

Landscape ecology is dead: long live landscape ecology!!

This is my last editorial so why not be controversial (for a change)? When we first set out on this great adventure we were concerned about habitat loss and fragmentation - very much under the spell of MacArthur and Wilson. 'Landscape' was defined at a kilometres-wide scale and the focus was on what you could see out of an aircraft window. We thought we had a novel perspective - something unique.

Few people up to that point (the mid-1980s) had tried to take into account interactions between habitats. Look at the ecology textbooks from that time: there was an underlying assumption that ecosystems were somehow pristine and if we wanted to do ecology, we had to go and find homogeneous stands and ignore external effects (actually, many texts still do this). Population ecology largely ignored immigration and movement in the landscape - concentrating instead on birth-death processes. Marc-André Villard suggested that we all became bedazzled by the intrinsic intellectual appeal of concepts such as habitat fragmentation and island biogeography - the latter has now been subject to so much criticism that people now largely ignore it altogether.

One problem with landscape ecology now is that everyone's doing it. Landscape ecology is not confined to *Landscape Ecology* (the journal) and even the BES, which was once so suspicious of landscape ecology it called one of its symposium volumes '*Large-scale Ecology*', now appears to recognise the term to the extent that they even have a 'landscape ecology' theme at their Annual Meetings.

There is an increasing recognition that scale is important yet landscape ecologists are, by

and large, predominantly interested in real landscapes. Monica Turner gave us a scale-independent definition of landscape - a "spatially heterogeneous area" but most landscape ecologists ARE still interested in what you see out of aeroplane windows. There are pragmatic reasons for this: first, because we live in landscapes and we want them to not only look nice, but also to function well; and second, because we can use science to inform planning and policy. Consequently, in one sense IALE has been successful in bringing a landscape-scale perspective to the fore, but in another, there's no need for landscape ecology now because the term is in such wide use that it has now become integrated into the wider ecological literature (see examples in this edition). Hence, landscape ecology is dead - long live landscape ecology!!

From the next issue... a new broom. Ben Allen will be taking over as Newsletter Editor - please send articles to him (or respond to his appeals!!). I've enjoyed my stint (in a masochistic sort of way). And if any of you want to discuss any of the issues I've raised - feel free to do so (or buy me a pint and talk about something else, I don't mind!).

In the meantime, I'm going to revisit the MacArthur-Wilson model - I think its demise is premature. Watch this space.

Duncan McCollin

To contact Ben:
Benjamin.Allen@English-Nature.org.uk

Out with the old and in with the new (again! Ed)....

Three years ago I went to the IALE(UK) Avian conference at UEA. I was a year into my PhD (without a single result to show for it - a slightly unnerving feeling that no doubt many a PhD student can relate to!), I didn't know much more than the basics of landscape ecology and knew even less about birds. So when I arrived I was a little apprehensive. This feeling promptly evaporated when I discovered a very welcoming organisation with a friendly atmosphere, something I think sets IALE aside from so many other organisations. Three days later, Sarah McKenzie and I had both volunteered to become the student representative for IALE(UK). Although I had resisted this to start with, after being plied with sufficient pints it seemed like an excellent idea!

With two of us volunteering, Sarah and I decided to share the role and set about increasing student membership and setting up a friendly forum for landscape ecology students to meet and share ideas. I hope we have been successful in some way in these tasks: In December 2003, Duncan McCollin helped us to hold the first student meeting - a one day event to get to know other postgraduate students whose research involved landscape ecology; in December 2004, we held a two-day FRAGSTATS workshop with Ben Allen who guided us through practicals in FRAGSTATS and Patch Analyst; we have also arranged social get-togethers at the annual conference to encourage new students who are attending on their own. Student membership has increased four-fold over the past couple of years (OK, so it was only six to begin with!), which is a fantastic start that we hope will continue in the future.

Student turnover is inherently high, making the role of student representative an active one. It is now the end of Sarah's and my stint as Student Representative and we pass the baton to Aleks Kazmierczak. We would like to thank the members and committee of IALE(UK) for making our time as student reps great fun and very rewarding. Over to Ola

Bella Davies

New Student Rep

My name is Aleksandra Kazmierczak - but my friends call me Ola.

