 1998–Mar 1999: **Research Fellow**, University of Dublin, Trinity College.

An EU-funded project researching the impact of climate change on potato crops. Duties included:

1. Assisting in overall co-ordination of the project.
2. Carrying out research and running field experiments.
3. Laboratory analyses.
4. Collection and statistical analysis of data, together with interpretation, presentation and publication of results.
5. Production of a promotional brochure on the findings of the project.

Jan-Oct 1994 & Sept–Dec 1997 **Laboratory Technician**, Botany and Environmental Science, Trinity College Dublin.

Jan 1989–Jan 1990: **Assistant Co-ordinator**, FÁS Dublin Heritage Project, FÁS, Jervis St., Dublin 1.

Jun 1986–Sept 1986: **Laboratory Assistant** Department of Geochemistry, University of Davis, California, USA.

## CORE COMPETENCIES AND SKILLS

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### Research:

High calibre scientist with many years' experience in environmental research at national, EU and international level. Main research focus on phenology as an environmental indicator of climate change; biodiversity; strategic environmental assessment; energy crops; agriculture; and urban metabolism.

### Written, review and editorial:

Accomplished writer and reviewer. Authored <80 peer-reviewed international scientific papers, including one 'Super-Hot' paper, various book chapters, numerous reports (EU, national), research proposals. Reviewer for numerous national and international journals, as well as project proposals for various funding agencies in Ireland (SFI, EPA, EI, IRCSET) and abroad (Belgian Science Policy Office, NERC, Swiss NSF, H2020). Guest editor for International Journal of Biometeorology. Google Scholar public profile, Citations 5,300+; h-index 30; i10-index 49.

### Funding:

Raised €1.5M for scientific research from the Environmental Protection Agency (Ireland), IRCSET (Irish Research Council for Science, Engineering and Technology) and the Irish Heritage Council, and involved in securing large-scale EU FP7 and small-scale USA funding (USGS).

### Leadership:

Principal Investigator on 2 research large-scale projects. Initiated the Trinity Research Staff Association leading to the Irish Research Staff Association. Effective project manager and research group leader.

### Communication:

Effective lecturer, international speaker, and mentor. Involvement in raising public awareness of environmental issues through, public lectures, running workshops, newspaper articles, TV and radio interviews and publication of information leaflets.

### Organisation:

Organised several conferences, meetings and workshops at national and international level.

Professional collaborations:

Effective networking with TEAGASC, EPA, Met Éireann, local authorities, COFORD, Coillte, Dublin Docklands Development Authority, Instituto Agrario di san Michele Trento, Italy, Universities and other third level institutes both in Ireland and abroad. EU – COST.

Teaching and supervision:

Designed, developed and presented courses in environmental science, geography and botany to undergraduate students at various universities. Used an integrated programme of lectures, web-based research and practical application or course materials. Successfully supervised 3 PhD and 4 MSc projects. Co-supervised many PhD candidates.

Technical:

Proficient in the operation of specialised research and laboratory equipment including CO<sub>2</sub> and O<sub>3</sub> fumigation systems, various chromatography techniques, viscosity analysis, CNS elemental and atomic absorption analysers.

Administration and budgetary:

Chair of NEON (National Ecological Observation Network) Technical Working Group on Plant Diversity and Phenology. Chair and ordinary member of university and departmental level committees. Member of the governing Board of Trinity College Dublin and Research Committee. Secretary of the Royal Irish Academy's Scientific Committee on Climate Change. Member of many other professional organisations. Responsible for financial reporting of large-scale research projects.

Volunteer:

Senior scientist for Operation Wallacea in Honduran cloud forest expedition. Assistant on spring field season in Kangerlussuaq, Greenland, 2011.

## PEER-REVIEWED PUBLICATIONS

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**Donnelly, A.,** Yu, R. and Liu, L. (**submitted**) Spring leaf phenology: *in situ* observations vs satellite-derived start of season at rural and urban sites in Ireland. *International Journal of Remote Sensing*

Rehberg, C., **Donnelly, A.** and Yu, R. (**submitted**) Characterizing Temperate Deciduous Shrub Phenology in an Urban Woodlot in Wisconsin, USA. *The American Midland Naturalist*

Gedymin-Viel, J., **Donnelly, A.,** Fredlund, G., Mueller, W. and Brady R. (**2020**) Common Nighthawk (*Chordeiles minor*) occurrence in urban areas of southeastern Wisconsin, USA. *The American Midland Naturalist* 183(2):233-245.

**Donnelly, A.,** Yu, R., Rehberg, C., Meyer, G. and Young, E.B. (**2020**) Leaf chlorophyll estimates of temperate deciduous shrubs during autumn senescence using a SPAD-502 meter and calibration with extracted chlorophyll. *Annals of Forest Science* 77(2):1-12.

Zhao, B., **Donnelly, A.** and Schwartz, M. (**2020**) Evaluating autumn phenology derived from field observations, satellite data and carbon flux measurements in a northern mixed forest, USA. *International Journal of Biometeorology* 64:713-727.

- Donnelly, A., Yu, R., Rehberg, C., Meyer, G. and Young, E.B. (2019)** Extracted leaf chlorophyll content with corresponding SPAD values of temperate deciduous native and non-native shrubs, autumn 2018, southern Wisconsin, USA. *PANGAEA* <https://doi.pangaea.de/10.1594/PANGAEA.907932>
- Donnelly, A., Yu, R., Liu, L., Hanes, J.M., Liang, L., Schwartz, M.D. and Desai, A.R. (2019)** Comparing *in-situ* leaf observations in early spring with flux tower CO<sub>2</sub> exchange and MODIS EVI in a northern mixed forest. *Agricultural and Forest Meteorology* 278:107673 <https://doi.org/10.1016/j.agrformet.2019.107673>
- Donnelly, A. and Yu, R. (2019)** Temperate deciduous shrub phenology: the overlooked forest layer. *International Journal of Biometeorology* 1-13.
- Donnelly, A., Liu, L., Zhang, X. and Wingler, A. (2018)** Autumn leaf phenology: discrepancies between *in situ* observations and satellite data at urban and rural sites. *International Journal of Remote Sensing* 1-22.
- Donnelly, A. (2018)** Climate change: potential implications for Ireland's biodiversity. *International Journal of Biometeorology* 62(7):1221-1228.
- Donnelly, A., Yu, R., Caffarra, A., Hanes, J., Liang, L., Desai, A.R., Liu, L. and Schwartz, M.D. (2017)** Interspecific and interannual variation in the duration of spring phenophases in a northern mixed forest. *Agricultural and Forest Meteorology* 243:55-67
- Donnelly, A. and Yu, R. (2017)** The rise of phenology with climate change: an evaluation of IJB publications. *International Journal of Biometeorology* 61:29-50.
- Liu, L., Zhang, X., Yu, Y. and Donnelly, A. (2017)** Detecting spatiotemporal changes of peak foliage coloration in deciduous and mixed forests in the Central and Eastern United States. *Environmental Research Letters* 12(2) 024013.
- Donnelly, A., Yu, R. and Geyer, H. (2016)** Are Irish winter migrant waterbirds staying longer as temperature warms? *Biology and Environment Proceedings of the Royal Irish Academy* 116(2):1-12.
- Liu, L., Zhang, X., Donnelly, A. and Liu, X. (2016)** Interannual variations in spring phenology and their response to climate change across the Tibetan Plateau from 1982 to 2013. *International Journal of Biometeorology* 60(10):1563-1575.
- Pletsers, A., Caffarra, A., Kelleher, C.T. and Donnelly, A. (2015)** Temperature and photoperiod influence the timing of bud burst in juvenile *Betula pubescens* Ehrh. and *Populus tremula* L. trees. *Annals of Forest Science* 72(7):941-953 (DOI 10.1007/s13595-015-0491-8).
- Yu, R., Schwartz, M.D., Donnelly, A., Liang, L. (2015)** Modeling the progression of spring and autumn phenology of deciduous trees. *International Journal of Biometeorology* 59(7):1-15.
- Liu, L., Liang, L., Donnelly, A. and Schwartz, M.D. (2015)** Temporal dynamics of autumn phenology in a temperate mixed forest. *Remote Sensing of Environment* 160, 156-165.
- Donnelly, A., Geyer, H. and Yu, R. (2015)** Changes in the timing of departure and arrival of Irish migrant waterbirds. *PeerJ* 3:e726 <http://dx.doi.org/10.7717/peerj.726>
- Donnelly, A., Yu, R. and Liu, L. (2015)** Trophic-level responses differ as climate warms in Ireland. *International Journal of Biometeorology* 59(8): 1007-1017.
- Liu, L., Liu, L., Liang, L., Donnelly, A., Schwartz, M.D. Park, I. (2014)** Differential response of spring land surface phenology to interannual and altitudinal temperature variations in Tibetan Plateau grasslands. *Chinese Science Bulletin*

