

Regan Early

Curriculum Vitae

Universidade de Évora, Cátedra Rui Nabeiro - Biodiversidade
Casa Cordovil 2ª Andar, Rua Dr. Joaquim Henrique da Fonseca, 7000-890 Évora, Portugal,
regan.early@gmail.com

EDUCATION

- University of York, UK 2003 - 2007
PhD: “Conservation at the Landscape Scale; the Marsh Fritillary and other British Butterflies”
Advisor: Prof. Chris Thomas. In collaboration with the Countryside Council for Wales (CCW)
- Oxford University, UK 1999 - 2002
Bachelor of Arts in Biological Sciences (2i)
-

PROFESSIONAL EXPERIENCE

- Postdoctoral Fellow, Cátedra Rui Nabeiro - Biodiversidade, Universidade de Évora 2010 - present
- Postdoctoral Research Associate, Ecology and Evolutionary Biology, Brown University, USA. 2008 – 2010
“Improving the accuracy of range-shift predictions under climate change.”
Mentor: Dov Sax
- Independent Researcher, Universidad Rey Juan Carlos, Madrid 2007
“Exploring the mechanisms of range limitation in a declining butterfly: implications for future distributions under climate change”
Collaborators: Owen Lewis (Oxford University), Robert Wilson (University of Exeter)
-

PUBLICATIONS

Peer-reviewed Journals

- Early, R. & Sax, D. “Climate-path analysis reveals potential limitations on species range shifts”. In press: *Ecology Letters*.
- Guo, Q., Sax, D., Qian, H. & Early, R. “Latitudinal shifts of introduced species: possible causes and implications”. Accepted: *Biological Invasions*.
- Bradley, B., Blumenthal D.M., Early, R., Grosholz, E.D., Lawler, J.L., Miller, L.P., Sorte, C.J.B., D’Antonio, C.M., Diez, J.M., Dukes, J.S., Ibanez, I., Olden, J.D. “Global change, global trade and the next wave of plant invasions”. Provisionally accepted: *Frontiers in Ecology and Evolution*.

- Richardson, D.M., Hellmann, J.J., McLachlan, J., Sax, D.F., Schwartz, M.W., Brennan, J., Gonzalez, P., Root, T., Sala, O., Schneider, S.H., Ashe, D., Camacho, A., Rappaport, J., Clark, Early, R., Etterson, J., Fielder, D., Gill, J., Minter, B.A., Polasky, S., Safford, H., Thompson, A., & Vellend, M. 2009. "Multidimensional evaluation of managed relocation". *Proceedings of the National Academy of Sciences of the United States of America*. 106(24): 9721-9724
- Early, R., Anderson, B. & Thomas, C.D. 2008. "Using habitat distribution models to evaluate large-scale landscape priorities for spatially dynamic species". *Journal of Applied Ecology* **45**(1): 228-238.
- Bulman, C.R., Wilson, R., Holt, A.R., Galvez Bravo, L., Early, R.I., Warren, M.S. & Thomas, C.D. 2007. "Minimum viable metapopulation size, extinction debt and the conservation of a declining species". *Ecological Applications* **17**(5): 1460-1473.
- Early, R. & Thomas, C.D. 2006. "Multi-species conservation planning: identifying landscapes for the conservation of viable populations using local and continental species priorities". *Journal of Applied Ecology*. **44**(2): 253-262.
- Moilanen, A., Franco, A.M.A., Early, R.I., Fox, R., Wintle, B.A. & Thomas, C.D. 2005. "Prioritizing multiple-use landscapes for conservation: Methods for large multi-species planning problems". *Proceedings of the Royal Society of London B*. **272**(1575): 1885–1891.

In Submission

- Diez, J.M., D'Antonio, C.M., Dukes, J.S., Grosholz, E.D., Olden, J.D., Sorte, C.J.B., Blumenthal, D.M, Bradley, B.A., Early, R., Ibáñez, I., Jones, S.J., Lawler, J.L., Miller, L.P. "Will Extreme Climatic Events Facilitate Biological Invasions?". In submission: *Frontiers in Ecology and Evolution*.