I am originally from Poland but have been living, studying and working in England for over two years. I arrived here in 2003 as an exchange student, expecting to stay for 5 months - but I enjoyed studying here so decided to stay for longer. At present I am a Research Assistant at the University of Salford, working on a

European project titled 'Improving the quality of life in the Large Urban Distressed Areas' (www.luda-europe.net).

When at home in Poland I studied *Geography* at the University of Warsaw. I graduated in *Geoecology* with a dissertation examining environmental resilience to pollutants emitted by municipal landfill (how did I survive soil sampling on hot summer days?).

In England I studied for the MSc in Environmental Resources at the University of Salford, and thanks to the contagious enthusiasm of my colleagues from the Urban Nature research group (www.els.salford.ac.uk/urbannature) I have developed an immense interest in landscape ecology in the urban context. In July 2005 I graduated having completed a dissertation on the functionality of the ecological networks implemented in local planning documents in Greater Manchester.

My interest in urban ecosystems and my love for Manchester resulted in the subject of my PhD project: 'Ecosystem health and social inclusion: the case of urban green spaces'. The project begins in April 2006 and is generously supported by the ESRC, NERC and Greater Manchester Planning Officers Group. My research findings will hopefully provide an evidence base for the policies on ecological networks and green infrastructure in Greater Manchester as well as address the important issues relating to how different groups of people use the green infrastructure of cities. I feel this project will be a big challenge but also an exciting opportunity to contribute to the enhancement of urban biodiversity and improvement of quality of life of people living in 'my' area.

I am enthusiastic about my new role as student representative for the IALE (UK). I hope we will enjoy working and learning together... But let's have a good few laughs along the way, too!



Report on 2005 Conference by Bella Davies

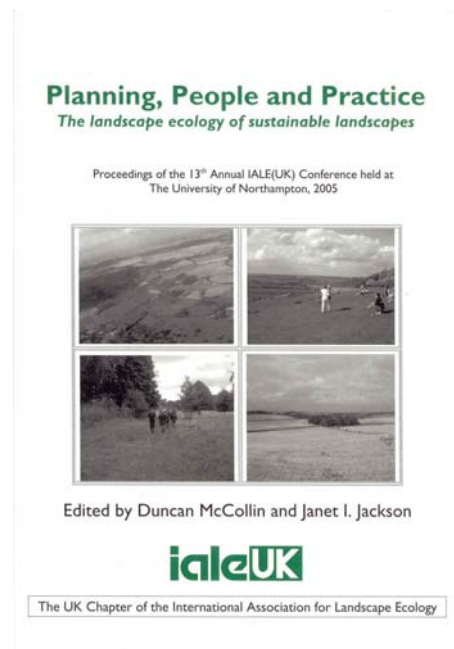
I was able to attend this year's IALE(UK) annual conference due to the Association's kind support, both through a Student Conference Travel Award and support given to the Student Representatives on the IALE(UK) Committee. Having just completed a PhD, I had no research or personal funds left, making IALE(UK)'s contribution invaluable! The topic of this year's conference brought landscape ecology back to a theme relevant to all of us – 'People, Planning and Practice'. Talks were kicked off by John Boothby who gave an excellent introduction to the whole conference, setting the legislative scene and planning process and stressing the importance of communication and stakeholder involvement. Further talks and the landscapes discussed were diverse. Tai and Dunnett showed how ancient Chinese philosophies relate to contemporary sustainable landscapes and Velarde *et al.* presented an evidence-based approach that documented the biodiversity impacts of common landuse changes. Several talks investigated species movement, biodiversity and restoration in contrasting landscapes, from UK gardens to landscape-scale restoration of the Australian bush, covering hundreds of thousands of hectares. It was particularly exciting to see landscape tools in operation, such as the Kent Landscape Information System, which provides a web-based GIS platform to advise on appropriate wildlife habitat (re-)creation. I thoroughly enjoyed this year's conference and would once again like to thank IALE(UK) for making it possible for me to attend. IALE conference 2005

And from Mary Webb..