- Caffarra, A., Zottele, F., Gleeson, E. and **Donnelly, A.** (2014) Spatial heterogeneity in the timing of birch bud burst in response to future climate warming in Ireland. *International Journal of Biometeorology* 58 (4), 509-519.
- Donnelly, A.**, Crowe, O., Regan, E., Begley, S. and Caffarra, A. (2014) The role of citizen science in environmental monitoring in Ireland. *International Journal of Biometeorology* 58(6):1237-49.
- Gleeson, E., **Donnelly, A.**, Aoife Ní Bhroin, O'Neill, B.F., Tido Semmler and Ray McGrath (2013) Assessing the influence of a range of spring meteorological parameters on tree phenology. *Biology and Environment; Proceedings of the Royal Irish Academy* 113B DOI: 10.3318/BIOE.2013.06.
- González, A., **Donnelly, A.**, Jones, M., Chrysoulakis, N. and Lopes, M. (2012) A decision-support system for sustainable urban metabolism in Europe. *Environmental Impact Assessment Review* 38:109-119.
- Stirnermann, R.L., O'Halloran, J., Ridgway, M. and **Donnelly, A.** (2012) Temperature related increases in grass growth and greater competition for food drive earlier migrational departure of wintering Whooper Swan. *Ibis* 154:542-553.
- Donnelly, A.**, Caffarra, A., Kelleher, C.T., O'Neill, B.F., Diskin, E., Pletsers, A., Proctor, H., Stirnermann, R., O'Halloran, J., Peñuelas, J., Hodkinson, T.R. and Sparks, T. (2012) Surviving in a warmer world: environmental and genetic responses. *Climate Research* 53:245-262.
- E. Diskin, H. Proctor, M. Jebb, T. Sparks and **A. Donnelly** (2012) The phenology of *Rubus fruticosus* in Ireland: herbarium specimens provide evidence for the response of phenophases to temperature, with implications for climate warming. *International Journal of Biometeorology* 56(6):1103-11(doi:10.1007/s00484-012-0524-z).
- O'Neill, B., Bond, K., Tyner, A., Sheppard, R., Bryant, T., Chapman, J., Bell, J. and **Donnelly, A.** (2012) Climatic warming advancing phenology of moth species in Ireland. *Entomologia Experimentalis et Applicata* 143:74-88.
- Donnelly, A.**, O'Neill, B.F., Caffarra, A. and Schwartz, M. (2011) IJB Special Issue Preface, Phenology 2010 Conference. 55(6):751-2.
- Finnan, J.M., Styles, D.F., Fitzgerald, J., Connolly, J. and **Donnelly, A.** (2011) Using a strategic environmental assessment framework to quantify the environmental impact of energy plans. *Global Change Biology Bioenergy* 4 311-329. (doi: 10.1111/j.1757-1707.2011.01143.x).
- González, A., **Donnelly, A.**, Jones, M., Klosterman, J., Groot, A. and Breil, M. (2011) Community of practice approach to developing urban sustainability indicators. *Journal of Environmental Assessment, Policy and Management* 13(4) 591-617.
- Donnelly, A.**, Caffarra, A. and O'Neill, B.F. (2011) A review of climate-driven mismatches between inter-dependent phenophases in terrestrial, aquatic and agricultural ecosystems. *International Journal of Biometeorology* 55(6) 805-817.
- Caffarra, A., **Donnelly, A.**, Chuine, I. and Jones, M. (2011) Modelling the timing of *Betula pubescens* budburst. I. Temperature and photoperiod: a conceptual model. *Climate Research* 46:147-157.
- Caffarra, A., **Donnelly, A.** and Chuine, I. (2011) Modelling the timing of *Betula pubescens* budburst. II. Integrating complex effects of photoperiod into process-based models. *Climate Research* 46:159-170.

- Donnelly, A.,** Styles, D.F., Fitzgerald, J. and Finnan, J.M. (2011) A proposed framework for determining the environmental impact of replacing agricultural grassland with *Miscanthus* in Ireland. *Global Change Biology Bioenergy* **3**:247-263.
- Caffarra, A. and **Donnelly, A.** (2011) The ecological significance of phenology in four different tree species: effects of light and temperature on bud burst. *International Journal of Biometeorology* **55**(5) 711-721 DOI 10.1007/s00484-010-0386-1
- González, A., **Donnelly, A.,** Jones, M. and Chrysoulakis, N. (2010) CoP in Sustainable Urban Planning. ([http://www.iaia.org/iaia10/documents/reviewed\\_papers/CoP%20in%20Sustainable%20Urban%20Planning.pdf](http://www.iaia.org/iaia10/documents/reviewed_papers/CoP%20in%20Sustainable%20Urban%20Planning.pdf)) IAIA10 Conference Proceedings, the role of impact assessment in transitioning to the green economy. 30<sup>th</sup> Annual Meeting of the International Association of Impact Assessment, 6-11 April 2010, International Conference Centre, Geneva, Switzerland (www.iaia.org).
- Carroll, E., Sparks, T., **Donnelly, A.** and Cooney, T. (2009) Irish phenological observations from the early 20<sup>th</sup> century reveal a strong response to temperature. *Biology and Environment: Proceedings of the Royal Irish Academy* 109(B)(2)115-126.
- Donnelly, A.,** Cooney, T., Jennings, E., Buscardo, E. and Jones, M. (2009) Response of birds to climatic variability; evidence from the western fringe of Europe. *International Journal of Biometeorology* **53**: 211-220.
- Donnelly, A.,** Prendergast, T. and Hanusch, M. (2008) Examining quality of environmental objectives, targets and indicators in environmental reports prepared for strategic environmental assessment. *Journal of Environmental Assessment Policy and Management* . 10(4)381-401.
- Prendergast, T. and **Donnelly, A.** (2007) Reconciling planning and environmental issues in SEA. *Pleanáil* **17**: 101-116.
- Donnelly, A.,** Jones, M.B., O'Mahony, T. and Byrne, G. (2007) Selecting environmental indicators for use in strategic environmental assessment. *Environmental Impact Assessment Review* **27**: 161-175.
- Donnelly, A.,** Jennings, E., Finnan, J., Mooney, P., Lynn, D., Jones, M., O'Mahony, T., Théruvel, R. and Byrne, G. (2006) Objectives, targets and indicator for use in Strategic Environmental Assessment (SEA). *Journal of Environmental Assessment Policy and Management* **8**:135-156.
- Donnelly, A.,** Jones, M.B., O'Mahony, T. and Byrne, G. (2006) Decision support framework for establishing objectives, targets and indicators for use in SEA. *Impact Assessment and Project Appraisal* **24**: 151-157.
- Prendergast, T. and **Donnelly, A.** (2006) How the Planning Process deals with Environmental Issues in SEA – Environmental Monitoring of the Dublin Docklands Area Master Plan 2003. *Insite* (**in press**).
- Menzel, A., Sparks, T.H., Estrella, N., Koch, E., Aasa, A., Ahas, R., Alm-Kübler, K., Bissolli, P., Braslavská, O., Briede, A., Chmielewski, F.M., Crepinsek, Z., Curnel, Y., Dahl, Å., Defila, C., **Donnelly, A.,** Filella, Y., Jatzcak, K., Måge, F., Mestre, A., Nordli, Ø, Peñuelas, J., Pirinen, P., Remisová, V., Scheifinger, H., Striz, M., Susnik, A., Wielgolaski, F.-E., van Vliet, A., Zach, S., and Züst A. (2006) European phenological response to climate change matches the warming pattern. *Global Change Biology* **12**: 1-8.