In Preparation

- Early, R., Wilczek, A., Sax, D. & Schmitt, J. "Phenology, range shifts and climate change: the missing links". Intended for: *American Naturalist*.
- Early, R. & Thomas, C.D. "Incorporating spatial population dynamic principles in large-scale conservation planning". *Conservation Biology*.

Technical Articles

- Sax, D., Early, R. & Guo, Q. 2010. "Assessing risks of plant invasions in the eastern United States: a biogeographic perspective" Technical Report to the US Forest Service.
- Early, R. 2008. "Landscape priorities for the conservation of the Marsh Fritillary in Wales". *Countryside Council for Wales*.

GRANTS IN SUPPORT OF RESEARCH AND DEVELOPMENT

- | | |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------|
| Government of the Portuguese Republic Fundação para a Ciência e a Tecnologia Individual Post-Doctoral Grant: "Species range shifts under 21 st century climate change: limitations and conservation strategies". Grant fully funds research, renewable for six years. | September 2010 onwards |
| Brown Environmental Change Initiative, working group grant: "How does phenology determine species ranges and what are the implications for future ranges under climate change?" | January 2009 (\$5500) |
| International Biogeography Society Travel Grant, for attendance at the IBS 2009 annual meeting. | 2008 (\$665) |

British Ecology Society, Small Ecological Project Grant: “Exploring the mechanisms of range limitation in a declining butterfly: implications for future distributions under climate change”	2007 (\$3000)
Hong Kong Sustainable Development International Youth Summit: grant covered all costs of attendance at the 2001 meeting.	2001

FELLOWSHIPS AND AWARDS

Anne Keymer prize for best student presentation, Runner-up. British Ecological Society Annual Meeting.	2005
Conoco-Phillips Academic Fellowship to support graduate studies	2003 – 2006 (\$4000)

TEACHING

Course development and instruction, Conservation Biology Master’s degree, Universidade de Évora: “Concepts and techniques in species distribution modelling”, a module within the Advanced Studies in Biodiversity and Nature Conservation course.	November 2011
Guest Lecturer, Universidade de Évora Biology PhD Program” “Controversies in invasion ecology”	April 2011
Guest Lecturer, Universidade de Évora: “Phytosociological techniques in global ecology and biogeography”	April 2011
Guest Lecturer, Brown University EEB: "Metapopulation biology and large-scale conservation strategies", for Conservation Biology senior class.	September 2009
Guest Lecturer, Brown University ECI: “Climate change and biodiversity”, for Watson International program for mid-career African scientists.	September 2009
Guest Seminar, Brown University EEB: "Species extinction in an era of climate change: Climate paths, dispersal barriers and the level of need for managed relocation", for Climate Change and Species Extinction class.	September 2009
Teaching Assistant. University of York: Quantitative Methods in Biology. Population Ecology.	2005 - 2006
Teaching Assistant. University of Leeds: Experimental Design and Analysis. Population and Community Ecology. Zoology Field Course: Animal Marine Biology. Biology Field Course: Plant Ecophysiology and Marine Biology.	2003 - 2004

SUPERVISORY AND MENTORING EXPERIENCE

Co-supervisor of research assistant and future PhD candidate Hedvig Nenzén (with Miguel Araújo), Universidade de Évora.	2010 - present
-------------------------------------------------------------------------------------------------------------------------	----------------

Undergraduate Student Supervisor, Brown University. Heidi Nutters, graduate research assistant. Natalie Jablonski, Sophomore research assistant. Dena Adler, Sophomore research assistant.	2007 - 2008
Selection and management of a research team consisting of eight assistants to collect and analyse data archived in libraries, herbaria and web sources. Brown University.	2007 - 2008
Undergraduate Group Project Mentor. University of York. "Learning Behaviour in Invertebrates".	2005 - 2007
Chief Scientist on wilderness expeditions for teenage students to the Amazon and the Yukon Territory. British Schools Exploring Society.	2006 - 2007