I was very grateful to receive an IALE student grant to attend this year's UK conference on "Planning, People and Practice" at the University of Northampton in September. As a (very) mature PhD student who has not done much academic work for many years, I felt quite daunted before the event. However, the papers were all stimulating and, even better, relevant to the real world, demonstrating how landscape ecology can work in practice across the UK, Europe and beyond. I found the cultural aspects of landscape ecology particularly interesting, such as the paper by Fairclough and Herlin on what the term "countryside" really means and the work on human identification with landscape in the Chilterns described by Hamilton and Selman. On a larger scale, the work in Italy by Pungetti on ecological networks and ecoregions which recognises the importance of the cultural dimension of landscape, using an holistic approach to landscape and planning, was particularly relevant to aspects of my research. On a practical level, the paper by Wilson on the landscape restoration work in Victoria, Australia, demonstrated clearly the use of GIS in applying landscape ecology to on-the-ground work to achieve real results. The conference renewed my enthusiasm for my research and again I would like to thank IALE (UK) for assisting me to attend.

Out now!!

The proceedings from the 2005 should be available for purchase later in November. See the website for details.



Some images from the 2005 Conference....





Want to see more? Go to...
<http://groups.yahoo.com/group/ialeuk/>

ANNOUNCEMENT AND CALL FOR PAPERS

Annual Conference 2006

Oxford Brookes University

September 5th-8th 2006

Water and the Landscape: The Landscape Ecology of Freshwater Ecosystems

Water is an integral and key part of the landscape - shaping topography, sustaining ecosystems and providing a variety of habitats. Despite its importance, water quality and aquatic ecosystems suffer continual degradation as a result of pollution, drainage, over-abstraction and many other factors. The effective protection and management of freshwater ecosystems requires a holistic approach that links waterbodies with their surrounding landscape.

Landscape Ecology is the study of the interactions between the temporal and spatial aspects of a landscape and its flora, fauna and culture. It has traditionally been focussed on terrestrial systems with freshwater ecosystems being largely ignored. There is now an urgent need to integrate 'aquascapes' into landscape ecology to ensure successful management of the whole landscape.

The aim of this conference is to bring about this integration, considering all types of waterbody and their interactions with landscapes.

Topics will include:

- How do aquatic systems fit into landscape ecological principles and planning?
- Waterbodies as barriers, corridors and stepping-stones
- Freshwater systems in different landscape types (both natural and man-made)
- Landscape interactions of plants and animals with aquatic systems
- Landscapes within waterbodies
- Catchment management and the Water Framework Directive
- Waterbodies as part of Agri-Environment Schemes
- Restoration of wetlands and other aquatic habitats
- Spatial management of the freshwater landscape
- Future directions for aquatic landscape ecology

This conference will be of particular interest to planners, practitioners, national and local government bodies, researchers and NGOs. **Please submit presentation or poster abstracts of 300 words to Bella Davies by January 13th 2006 at brdavies@brookes.ac.uk.** Papers for conference proceedings will be required by May 2006 (Oral papers up to 8 A4 pages; posters up to 4 A4 pages).

The booking form will be added to the IALE(UK) website (www.iale.org.uk) shortly.

Student Conference Travel Award

The IALE(UK) awards a number of travel grants to students studying landscape ecology at a UK university. The award is open to all students with an interest in landscape ecology. In general, awards are designed to assist postgraduate students to attend the annual conference of IALE(UK) and for research postgraduates to attend other meetings, including the European and International Meetings of the IALE.

Please apply to:

Dr Janet Jackson, Secretary IALE(UK)

School of Applied Sciences

The University of Northampton

Northampton NN2 7AL

Email: janet.jackson@northampton.ac.uk

Vice-President Nominations - latest

The IALE(UK) committee nominee, Duncan McCollin, sadly, was unsuccessful in his bid for world domination - the vacant posts went to Maria Kozova (Slovak Republic) and Sandra Luque (Argentina). For more details see the IALE Bulletin. Congratulations are extended to Maria and Sandra from everyone in IALE(UK)!