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- Donnelly, A.**, Salamin, N. and Jones, M.B. (2006) Changes in tree phenology: an indicator of spring warming in Ireland? *Biology and Environment: Proceedings of the Royal Irish Academy* **106(1)**: 47-55.
- Donnelly, A.**, Finnan, J.M., Jones, M.B. and Burke, J.I. (2005) The potential impact of elevated concentrations of greenhouse gases on wheat production in Ireland. *The Irish Journal of Agricultural and Food Research* **44**: 141-145.
- Finnan, J.M., **Donnelly, A.**, Jones, M.B. and Burke, J.I. (2005) The effect of elevated CO<sub>2</sub> on potato - a review. *The Journal of Crop Improvement* **13**: 91-111.
- Jones, M.B. and **Donnelly, A.** (2004) Carbon sequestration in temperate grassland ecosystems and the influence of management and climate. Tansley Review. *New Phytologist* **164**: 423-439.
- Donnelly, A.**, Jones, M.B. and Sweeney, J. (2004) A review of indicators of climate change for use in Ireland. *International Journal of Biometeorology* **49**: 1-12.
- Donnelly, A.**, Jennings, E. and Allott, N. (2003) Review of liming options for afforested catchments in Ireland. *Biology and Environment; Proceedings of the Royal Irish Academy*, **103B**, No. 2: 91-105.
- Donnelly, A.** (2003) Trees as climate change indicators for Ireland. *Arboreta Phaenologica* – information of the IPG working group. 7-19.
- Finnan, J.M., **Donnelly, A.**, Burke, J.I. and Jones, M.B. (2002). The effects of elevated concentrations of carbon dioxide and ozone on potato (*Solanum tuberosum* L.) yield. *Agriculture, Ecosystems and Environment* **88**: 11-22.
- Craigon, J., Fangmeier, A., Jones, M., **Donnelly, A.**, Bindi, M., De Temmerman, L., Persson, K. and Ojanpera, K. (2002) Growth and marketable-yield responses of potato to increased CO<sub>2</sub> and ozone. *European Journal of Agronomy* **17** (4): 273-289.
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- Donnelly, A.**, Craigon, J., Black, C.R., Colls, J.J. and Landon, G. (2001) Elevated CO<sub>2</sub> increases biomass and tuber yield in potato (*Solanum tuberosum* L.) even at high ozone concentrations. *New Phytologist* **149**: 267-274
- Donnelly, A.**, Craigon, J., Black, C.R., Colls, J.J. and Landon, G. (2001) Does elevated CO<sub>2</sub> ameliorate the impact of O<sub>3</sub> on chlorophyll content and photosynthesis in potato (*Solanum tuberosum* L.). *Physiologia Plantarum* **111**: 501-511.
- Donnelly, A.**, Craigon, J., Black, C.R., Colls, J.J. and Landon, G. (2001) Impact of elevated CO<sub>2</sub> and O<sub>3</sub> on tuber quality in potato (*Solanum tuberosum* L.). *Agriculture, Ecosystems and Environment* **87**: 273-285.
- Donnelly, A.**, Jones, M.B., Burke J.I. and Schnieders, B. (2000) Elevated CO<sub>2</sub> provides protection from O<sub>3</sub> induced photosynthetic damage and chlorophyll loss in flag leaves of spring wheat (*Triticum aestivum* L., cv. 'Minaret'). *Agriculture, Ecosystems and Environment* **80**: 159-168.



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- Ommen, O.E., **Donnelly, A.,** Vanhoutvin, S., van Oijen, M. and Manderscheid, R. (1999) Chlorophyll content of spring wheat flag leaves grown under elevated CO<sub>2</sub> concentrations and other environmental stresses within the 'ESPACE-wheat' project *European Journal of Agronomy* **10** (3-4): 197-203
- Mitchell, R.A.C., Black, C.R., Burkart, S., Burke, J.I., **Donnelly, A.,** de Temmerman, L., Fangmeier, A., Mulholland, B.J., Theobald, J.C. and van Oijen, M. (1999) Photosynthetic responses in spring wheat grown under elevated CO<sub>2</sub> concentrations and stress conditions in the European, multiple-site experiment 'ESPACE-wheat' *European Journal of Agronomy* **10** (3-4): 205-214.
- Donnelly, A.,** Jones, M.B., Schnieders, B.J. and Burke, J.I. (1998) The interactive effects of CO<sub>2</sub>, O<sub>3</sub> and nitrogen on the photosynthetic response of juvenile spring wheat plants. In: de Kok L.J. and Stulen I. eds. *Responses of plant metabolism to air pollution*. Backhuys Publishers, Leiden, The Netherlands, 291-293.
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## BOOK CHAPTERS

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- González, A., Jones, M. and **Donnelly, A.** (2014) The BRIDGE impact assessment framework. Chapter 15 Bridge Book. Understanding Urban Metabolism: A tool for urban planning. Eds N. Chrysoulakis, E. Anselmo de Castro and E.J. Moors. Earthscan from Routledge.
- Donnelly, A.,** Caffarra, A., Zotte, F. and Gleeson, E. (2013) Irish wildlife in a warmer climate. Irelands climate: the road ahead. Eds: E. Gleeson, R. McGrath, M. Treanor.
- Donnelly, A.,** Robinson, J., Newton, S., O'Halloran, J. and Nairn, R. (2011) Climate change and bird conservation.
- Donnelly, A.,** and O'Mahony, T. (2010) Development and Application of Environmental Indicators in SEA.
- Donnelly, A.,** Caffarra, A., Diskin, E., Kelleher, C.T., Pletsers, A., Proctor, H., Stirnemann, R., Jones, M.B., O'Halloran, J., O'Neill, B.F., Peñuelas, J. and Sparks, T. Climate warming results in phenotypic and evolutionary changes in spring events – A mini-review. In: Hodkinson, T. and Parnell, J.A.N. (eds) *Climate Change, Ecosystems and Systematics*.
- Donnelly, A.** and Moran, E. (2008) History of phenology in Ireland. In: Nekovář, J. (ed) *The history and current status of plant phenology in Europe*. COST Office.
- Byrne, C., Jones, M.B., **Donnelly, A.** and Wilson, J. (2003) Chapter 6: Assessment of the Impacts of Climate Change on Biodiversity in Ireland. Edited by John Sweeney.
- Finnan, J.M., **Donnelly, A.,** Jones, M.B., Burke, J.I. (2005) The effects of elevated levels of carbon dioxide on potato crops: a review in, editor, Tuba, Zoltan, *Ecological responses*

*and adaptations of crops to rising atmospheric carbon dioxide*, London, Food Products Press, 2005, pp91 – 111.

