Biodiversity - patterns, processes and scales, 4.5 ECTS



3-7 September the Ågren Residence Gothenburg, Sweden Department of Biological and Environmental Sciences



<u>Invited Lecturers</u>

Anne Magurran, Marc Cadotte, Martin Sykes, Ulf Molau, and Xingping Liu

Organizers

Robert G. Björk, Lars Gamfeldt, and Johan Höjesjö



ClimBEco

The course in short

The course will start with a day of lectures on biodiversity and the society, where an insight into how international negotiation is conducted and what's on the political agendas e.g. CDB, IPBES, REDD+, and IPCC. Furthermore, there will be lectures on the environmental economic issues on biodiversity, for instance what is the TEEB (the Economics of Ecosystems and Biodiversity) report all about? The rest of the week will be focused on the biological part of biodiversity, where talks will be given on how to measure biodiversity, biodiversity and ecosystem function, phylogenetic and functional diversity, and also diversity across scale, ecosystem services and how to model ecosystem changes. These lectures will be mixed with exercises to try to get the theoretical parts into your research. There will also be literature sent out beforehand that needs to be read before the start of the course.

Eligible participants

PhD students in biology/environmental science with research interest in biodiversity in any ecosystem. Postdoctoral researchers will be accepted if space permits. The number of applicants that will be accepted is up to **25** participants. Participants should bring their own laptops.

Course fee

The course is **free** for PhD students from the University of Gothenburg and PhD student in ClimBEco graduate research school. There are 7 positions reserved for ClimBEco PhD students. For PhD students from other universities (and Postdoctoral researchers from all universities, if there is space), the course fee is **3000 SEK (to be paid once applicants are formally accepted)**. Note that this fee includes lunch and coffee for all 5 days and the course dinner. However, accommodation, travel and dinners (except one course dinner) are not included and must be organized by the participants and pay for themselves.

How and why to apply

A written application should be sent via email to the course organizer Robert Björk (email address: robert.bjork@gu.se) by May 31st, 2012. The application should include the applicant's full name, academic position (e.g. "PhD student"), gender and work address, and a 250-word statement of his/her research interests in biodiversity research.

Course venue

The course venue will be the Ågren residence, which is centrally located in Gothenburg. This former family residence, built in 1916, was extensively renovated in the 1980s. The Villa was converted to a convenient and comfortable venue for board meetings, planning sessions, workshops, once-off courses and hospitality functions, taking great care to retain its home-like, relaxing, atmosphere.



Invited lecturers



Anne Magurran is Professor in Ecology and Evolution at the School of Biology, University of St Andrews. She is interested in the measurement, evolution and conservation of biological diversity. Her research focuses on fish communities, particularly in the neotropics, but she has worked on a wide range of taxa and systems. At the moment she is particularly

interested in how biological diversity changes through time, and how temporal turnover contributes to the maintenance of community structure.

http://biology.st-andrews.ac.uk/magurran/profile_aem1.aspx



Marc Cadotte is an Assistant Professor in the Department of Biological Sciences at the University of Toronto Scarborough and in Ecology and Evolutionary Biology at the University of Toronto. His research interests focus on the mechanisms generating patterns of diversity, from

communities to biogeographical regions, and the consequences of changes in diversity. This work employs tools and hypotheses from models of species coexistence to patterns of evolutionary history, and applies to understanding the threats facing biodiversity.

http://www.utsc.utoronto.ca/~mcadotte/



Martin Sykes is Professor in Plant Ecology at Department of Physical Geography & Ecosystem Science, Lund University. He is an experimental and theoretical ecologist with broad interests in plant ecology focused on modelling the responses of vegetation to climate, and on the maintenance of plant species diversity. Current research has two general themes: 1) Ecosystem, vegetation dynamics and biodiversity modelling at spatial scales from the patch to the globe and at temporal scales through the

Holocene to 2100. Interdisciplinary approaches are a strong element driven by the need to understand global change impacts on ecosystems and their goods and services. Increasingly this theme is directed to scales that are policy relevant, a development strongly promoted through extensive EU collaborations. 2) Building on a long-term interest in the maintenance of species diversity I am jointly leading a number of field based studies into diversity and the functioning of ecosystems especially within cultural landscapes in Sweden.

http://www.nateko.lu.se/embers/sykesres.htm



Ulf Molau is Professor in Plant Ecology at the Department of Biological and Environmental Sciences, University of Gothenburg. Since 1 April 2012 he is also part-time guest professor at the Stockholm Resilience Centre. He is a member of the Swedish Scientific Council on Biodiversity, and advisory body to the government and national focal

point for CBD, the UN Convention on Biological Diversity. Molau has since long been a collaborator of IPCC, and currently lead author of a chapter for IPCC 5th Assessment Report,

WG2 (2014). He is currently scientific leader of the Arctic Resilience Report, an initiative from the Arctic Council. Molau's scientific background is in alpine plant systematics and ecology. Current research fields include reproductive biology of arctic and alpine plants, tundra ecology and biodiversity, global change impacts and resilience, and processes mediated by ongoing changes in the cryosphere (permafrost, snowbeds, etc.). http://www.bioenv.gu.se/english/staff/ulf/



Xiangping Liu is Postdoctoral Researcher at Environmental Economics Unit, Department of Economics, University of Gothenburg. Her researcher field is Environmental and Resource Economics. Her research focus has been on the evaluation of land conservation and policies, such

as, voluntary land preservation programs, land use regulations, and the spillover effect of desirable or undesirable land-uses. The common theme of her research is the use of advanced quantitative methods, especially spatial econometrics and semi-parametric matching methods to evaluate program effectiveness. At the University of Gothenburg, she works on an inter-disciplinary program that focuses on land use, biodiversity, and ecosystem services. She is particularly interested in studying the relationship among conservation policies, spatial configuration of land-uses, and ecosystem health in Sweden.

 $\underline{http://www.economics.gu.se/english/staff/senior_lecturers-lecturers-\underline{researchers/xiangping-liu/}}$

Looking forward to see you in Gothenburg September 2012,



Robert G. Björk, Assistant Professor in Plant Ecology



Lars Gamfeldt, Assistant Professor in Ecology



Johan Höjesjö Associate Professor in Animal Ecology