Landscape Character and Biodiversity: Countryside Character Network workshop review

By Paul Mahony, Countryside

On May 10th 2005 the Countryside Character Network held an event at the Manchester Conference Centre entitled: 'Landscape Character and Biodiversity'. Chaired by Philip James of The University of Salford, the workshop highlighted the importance of landscape-scale processes and patterns for biodiversity, which is now recognised as a crucial aspect of the cultural landscape and a key contributor to health and well being. In particular, the event explored the methods and outcomes of projects that have used Landscape Character Assessment (LCA) to move away from site-based conservation towards landscape-scale approaches, involving a diverse range of stakeholders – helping to deliver benefits for biodiversity and for people.

The morning session began with a presentation from Jonathan Porter of Countryside, entitled 'Landscape and Biodiversity – Working Together'. This introduced the role of LCA as a tool for biodiversity planning and targeting, exploring the link between landscape character and biodiversity as products of the interaction between natural and/or human factors. It recognized the need to take account of local variations in landscape character in the development of wider ecological networks, as well as the benefits of using landscape-scale approaches to engage with partners and communities.

This was followed by a presentation from Stephen Preston of English Nature – entitled 'Emerging Visions of England – Whither or Wither Natural Areas?' - which explored the role of LCA as a tool to gauge the appropriateness of habitat creation; ie. providing a strategic overview of where habitat restoration or re-creation should occur. It suggested that Natural Areas, the framework of bio-geographic zones used by English Nature, do not delve sufficiently into the cultural elements of the landscape, and that other landscape-scale frameworks should be explored in order to help set context for designated sites. It also stressed the importance of landscape monitoring projects, such as Countryside Quality Counts (CQC), to help gain a better understanding of land management and environmental outcomes.

Next came a presentation from Chris Bolton of Defra's Rural Development Service (RDS), which posed the question: how can we ensure that the evident synergies between biodiversity and landscape character at the broad scale can be transferred down to locally distinctive landscapes? It outlined the role of landscape within Defra's Biodiversity Strategy and Agri-Environment Schemes, recognizing the need for a holistic approach to biodiversity – one that promotes change from focused protection to positive management and restoration. Agriculture was identified as the main deliverer of biodiversity, and several examples were given of how the previous Agri-Environment Schemes had delivered benefits for biodiversity and landscape.

The morning session concluded with a presentation from Craig Blackwell of Oxfordshire County Council, providing an overview of the Oxfordshire Wildlife and Landscape Study (OWLS) – a 3 year National Demonstration Project, aiming to undertake a combined landscape and biodiversity appraisal of the county. The project was designed to fall within the Joint Character Areas and Landscape Description Units (LDUs) level 2 frameworks. As a result of the biodiversity appraisal, it was possible to design a basic scoring system that allocated a specific 'bioscore' for each of the LDUs, based on the number and type of habitats they contain. The

bioscores were grouped into 6 broad biobands, which were then highlighted on a biomap. By overlaying the identified landscape types with the biomap, it was possible to demonstrate the variation in bioscores both within and between different landscape types. The study is now being used for a variety of purposes, such as informing the planning process, Environmental Stewardship Schemes and community strategies. It is available online at www.owls.oxfordshire.gov.uk

The afternoon session started with a presentation from Jess Allen of Herefordshire Council, giving a summary of the Herefordshire Lifescapes project under the title 'Grass Roots and Great Crested Newts'. The project was hatched in spring 2003 with the aim of extending nature conservation principles and practice from designated sites to the wider 'working' countryside and, in particular, to involve local people in the process of planning and creating ecologically functional landscapes. As with all Lifescapes projects, digital mapping (GIS) was used a tool for collating and analyzing environmental datasets to plan habitat conservation, restoration and (re)creation at a landscape scale. Furthermore, the Lifescapes remit has extended beyond simply consulting with communities. Using LEADER+ funding, the project is now assisting local people to carry forward their ideas into practical action, such as the creation of woodland paths, pond restoration and the construction/monitoring of bird and bat boxes.