**Alison Donnelly**, Eleanor Jennings and Norman Allott (2004) Liming options in afforested catchments in Ireland. COFORD Connects.

## SELECTED EU AND NATIONAL REPORTS

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**Donnelly, A.** et al., (2013) Climate Change Impacts on Phenology: Implications for Terrestrial Ecosystems, Climate Change Research Programme (CCRP) 2007 - 2013 Report Series No. 22

**Donnelly, A.**, Proctor, H. and O'Connor, B. (2013) Climate Change Impacts on Phenology: Implications for Terrestrial Ecosystems, Climate Change Research Programme (CCRP) 2007 - 2013 Report Series No. 23

**Donnelly, A.** and Jones, M. (2008) Final report; EPA Small Scale Study; Response of birds to climatic variability; evidence from the western fringe of Europe.

Prendergast, T. and **Donnelly, A.** (2008) Environmental Report for the Draft Dublin Docklands Master Plan 2008-2013.

**Donnelly, A.** and Jones, M. (2007) Final report; EPA project The development of environmental indicators and other methods for the provision of information as required under the EU Strategic Environmental Assessment (SEA) Directive. (Project: Environmental RTDI Programme: 2000 – 2006).

Buscardo, E., **Donnelly, A.**, Caffarra, A. and Jones, M. (2005) Final report; EPA Small Scale Study; Proposal for the production of a scoping document for the development of a framework for phenological data collation and management in Ireland.

**Donnelly, A.**, Rice, B. and Jones, M. (2003) Interactive European Network for Industrial Crops and their Applications (IENICA). Report from the Republic of Ireland.

**Donnelly, A.**, Caffarra, A. and Jones, M. (2003). Phenological Gardens in Ireland 2003

Sweeney, J., **Donnelly, A.**, McElwain, L. and Jones, M.B. (2002) Climate change – indicators for Ireland. Environmental Protection Agency, Dublin, Ireland.

Jennings, E., **Donnelly, A.** and Allott, N. (2002) Effectiveness of buffer strips for the mitigation of acid runoff from afforested catchments. Environmental Protection Agency, Project No. 2000-LS-3-M2 (in press).

**Donnelly, A.**, Jennings, E. and Allott, N. (2002) Effectiveness of liming as a method of mitigating increased acidity of surface waters in Ireland. Environmental Protection Agency, Project No. 2000-LS-3-M2 (in press).

**Donnelly, A.**, Lawson, T., Craigon, J., Black, C.R., Colls, J.J. and Landon, G. (2001) Final Report of the Nottingham Group, Contract no: ENV4-cr97-Q498. CHanging Climate and Potential Impacts on Potato Yield and Quality

**Donnelly, A.**, Lawson, T., Craigon, J., Black, C.R., Colls, J.J. and Landon, G. (2000). 1999 Annual Report of the Nottingham Group, Contract no: ENV4-CT97-0498. CHanging Climate and Potential Impacts on Potato Yield and Quality

Rice, B. and **Donnelly, A.** (1999) Interactive European Network for Industrial Crops and their Applications (IENICA). Report from the Republic of Ireland.

**Donnelly, A.**, Jones, M.B., Schnieders, B.J., and Burke, J.I. (1996) Interactive effects of CO<sub>2</sub> and O<sub>3</sub> on growth and dry matter production of juvenile spring wheat (*Triticum aestivum*)

plants. Report on the 1996 ESPACE-Wheat controlled environment chamber experiment at Carlow, Ireland. In: Hertstein, U. and Jager, H.-J. (Eds.). *ESPACE-Wheat European Stress Physiology and Climate Experiment - Project 1: Wheat*. Contract no: EV5V-C793-0301. Progress Report 1996.

Burke, J.I., Schnieders, B.J., **Donnelly, A.** and Jones, M.B. (1996) Effects of CO<sub>2</sub> and O<sub>3</sub> on growth and dry matter production of spring wheat (*Triticum aestivum*). Annual Report 1996 on the ESPACE-Wheat open-top chamber experiment at Carlow, Ireland. In: Hertstein, U. and Jager, H.-J. (Eds.). *ESPACEWheat. European Stress Physiology and Climate Experiment - Project 1: Wheat*. Contract no: EV5V-C793-0301. Progress Report 1996.

Burke, J.I., Schnieders, B.J., **Donnelly, A.** and Jones, M.B. (1995) Effects of CO<sub>2</sub> and O<sub>3</sub> during grain filling on growth and dry matter production of spring wheat. Report of the ESPACE-Wheat open-top chamber experiment 1994 at Carlow, Ireland. In: Hertstein, U. and Jager, H.-J. (Eds.). *ESPACE-Wheat. European Stress Physiology and Climate Experiment - Project 1: Wheat*. Contract no: EV5V-C793-0301. Progress Report 1994,55-64.

Burke, J.I., Schnieders, B.J., **Donnelly, A.** and Jones, M.B. (1995) Effects of CO<sub>2</sub> and O<sub>3</sub> on growth and dry matter production of spring wheat (*Triticum aestivum*). Annual Report 1995 on the ESPACE-Wheat open-top chamber experiment at Carlow, Ireland. In: Hertstein, U. and Jager, H.-J. (Eds.). *ESPACEWheat. Physiology and Climate Experiment - Project 1: Wheat*. Contract no: EV5V-C793-0301. Progress Report 1995,69-83.

## **OTHER PUBLICATIONS**

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Commissioned National Report:

Climate change impacts on phenology: implications for biodiversity in Ireland.  
Commissioned by the National Parks and Wildlife Service. September 2017

Scientific Statements for the Climate Change Science Committee of the Royal Irish Academy:

6<sup>th</sup> Scientific Statement; Impacts of climate change on biodiversity  
10<sup>th</sup> Scientific Statement; The impact of rising spring temperature on trees, insect and birds in Ireland

Preface:

Schwartz, M. and **Donnelly, A.** (2014) IJB Special Issue Preface, Phenology 2012 Conference. 1-1.

## **SELECTED PUBLISHED ABSTRACTS FOR NATIONAL AND INTERNATIONAL CONFERENCES**

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**Alison Donnelly** and Rong Yu (2020) Combining *in situ* observations and high resolution VEN $\mu$ S data to monitor temperate deciduous shrub and tree phenology. Invited speaker EGU, Online 4 – 8 May.

