University of Birmingham

Alexander Poynter

Doctoral Researcher

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About

Title of PhD: Impacts of environmental stressors on the River Itchen Ranunculus community

Supervisors: Dr Lesley Batty (/staff/profiles/gees/batty-lesley.aspx) , Dr Mark Ledger (/staff/profiles/gees/ledger-mark.aspx) , Dr John Bridgman (/staff/profiles/civil/bridgeman-john.aspx) (University of Birmingham), Shirley Medgett (Environment Agency South)

Alex's research aims to develop an understanding of the aquatic plant community within the River Itchen, Hampshire. As key components of the chalk stream environment, submerged aquatic macrophytes are responsive indicators to changes in river conditions, and are intrinsically linked to the overall health of the stream ecosystem. Concerns over the slow decline in plant quality, associated with the term coined 'Chalk Stream Malaise' representing an overall decrease in ecosystem conditions, have prompted a need for the improved assessment of community status and a greater understanding of the roles of principal controlling environmental variables. As chalk streams become increasingly pressured by the effects of water abstraction, diffuse nutrient input and increased siltation, greater knowledge of chalk stream flora will inevitably allow the development of more robust management regimes to aid conservation in these sensitive ecosystems.
The project is fully funded by the Environment Agency.

As an additional element to his research, Alex (along with his supervisors) was awarded a NERC NBAF Award in 2011, which provided funding to incorporate environmental metabolomics into the project. This aspect is entitled "Identification of the sub-lethal response of Ranunculus penicillatus subsp. pseudofluitans var. pseudofluitans to environmental stresses using a metabolomic approach".

Qualifications

- BSc (Hons) Environmental Science – University of Wales, Aberystwyth (2005-2008)
- MSc Air Pollution Management and Control – University of Birmingham (2008-2009)

Biography

Alex's undergraduate studies were performed at the University of Wales, Aberystwyth (now Aberystwyth University), where he obtained an Honours degree in Environmental Science. During this degree course, he developed a keen interest in ecology and environmental pollution. Following this, Alex undertook a Masters degree in Air Pollution Management and Control at the University of Birmingham. After realising that ecology was his preferred field, Alex was delighted to find his current PhD project on offer at Birmingham.

Research

Research interests

- Lotic ecology
- Plant ecology
- Freshwater population and community ecology
- Biodiversity
- Habitat degradation
- Environmental pollution
- Biogeography

Other activities

Alex has taken an active role in teaching undergraduate and postgraduate courses at the university since commencement of his PhD. He has been a First year academic tutor to undergraduate BSc Geography students, planning and teaching tutorial sessions, and setting coursework projects. He has also been involved with undergraduate field courses.

In his spare time, Alex also provides help as a volunteer for conservation projects in the south of England.

Publications

Poynter, A. J. W. (2011). Ranunculus subgenus Batrachium in lowland chalk streams: A Review. Wessex Chalk Stream and Rivers Trust, Kimbridge, UK.

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