The final presentation of the day came from Rebekah Newman of the Peak District National Park Authority, outlining the Vision for Wildlife Project – a partnership project with English Nature, aimed at enhancing, extending and linking sites of high wildlife importance. In short, the Vision project takes a holistic, landscape-based approach to the conservation and restoration of priority Biodiversity Action Plan (BAP) habitats. It involves both defining a "Vision for Wildlife" and implementing habitat conservation and restoration with the aim of achieving the vision. During 2004/05 the project has contributed significantly to the achievement of Peak District BAP targets and has proved effective in both engaging with and involving local communities, while engendering commitment from local businesses, naturalists and partners. There is now commitment within the Authority to continue the project into 2005/06 and potentially beyond.

Both the morning and afternoon sessions were followed by periods of lively and productive discussion. Key outcomes included:

- LCA can be used to deliver biodiversity gains: it is up to those engaged in both LCA and biodiversity to take advantage of this.
- There are benefits to be gained from landscape and biodiversity professionals working together. It is important to find a way of breaking down the silos that might exist between the two camps, and a holistic approach to landscape may be a way to achieve this.
- There is much enthusiasm surrounding the new agri-environment schemes, but there may be some gaps that will need to be filled by other schemes in order to gain the maximum advantage. Although landscape character-based biodiversity schemes are often resource-intensive, there are funds available for projects of this sort, such as through the Heritage Lottery Fund's 'Landscape Partnerships' scheme.
- When planning future landscapes, it is important to think creatively and to consider their ecological function. In some cases, new landscapes may be the most sustainable option.
- Projects that combine landscape and biodiversity have succeeded in engaging local communities to deliver real environmental improvements.

Full proceedings of this workshop, including the minutes of the discussion sessions, are available on the Workshops page on the CCN website.

The Countryside Character Network (CCN) is an informal network, open to anyone who has an interest in Landscape Character Assessment and its applications. To find out more visit the website at www.ccnetwork.org.uk

Recent Contents

Landscape Ecology

Volume 20, Number 8, December 2005

Fernández, N. Spatial patterns in European rabbit abundance after a population collapse. pp. 897-910

Koivula, M; Vermeulen, H. Highways and forest fragmentation - effects on carabid beetles (Coleoptera, Carabidae). pp. 911-926

Storch, I et al. Landscape-scale edge effect in predation risk in forest-farmland mosaics of Central Europe. pp. 927-940

Collinge, S et al. Landscape structure and plague occurrence in black-tailed prairie dogs on grasslands of the Western USA. pp. 941-955

González, J.T. et al. Integrating fire risk considerations in forest management planning in Spain - a landscape level perspective. pp. 957-970

Mou, P et al. Regeneration strategies, disturbance and plant interactions as organizers of vegetation spatial patterns in a pine forest. pp. 971-987

Cleary, D. et al. Associations of bird species richness and community composition with local and landscape-scale environmental factors in Borneo. pp. 989-1001

Säid, S; Servanty, S. The influence of landscape structure on female roe deer home-range size. pp. 1003-1012

Martinez, J-J.; Mokady, O.; Wool, D. Patch size and patch quality of gall-inducing aphids in a mosaic landscape in Israel. pp. 1013-1024

Volume 20, Number 7, November 2005

Gustafson, E. J. et al The relationship between environmental amenities and changing human settlement patterns between 1980 and 2000 in the Midwestern USA. pp. 773-789

Wickham, J. et al. Evaluating the relative roles of ecological regions and land-cover composition for guiding establishment of nutrient criteria. pp. 791-798

Ferrarini, A et al. Ascribing ecological meaning to habitat shape by means of a piecewise regression approach to fractal domains. pp. 799-809

Linke, J. et al. Seismic cutlines, changing landscape metrics and grizzly bear landscape use in Alberta. pp. 811-826

Manton, M. et al. Modelling habitat suitability for deciduous forest focal species - a sensitivity analysis using different satellite land cover data. pp. 827-839