Geoffrey M. Henebry, Yuan Zhang, Monika Tomaszewska, Rong Yu, **Alison Donnelly**, Pietro Sciusco, Jiquan Chen (2020) Comparative urban land surface phenology using vegetation indices from VEN $\mu$ S and land surface temperature from ECOSTRESS & MODIS. EARSeL Liege, Belgium 26-28 May

- Alison Donnelly**, Rong Yu and Lingling Liu (2019) Spring Leaf Phenology: Discrepancies between *in situ* Observations and Satellite Data at Rural and Urban Sites in Ireland. Poster AGU, 9-13 December.
- Chloe Rehberg, **Alison Donnelly** and Rong Yu (2019) Variation in shrub phenology between native and invasive species in an urban woodlot Poster AGU, 9-13 December.
- Rong Yu, **Alison Donnelly** and Chloe Rehberg (2019) Monitoring Phenology in a Deciduous Urban Woodlot 2018-2019 Using the Recently Launched VEN $\mu$ S Micro-satellite Data Poster AGU, 9-13 December.
- Alison Donnelly**, Rong Yu and Chloe Rehberg (2018) Determining the contribution of shrubs to forest phenology using *in-situ* observations and newly acquired Ven $\mu$ s-satellite-data. Phenology 2018, Melbourne, Australia, 23-27 September.
- Alison Donnelly**, Astrid Wingler, Lingling Liu and Xiaoyang Zhang. (2018) Autumn leaf phenology: discrepancies between *in situ* observations and satellite data. AAG, New Orleans, LA, April 9.
- Alison Donnelly**, Astrid Wingler, Lingling Liu and Xiaoyang Zhang. (2017) Detecting changes in the timing of autumn phenology in response to climate change. EMS, Dublin, Ireland, September 7.
- Alison Donnelly**, Rong Yu, Amelia Caffarra, Jonathan Hanes, Liang Liang, Ankur Desai, Lingling Liu, and Mark Schwartz. (2017) Comparing net ecosystem exchange, satellite derived phenological measures and in-situ leaf observations in early spring in a temperate mixed forest. EMS, Dublin, Ireland, September 7.
- Alison Donnelly**, Rong Yu, Amelia Caffarra, Jonathan Hanes, Liang Liang, Ankur Desai, Lingling Liu, and Mark Schwartz. (2017) Inter-annual variability in net ecosystem CO<sub>2</sub> exchange during leaf development in a temperate mixed forest. ICB, Durham, UK, September 4.
- Alison Donnelly**, Rong Yu, Amelia Caffarra, Jonathan Hanes, Liang Liang, Ankur Desai, Lingling Liu and Mark Schwartz. (2017) Timing and duration of spring phenophases in relation to carbon flux in a mixed forest. AAG, Boston, MA, April 9.
- Alison Donnelly**, Rong Yu, Amelia Caffarra, Jonathan Hanes, Liang Liang, Lingling Liu, Ankur Desai and Mark Schwartz. (2016) The *duration* of spring phenophases vary among species in response to chilling and forcing in a mixed forest community – data challenges. AAG, San Francisco, CA March 30.
- Alison Donnelly**, Annelies Pletsers, Amelia Caffarra and Colin Kelleher (2015) The influence of temperature and photoperiod on budburst of birch and aspen. AAG, Chicago, IL, April 21-25.
- Alison Donnelly**, Rong Yu and Lingling Liu (2014) Potential phenological mismatch as climate warms in Ireland. AAG, Tampa, Florida, 8-12 April.
- Amelia Caffarra, Fabio Zottele, Bridget O'Neill, Emily Gleeson and **Alison Donnelly** (2012) Spatial heterogeneity in the timing of birch bud burst in response to future climate warming in Ireland. Phenology 2012, Milwaukee, USA, September 2012.
- Alison Donnelly** (2012), Eugenie Regan, Sinead Begley, Eleanor Jennings and Amelia Caffarra. The role of citizen scientists in environmental monitoring in Ireland. Phenology 2012, Milwaukee, USA, September 2012.

- Ainhoa González, **Alison Donnelly** and Mike Jones (2010) CoP in Sustainable Urban Planning. Oral presentation. International Association of Impact Assessment meeting, Geneva, Switzerland, 6-11 April 2010.
- Diskin, E.B., Proctor, H., Jebb, M. and **Donnelly A.** (2009) Blackberry (*Rubus* spp.) phenology in Ireland: an exploration using herbarium specimens. Oral presentation. International conference on scope and current limits of linking phenology and climatology, in Geisenheim, Germany on 10-12 March 2009, organised by COST 725.
- Pletsers, A., Kelleher, C.T., Jones, M.B. and **Donnelly, A.** (2009) Assessing the genetic variation of dormancy-related traits in European trees. Oral presentation. International conference on scope and current limits of linking phenology and climatology, in Geisenheim, Germany on 10-12 March 2009, organised by COST 725.
- Proctor, H. and **Donnelly, A.** (2009) Expansion of the phenological gardens network in Ireland. Poster presentation. International conference on scope and current limits of linking phenology and climatology, in Geisenheim, Germany on 10-12 March 2009, organised by COST 725.
- Pletsers, A., Kelleher, C.T., Jones, M.B. and **Donnelly, A.** (2009) Assessing the genetic variation of dormancy-related traits in European trees. Oral presentation. Irish Plant Scientists' Association meeting at Trinity College, Dublin on 19-20 March 2009.
- R. L. Stirnemann, **Alison Donnelly** and John O'Halloran (2009) Impact of climate warming on whooper swan wintering phenology in Ireland. Poster presentation. European Ornithologist's Union conference in Zurich, Switzerland on 21-26 August 2009.
- Bridget O'Neill, Amelia Caffarra, Emily Gleeson, Tido Semmler, Ray McGrath and **Alison Donnelly** (2009) The use of climate projections in the modelling of budburst. Poster presentation. ENSEMBLES symposium, Exeter, UK. 17-19 November 2009.
- Donnelly, A.**, Jones, M.B., Finnan, J., Craigon, J. and Black, C. (2008) The effects of CO<sub>2</sub> and O<sub>3</sub> on potato yield. *National Botanic Gardens exhibition for the international year of the potato April 2008.*
- Donnelly, A.**, Jones, M.B., O'Mahony, T. and Byrne, G. (2006) Criteria for selecting environmental indicators for use in strategic environmental assessment. *IAIA, Stavanger, Norway* May, 25.
- Donnelly, A.**, Jones, M.B., O'Mahony, T. and Byrne, G. (2005) Decision support framework for establishing objectives, targets and indicators for use in Strategic Environmental Assessment (SEA). *IAIA, Prague, Sept*, 26.
- Caffarra, A., **Donnelly, A.** and Jones, M. (2005) Modelling environmental drivers of the phenological phases of tree species. Challenging times. 5 - 8 September, Garminch, Germany. International Biometeorology Association.
- Donnelly, A.**, John Finnan, Mike Jones and Jimmy Burke (2004) Effects of ambient O<sub>3</sub> concentrations on clover and knapweed in Ireland. UNECE ICP-vegetation, Kalamata, Greece, February 2004.
- Caffarra, A., **Donnelly, A.** and Jones, M. (2003) Quantifying the environmental drivers of the phenological phases of tree species. Challenging times. 31 Mar- 2 April, Wageningen, the Netherlands. EPN Congerence.
- Donnelly, A.**, Jones, M., Sweeney, J. and Caffarra, A. (2003). Impact indicators of climate change in Ireland. EPA meeting on Sustainability 15-16 May