PROFESSIONAL ACTIVITIES

Invited Scientific and Policy-orientated Working Groups

"Climate change and invasive species: are non-natives poised for greater success in future climatic conditions?" at NCEAS (Project Leaders: Cascade Sorte, Jeff Dukes, and Joshua Lawler)	2011
Assisted Migration: Evaluating a New Strategy for Species Conservation. (Project Leaders: Jessica Hellmann, Jason McLachlan, Dov Sax, Mark Schwartz)	2008 - 2009
Phenology and Climate Change, an Environmental Change Working Group at Brown University (Project Leaders: Jim Tang, Johanna Schmitt)	2008 - 2009
UK Biodiversity Action Plan steering committee for the Marsh Fritillary (Project Leaders: Butterfly Conservation, English Nature, Countryside Council for Wales, Scottish Natural heritage)	2003 - 2006
Dispersal and Conservation. Centre for Ecology and Hydrology workshop. (Project Leader: Justin Travis)	2004

Professional Affiliations

American Association for the Advancement of Science, British Ecological Society, Ecological Society of America, International Biogeography Society.

Reviews and Peer Assessment

Scientific Journal Reviews: *American Naturalist*, *Applied Vegetation Science*, *Biological Conservation*, *Biological Invasions*, *Conservation Biology*, *Diversity and Distributions*, *Environmental Modelling and Software*, *Global Ecology and Biogeography*, *Journal of Applied Ecology*, *Journal of Biogeography*.

Grant Proposal Reviews: *National Science Foundation: Population and Community Ecology Cluster*, *International Biogeography Society Travel Grants 2011*.

Student Presentation Award judge. *ESA Annual Meeting 2008*, *IBS Biennial Conference 2009*, *2011*.

Session moderator. *ESA Annual Meeting 2008*.

INVITED SEMINARS

- Early, R. Improving predictions of range shifts under climate change: Some good news some bad news. *Imperial College, Silwood Park. February 2011.*
- Early, R. & Sax, D.F. Range shift dynamics and climate paths. Invited Symposium: *Managed Relocation (aka Assisted Migration): An Interdisciplinary Evaluation of a Newly Proposed Conservation Strategy. ESA Annual Meeting. August 2009.*
- Early, R., Wilczek, A., Sax, D.F. & Schmitt, J. Phenology and distributions under climate change. *ECI Phenology and Climate Change Workshop, Brown University. March 2009.*
- Early, R. Large-scale, population-based conservation strategies for spatially dynamic species. *Brown University. February 2008.*
- Early, R. Research variations on a spatial population-dynamic / conservation theme. *Brown University. September 2007.*
- Hodgson, J., Early, R. & Franco, A.M.A. New techniques to link impacts of development into large scale species conservation. *Special BES / IEEM Management Symposium on Ecological Impact Assessments: Science and Best Practice 2006.*
- Early, R. Selecting multi-species landscapes for conservation. *University of York. May 2005.*
- Early, R. The development of population-based conservation strategies at large scales. *University of York. October 2005.*
- Early, R. The development of population-based conservation strategies at large scales: the Marsh Fritillary in Wales. *Dispersal workshop. Centre for Ecology and Hydrology, Banchory, UK. 2004.*
- Early, R. Selecting landscapes for Conservation: Impacts of species prioritisation. *University of York. February 2005.*
- Early, R. A GIS tool to make population model results accessible to conservation planners. *Leeds University, 2003.*
-

SKILLS

Areas of Ecological Expertise

Climate and habitat niche-modelling, metapopulation modelling, dispersal, landscape ecology, reserve design, biotic interactions and climate change, butterfly ecology, phenology, invasive species.

Quantitative Skills

Large-scale statistical modelling (R).

Spatial analysis and visualisation (ArcGIS, Python).

Design and management of large databases. Connection of multiple databases and software components for analysis (SQL).

Additional programming skills in C and MATLAB.

Foreign languages

Spanish, Portuguese