Darcy, M. & Eggleston, D. Do habitat corridors influence animal dispersal and colonization in estuarine systems? pp. 841-855

Alderman, J. et al. Modelling the effects of dispersal and landscape configuration on population distribution and viability in fragmented habitat. pp. 857-870

Seto, K. C. & Fragkias, M. Quantifying spatiotemporal patterns of urban land-use change in four cities of china with time series landscape metrics. pp. 871-888

Volume 20, Number 6, September 2005

Benjamin, K. et al. Vegetation composition and succession of abandoned farmland: effects of ecological, historical and spatial factors. pp. 627-647

Groom, G. et al. Remote sensing in landscape ecology: experiences and perspectives in a European context. pp. 627-644

Palang, H. et al. The forgotten rural landscapes of Central and Eastern Europe. pp. 645-655

Cook, G. D. & Dawes-Gromadzki, T. Z. Stable isotope signatures and landscape functioning in banded vegetation in Arid-Central Australia. pp. 649-660

Swaffield, S. & Primdahl, J. Spatial concepts in landscape analysis and policy: some implications of globalisation. pp. 657-673

Nunes, M. C.S.; et al. Land cover type and fire in Portugal: do fires burn land cover selectively? pp. 661-673

Bossenbroek, J. et al. Taxon-dependent scaling: beetles, birds, and vegetation at four North American grassland sites. pp. 675-688

Taverna, K. et al. Modeling landscape vegetation pattern in response to historic land-use: a hypothesis-driven approach for the North Carolina Piedmont, USA. pp. 689-702

Graf, R. F. et al. The importance of spatial scale in habitat models: Capercaillie in the Swiss Alps. pp. 703-717

Jordan, G. J. et al. Assessing spatial uncertainty associated with forest fire boundary delineation. pp. 719-731

Wu, X. & Archer, S. Scale-dependent influence of topography-based hydrologic features on patterns of woody plant encroachment in savanna landscapes. pp. 733-742

Pieterse, N.M. et al. Is nutrient contamination of groundwater causing eutrophication of groundwater-fed meadows? pp. 743-753

Kail, J. & Hering, D. Using large wood to restore streams in central Europe: potential use and likely effects. pp. 755-772

Volume 20, Issue 5 2005

Dunford W. & Freemark, K. Matrix matters: effects of surrounding land uses on forest birds near Ottawa, Canada. Pp. 497-511

Monteil C, et al. Simple neural network reveals unexpected patterns of bird species richness in forest fragments. pp. 513-527

Estrada-Pena A. Effects of habitat suitability and landscape patterns on tick (Acarina) metapopulation processes. pp. 529-541

Toms JD, et al. Population dynamics of songbirds in the boreal mixedwood forests of Alberta, Canada: Estimating minimum and maximum extents of spatial population synchrony. pp. 543-553

Bond G, et al. The effects of land-use and landscape structure on barn owl (*Tyto alba*) breeding success in southern England, UK. pp. 555-566

Puth LM, & Allen TFH. Potential corridors for the rusty crayfish, *Orconectes rusticus*, in northern Wisconsin (USA) lakes: Lessons for exotic invasions. pp. 567-577

Mazerolle MJ. Drainage ditches facilitate frog movements in a hostile landscape. pp. 579-590

Corry RC. Characterizing fine-scale patterns of alternative agricultural landscapes with landscape pattern indices. pp. 591-608

Hawbaker TJ, et al. Road density and landscape pattern in relation to housing density, and ownership, land cover, and soils. pp. 609-625

Volume 20, Number 4, May 2005

Hargrove, W. W. et al. A practical map-analysis tool for detecting potential dispersal corridors. pp. 361-373

Xiao, X. et al. Optimal sampling scheme for estimation landscape mapping of vegetation cover. pp. 375-387

Bennett, E. M. et al. Soil phosphorus variability: scale-dependence in an urbanizing agricultural landscape. pp. 389-400

Harwood, W. & Nally, R. Geometry of large woodland remnants and its influence on avifaunal distributions. pp. 401-416