- Donnelly, A.,** Jennings, E. and Allott, N. (2003) The potential use of liming to mitigate against acidification of surface waters. Proceedings of the IPSAM conference held in Trinity College, March 2003.
- Donnelly, A.,** McElwain, L., Jones, M.B. and Sweeney, J. (2001) The use of biological indicators to detect climate change in Ireland. Detecting environmental change: science and society. 17-20 July 2001, University College London, UK, book of abstracts, p. 73.
- Donnelly, A.,** Schnieders, B.J., Jones, M.B. and Burke, J.I. (1997) The influence of CO<sub>2</sub>, O<sub>3</sub>, and nitrogen on the photosynthetic response of juvenile wheat plants. *Journal of Experimental Botany*, 48 (Supplement May).
- Donnelly, A.,** Schnieders, B.J., Jones, M.B. and Burke, J.I. (1997) The influence of CO<sub>2</sub>, O<sub>3</sub>, and nitrogen on the photosynthetic response of juvenile spring wheat plants. Proceedings of the Irish Botanists Meeting, Trinity College, March, 1997.
- Donnelly, A.,** Schnieders, B.J., Jones, M.B. and Burke, J.I. (1997) The influence of CO<sub>2</sub>, O<sub>3</sub>, and nitrogen on juvenile spring wheat plants. Proceedings of the 4th International Symposium on Responses of Plant Metabolism to Air Pollution and Global Change, April 1-5, 1997, Egmond aan zee, The Netherlands.
- Donnelly, A.,** Schnieders, B.J., Jones, M.B. and Burke, J.I. (1996) The interactive effects of CO<sub>2</sub> and O<sub>3</sub> on spring wheat. *Journal of Experimental Botany*, 47 (Supplement May).
- Donnelly, A.,** Schnieders, B.J., Jones, M.B. and Burke, J.I. (1996) Interactive effects of CO<sub>2</sub> and O<sub>3</sub> on spring wheat. Proceedings of the Irish Botanists Meeting, Trinity College, March 1996.
- Donnelly, A.,** Schnieders, B.J., Jones, M.B. and Burke, J.I. (1995) The response of spring wheat to various CO<sub>2</sub> and O<sub>3</sub> levels. *Journal of Experimental Botany*, 46: 5 (Supplement May).
- Donnelly, A.,** Schnieders, B.J., Jones, M.B. and Burke, J.I. (1995) The determination of photosynthesis, stomatal conductance and A/c<sub>i</sub> of the flag leaf of spring wheat exposed to elevated CO<sub>2</sub> and O<sub>3</sub> using the Licor 6200. S.E.B./B.E.S./F.E.S.P. International workshop in field techniques for ecophysiology, Rapolano Terme, 17-22 September 1995.
- Schnieders, B.J., **Donnelly, A.,** Burke, J.I. and Jones, M.B. (1995) The combined effects of CO<sub>2</sub> and O<sub>3</sub> during grain filling on photosynthesis and dry matter production of spring wheat, analysed with a growth model. *Journal of Experimental Botany*, 46: 7 (Supplement May).

## EDITORIAL DUTIES

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### *Editorial Advisory Board*

Field Editor for International Journal of Biometeorology 2017 - present

### *Guest editor*

Special issue, International Journal of Biometeorology, following Phenology 2012 conference.

Special issue, International Journal of Biometeorology, following Phenology 2010 conference.

Reviewed & edited 5 chapters, rewrote 2 chapter, wrote 2 abstracts and edited & rewrote preface for Phenology: an integrative environmental science, 2013.

## REVIEWING UNDERTAKINGS

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### Journals:

Plant Cell and Environment; Global Change Biology; Plant Physiology and Biochemistry; Agricultural and Forest Meteorology; Journal of Environmental Assessment Policy and Management; Journal of Experimental Biology; National Reviewer for IPCC's 4<sup>th</sup> Assessment Report; Ecology; Journal of Environmental Management; International Journal of Biometeorology; Ecosystems, Plant Ecology and Diversity; Environmental and Experimental Botany; Acta Oecologia; Polish Journal of Environmental Studies; Meteorologische Zeitschrift; Trees: Structure and Function; Ecology Letters; Plant Biology; Physiologia Plantarum; Botany/Botanique; Global Change Biology Bioenergy; Philosophical Transactions of the Royal Society B: Biological Sciences; Remote Sensing; Studies in Avian Biology; American Journal of Botany; Biology Letters; Austral Ecology; Natural Hazards and Earth System Sciences; Annals of Forest Science; Journal of Plant Diseases and Protection; Impact Assessment and Project Appraisal; Nature; PLOS ONE; Climate Research; Biology and Environment: Proceedings of the Royal Irish Academy; Remote Sensing; Global Ecology and Biogeography; Biological Conservation; Forestry: an international journal of forest research; Nature Ecology & Evolution; Nature Communications; Nature Climate Change; Journal of Geophysical Research: Biogeosciences; Tree Physiology; International Journal of Climatology; Frontiers in Plant Science; International Journal of Applied Earth Observations and Geoinformatics; Biological Reviews;

### Funding:

Range of funding proposals for EPA; Walton Awards for SFI; Commercialization Fund for Enterprise Ireland; IRCSET Ulysses Programme plus other grants; Natural Environment Research Council (UK); Earthwatch Institute; UWM Research and Creative Activities Support (RACAS) awards

### Expert reviewing:

Belgian federal public Health Service; IPCC WGII AR4 Expert Reviewer; IPCC WGII AR5 Expert Reviewer; Swiss National Science Foundation; EU Horizon 2020; European Science Foundation

## GRANTS AWARDED

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Selected to attend NEON Science Summit, Boulder, CO, 15-17 October 2019. Awarded **\$552** travel grant.

Successful Research Growth Initiative (RGI) grant, UWM funding, **\$137,000** January 2019 – July 2020. Determining the contribution of the shrub layer to overall forest phenology using *in situ* observations and remote sensing metrics

Successful application to be part of the global VEN $\mu$ S Earth Observation mission May 2017. Funding for travel provided.

Invited to participate as an advisor on a grant application by Illinois State University to the American Chemical Society Climate Science Toolkit Grants. The grant was one of 11 to succeed out of >300. The award was **\$4,250**.

Heritage Council (E00896) Hazel Proctor and Alison Donnelly **€15,000**.



IRCSET EMBARK programme Studentship on 'Climate change impacts on phenology in Ireland; an investigation of trophic mismatches' (RS2000064). Eileen Diskin and Alison Donnelly **€72,009**.

EPA Climate change impacts on phenology: implications for terrestrial ecosystems. Awarded December 2007 commenced April 2008 (2007-CCRP-2.4). **€1M**.

EU FP7 BRIDGE December 2008 – November 2011 (FP7-ENV-2007-1; 211345) Mike Jones and Alison Donnelly **€169,200** awarded out of a total of €3.1M.

The development of environmental indicators and other methods for the provision of information as required under the EU Strategic Environmental Assessment Directive (2004-SEA-FS-19-M4). October 2004 – September 2006, **€128,400** from Environmental Protection Agency. In addition, I was awarded **€106,427** for an extension year for the same project.

Small scale study (SSS): Proposal for the production of a scoping document for the development of a framework for phenological data collation and management in Ireland. May 2005 – September 2005 (2004-SS-34-M1) **€6,438** from Environmental Protection Agency. Examination of 20 years data on arrival and departure dates of migratory birds to Ireland, September to December 2005 (2005-SS-44-M1) **€5,040**.

Series of 3 Workshops on Strategic Environmental Assessment **€45,000**

#### **UNSUCCESSFUL FUNDING APPLICATIONS**

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**2020** NSF 2017836 Collaborative Proposal MSA: Plant invasion detection using a combination of in situ phenology and remote sensing across NEON eco-climatic domains. **\$299,460**

**Alison Donnelly** PI and Rong Yu co-PI

**2019** NSF Pre-proposal for LTER-MKE. My role Senior Personnel with many others. **\$299,460**

Paul Stoy & Alfonso Morales (UW-Madison) PIs

**2018** EPA 5162 Ireland PhenoTrack Tracking changes in phenology as a measure of environmental impact on Irish ecosystems **EURO 248,910**

**Alison Donnelly** PI

#### **MEMBER OF PROFESSIONAL ORGANISATIONS**

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Member of the Board of Trinity College and Member of the Research Committee of Trinity College (2005-2008). Also, member of AgMet, Irish Meteorological Society, European Meteorological Society and International Phenological Network, Natures Calendar Ireland, I was also on the management committee of EU COST Action (725) Establishing a European Phenological Data Platform for Climatological Applications and a past participant in a UN/ECE convention on long-range transboundary air pollution, International Cooperative Programme on Effects of Air Pollution on Natural Vegetation and Crops. Interactive European Network for Industrial Crops and their Applications (IENICA). Chartered Institution of Water and Environmental Management (CIWEM). Member of the International Association for Impact Assessment. Member of International Society of Biometeorology. Association of American Geographers 2014-Present.

Invited committee member of the Royal Irish Academy's Committee for Climate Change Sciences, October 2009. Appointed to post of secretary in February 2010.

## STUDENT ADVISING

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### PhD Primary adviser:

Jana Viel (UWM) in progress  
Heather Geyer (UWM) in progress  
Eileen Diskin (TCD) Pink is the new black: An investigation of antibiotic resistance in wild birds through use of a novel indicator, the Greater Flamingo (2014)  
Annelies Pletsers (TCD) Insights in the phenotypical and genotypical mechanisms regulating bud burst of temperate trees in the scope of climate change (2012)

### MSc Primary adviser:

Chloe Rehberg (UWM) An analysis of temperate deciduous shrub phenology in Downer Woods, University of Wisconsin-Milwaukee, Wisconsin, USA. (2020)  
Hazel Proctor (TCD) The influence of meteorological parameters on the timing of the birch (*Betula* spp.) pollen season and related species in Ireland (2010-2011) (2012)  
Heather Geyer (TCD) The impact of temperature on species arrival phenology for migrating non-passerine bird species to the East coast of Ireland (2011)  
Rebecca Stirnemann (TCD) What mechanisms are driving responses of migratory bird phenology to changing environmental conditions? (2011)

### PhD Co-adviser:

Lingling Liu (Chinese Science Academy) In conjunction with Profs. Liu and Schwartz (2014)  
Rong Yu (UWM) In conjunction with Professor Mark Schwartz (2013)  
Amelia Caffarra (TCD) In conjunction with Professor Mike Jones. Quantifying the environmental drivers of tree phenology (2007)

### MSc Co-adviser:

Bailu Zhao (UWM) in conjunction with Distinguished Professor Mark Schwartz (2019)  
Jana Viel (UWM) in conjunction with Professor Glen Fredlund (2014)

### PhD Thesis examination:

Deepa Shree Rawal (2014) Phenological responses of select *Eucalyptus* species to environmental variability. Department of Forest and Ecosystem Science, University of Melbourne. Supervisors: Dr C R Nitschke, Dr S Kasel and Dr M R Keatley.

### Committee member Prelims:

Wei Fan, UWM Geography PhD student S2020  
Wei Xu, UWM Geography PhD student S2017  
Gainbi Park, UWM Geography PhD student S2017  
Jana Viel, UWM Geography PhD student F2016  
Haijian Liu, UWM Geography PhD student S2016  
Feng Pan, UWM Geography PhD student F2016  
Nicholas J Schuelke, UWM Geography PhD student S2016

### Committee member Dissertation:

Susan Borchardt, UWM Geography PhD student S2020  
Wei Xu, UWM Geography PhD student S2019

Haijian Liu, UWM Geography PhD student S2017  
Wenliang Li, UWM Geography PhD student S2016

Committee member Masters:

Bailu Zhao, UWM Geography PhD student S2019  
Susan Borchardt, UWM Geography masters student S2016  
Thomas Welcenbach, UWM Geography masters student F2015  
Jana Viel, UWM Geography masters student 2014

## TEACHING

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Courses:

GEOG 125 Introduction to environmental geography (since Fall 2012)  
GEOG 340 Biogeography (since Fall 2012)  
GEOG 304 Human impact on the environment (since Fall 2012)  
GEOG 450 Climates of the past and climate change (since Fall 2012)

Independent studies:

Kaleigh Hilger, UWM CES, Spring 2017  
Rebecca Maletta, UWM Geography, Summer 2016  
Jana Viel, UWM Geography, Fall 2015

Capstone advising:

Emily Berth, Homelessness in Milwaukee, Spring 2017  
Ashley Heding, Organic farming, Spring 2016  
Noah Hammes-Hefti, Colorado river water agreement, Spring 2016  
Rebecca Maletta, Estabrook Dam, Spring 2016  
???, Wolves in North America, Spring 2015

Teaching assistants:

Participated in University-wide workshop on pedagogy April 2017  
Delivered TA workshop, August 2016  
Published TA Handbook with Kristin Sziarto 2015  
Designed, developed and implemented TA workshop Fall 2015  
Designed, developed and implemented TA observation and evaluation procedure  
Fall 2014

Undergraduate participation:

Organized students (one in G304 and an MA geography student) to make poster for  
Sustainability Symposium 22 April 2014  
Gave presentation to Writing Centre 28 February 2014

Community Engagement & Student Leadership Awards:

Nominated Matthew Rudman (Former undergraduate student in geography) for the  
above award for a Service Learning project during Geography 125, S2015.

Nominated Ellie Kirkwood (Former undergraduate student in geography) and Vince Bushell (Director, River Revitalization Foundation) for the above award for a collaborative Service Learning project during Geography 125, S2014.

Nominated Angie Jackson (Former graduate student in geography) for the above award for a collaborative Service Learning project during Geography 125, F2012.

UWM Teaching and learning symposium 12 January 2017:

Selected to give presentation entitled 'Effective Teaching Assistants'; Donnelly, A., Sziarto, K. and Kim, M.

## **OUTREACH AND PUBLICITY**

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UWM Mobile Master Chat series:

Monitoring trees and shrubs in Downer Woods, from space. January 20, 2021 10-11 AM.

UWM highlights:

UWM Research highlights 1 April 2020 Research 'Calibrating a satellite while it watches Earth's gardens grow' <https://uwm.edu/news/calibrating-satellite-while-it-watches-earths-gardens-grow/>

UWM Highlights Geography Professor tracks green on the ground and in space June 6 2018; <https://uwm.edu/letters-science/news/geography-professor-tracks-green-on-the-ground-and-in-space/>

Workshops:

Co-organized educator workshop on Climate Science, at UWM 17 August 2016.

Invited speaker at teacher training workshop in Normal, Illinois State University, Oct. 2015.

Invited speaker at teacher training workshop in Door County, WI, September 2014.

Facilitated local resident to join field-trip to Downer Woods who subsequently wrote an article for the local newsletter June 2014 'Murray Hill News'.

Invited speaker at teacher training workshop in Peoria, Illinois State University, Oct. 2014.

Invited speaker at teacher training workshop in Illinois State University, Normal Oct. 2013.

Co-organized fieldtrip to recycle facility with the Office of Sustainability, 9 May 2014

Newspaper articles:

Irish Times – 17 September 2013

Irish Times – Front page 29 March 2012

Irish Times Science Today. 19 January 2012

Irish Times Michael Viney 18 March 2006

Irish Times Michael Viney 19 March 2005

Irish Independent 16 November 2004

Irish Times Weather Eye. 11 November 2004

Sunday Tribune, 11 January 2004

Irish Times Science Today Thursday 5 September 2003

Irish Times Science Today. 13 September 2001

Television:

TG4 Gairdin na Lus, History of the Botanic Gardens, January 2014

TG4 Nuacht and RTE News 1 September 2008  
City Channel, What Europe means to Europeans 'The ozone Layer'. March 2008.  
BBC News 24. 29 July 2004, 10.30am

Radio:

NPR Environmental correspondent, Susan Bence, 3 December 2018  
<http://www.wuwm.com/post/uwm-partners-international-space-agencies-study-shrubs#stream/0>  
Mooney Goes Wild 20 January 2012  
Newstalk 6 December 2009  
Interview on Newstalk at 2.45pm Sean Moncrief  
BBC4, Material World, 4.30, 8 September 2005  
Anna Livia (Local radio) 22 November 2004 7-8 pm  
RTE 1 News at 1 9 November 2004

ESOF Dublin City of Science 2012:

1 March 2012 Launch of Phenology Scientific Statement, Royal Irish Academy.  
13 March 2012 Detecting the impact of climate change on plants and animals.  
National Botanic Gardens.  
24 March 2012 What plants can tell us about climate change.  
25 March 2012 Launch of Phenology Trail at the National Botanic Gardens.  
12 May 2012 Book launch Bird Habitats of Ireland, Royal Dublin Society.

**SERVICE**

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International Expert Reviewer:

Nominated to European Science Foundation College of Expert Reviewers. Spring 2020 – present.  
Nominated to Research Foundation Flanders (FWO) Review College. Spring 2020 – present.

Chair:

National Ecological Observatory Network, Technical Working Group on Terrestrial Plant Diversity and Phenology. January 2020-present.

Committee Chair:

UWM, Department of Geography, Chair of lectures committee August 2016 – May 2019

Committee Member:

UWM, University IT Policy Committee, Fall 2019 – present  
UWM, Field Station Committee, Fall 2019 – present  
UWM, Department of Geography, PR Committee, Fall 2019 – present  
UWM, Department of Geography, Steering Committee, Fall 2019 – Fall 2020  
UWM, Department of Geography, Post-Tenure Review Committee member, September 2017 – October 2017  
UWM, Awards and Recognition Committee, Sept. 2017 – Oct. 2017  
UWM, Conservation and Environmental Science Advisory Committee, UWM Sept. 15 - present  
UWM, Centre for Celtic Studies Advisory and Curriculum Committee, September 2014 - present

UWM, Department of Geography, Graduate Committee, September 2015 - August 2016

UWM, Review Committee for the BS in Atmospheric Sciences program, Fall semester 2015

Elected member of Governing Board, Trinity College Dublin (2005-2008)

Research Committee, Trinity College Dublin (2005-2008)

Member and secretary of the Royal Irish Academy's Scientific Committee on Climate Change (2009-2012)

Founding member, Chairperson and Committee member, Trinity Research Staff Association (2005-2010)

Post-tenure Review Committee:

Distinguished Professor Mark Schwatz Fall 2017

## INVITED PUBLIC AND KEYNOTE LECTURES

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Invited:

Invited to speak at the **University of British Columbia's** Biodiversity Research Seminar series. Spring 2021 (date TBD)

Keynote presentation (online), **European Geosciences Union 2020**, Vienna, **Austria**: Session; Phenology and seasonality in climate change. Presentation title; Combining *in situ* observations and high resolution VEN $\mu$ S data to monitor temperate deciduous shrub and tree phenology. May 8.

Invited to participate as a 'starter' by **UWM's Center for Excellence in Teaching and Learning** event entitled 'High Impact Educational Practices Fishbowl Forum'. Feb. 2020.

Invited to speak at the **UWM Planetarium's** Astro-break series. Trees and shrubs from space. Fall 2018.

Keynote presentation, How green is the Emerald Isle? Conference, **University of St. Thomas, St Paul, Minnesota**, 4 November 2017 'Climate change and the Irish landscape'.

**Greendale High-School**, 11 April 2017, Wildlife in a warmer world

Geosciences (UWM) Colloquium Series, 2 February 2017, The Bloomin' Arctic

**Chuck Ward Memorial lecture**, 18 November 2016, Climate change and the Irish landscape

Celtic Studies, **UWM**, recurring 2015-present, Ireland's ancient landscape

American Chemical Society: Workshop on Climate Science. **Peoria, Illinois**, 25 October 2014.

American Chemical Society: Workshop on Climate Science. **Door County**, Wisconsin, 27 September 2014.

Center for Celtic Studies (UWM) **Graduation Ceremony**, 9 May 2014

American Chemical Society: Workshop on Climate Science. Normal, Illinois, 19 October 2013.

**Biological Sciences (UWM) Colloquium Series**, 18 October 2013, Detecting climate change: past, present and future.

**Yi-Fu Tuan Lecture Series**, Department of Geography, University of Wisconsin-Madison, 8 March 2013. Timing is everything: especially for wildlife survival in a warmer world.

**Mary Immaculate College, Limerick**, 20 February 2012. The bloomin' Arctic.

**Dundalk Institute of Technology**, February 2012, Climate Change

**Dundalk Institute of Technology**, Indicators of Climate Change 15 November 2011

**Nottingham University, UK**, 11 May 2011, Timing is everything: phenology as an indicator of climate warming.

**UCD** 8 December 2011, Timing is everything: phenology as an indicator of climate warming.

**Dundalk Institute of Technology**, Indicators of Climate Change 12 Nov. 2009

**Dundalk Institute of Technology**, Indicators of Climate Change 7 Nov. 2008

**Dundalk Institute of Technology**, Feb. 2005, Climate change: signals from nature.

**Dundalk Institute of Technology**, Presentation to Countryside Management Students from University of Wales, Bangor, March 2004 The potential use of liming to mitigate acidification of surface waters.

Public:

Irish Meteorology Society, 5 September 2003, Environmental Indicators of Climate Change.

Irish Meteorology Society, 11 November 2004, Climate Change – signals from nature.

Keynote:

How to build a national phenological network. Alnarp, **Sweden**, 7 Feb 2008.

Café scientifique:

Mercantile pub, Dublin, 9 November 2004.

**AWARDS**

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Nominated for UWM Distinguished Undergraduate Teaching Award 2016-2017

Nominated for UWM Distinguished Undergraduate Teaching Award 2017-2018

**TEACHING QUALIFICATION**

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Online and blended teaching certificate. Fall 2020 (pending)