Grashof-Bokdam, C. J. & Langevelde, F. Green veining: landscape determinants of biodiversity in European agricultural landscapes. pp. 417-439

Price, S. J. et al. The importance of spatial scale for conservation and assessment of anuran populations in coastal wetlands of the Western Great Lakes, USA. pp. 441-454

Bosschieter, L. & Goedhart, P.W. Gap crossing decisions by reed warblers (*Acrocephalus scirpaceus*) in agricultural landscapes. pp. 455-468

Schmidt, E. & Bock, C.E. Habitat associations and population trends of two hawks in an urbanizing grassland region in Colorado. pp. 469-478

Tress, G. et al. Clarifying integrative research concepts in landscape ecology. pp. 479-493

Volume 20, Issue 3 2005

Anderson DP. Special issue on reciprocal interactions between herbivores and landscapes - Preface. pp. 255-256

Anderson DP, Forester JD, Turner MG, et al. Factors influencing female home range sizes in elk (*Cervus elaphus*) in North American landscapes. pp. 257-271

Frair JL et al. Scales of movement by elk (*Cervus elaphus*) in response to heterogeneity in forage resources and predation risk. pp. 273-287

Kie JG, et al. Landscape-level movements of North American elk (*Cervus elaphus*): effects of habitat patch structure and topography. pp. 289-300

Morales JM, et al. Adaptive models for large herbivore movements in heterogeneous landscapes. pp. 301-316

Owen-Smith N. Functional heterogeneity in resources within landscapes and herbivore population dynamics. pp. 317-317

Adler PB, & Hall SA. The development of forage production and utilization gradients around livestock watering points. pp. 319-333

Palmer SCF, et al. Introducing spatial grazing impacts into the prediction of moorland vegetation dynamics. pp. 335-335

Wallace LL, & Crosthwaite KA. The effect of fire spatial scale on Bison grazing intensity. pp. 337-349

Olofsson J, et al. Effects of mammalian herbivores on revegetation of disturbed areas in the forest-tundra ecotone in northern Fennoscandia. pp. 351-359

Volume 20, Issue 2 2005

Bender O, et al. Analysis of land-use change in a sector of Upper Franconia (Bavaria, Germany) since 1850 using land register records. pp. 149-163

Renofalt BM et al. Spatial patterns of plant invasiveness in a riparian corridor. pp. 165-176

Gergel SE. Spatial and non-spatial factors: When do they affect landscape indicators of watershed loading? pp. 177-189

Kochy M & Wilson SD. Variation in nitrogen deposition and available soil nitrogen in a forest-grassland ecotone in Canada. pp. 191-202

Bayne EM, et al. Modeling and field-testing of Ovenbird (*Seiurus aurocapillus*) responses to boreal forest dissection by energy sector development at multiple spatial scales. pp. 203-216

Murwira A & Skidmore AK. The response of elephants to the spatial heterogeneity of vegetation in a Southern African agricultural landscape. pp. 217-234

Smith RM, et al. Urban domestic gardens (V): relationships between landcover composition, housing and landscape. pp. 235-253

Ross JA, et al. Edge avoidance and movement of the butterfly *Parnassius smintheus* in matrix and non-matrix habitat. pp. 127-135

Pierce KB et al. A simple method for estimating potential relative radiation (PRR) for landscape-scale vegetation analysis. pp. 137-147

Volume 20, Issue 1 2005

Manier DJ, et al. Canopy dynamics and human caused disturbance on a semi-arid landscape in the Rocky Mountains, USA. pp. 1-17

D'eon RG & Glenn SM. The influence of forest harvesting on landscape spatial patterns and old-growth-forest fragmentation in southeast British Columbia. pp. 19-33

Gilbert M, et al. Post-storm surveys reveal large-scale spatial patterns and influences of site factors, forest structure and diversity in endemic bark-beetle populations. pp. 35-49

Munoz-Reinoso JC & Novo FG. Multiscale control of vegetation patterns: the case of Donana (SW Spain). pp. 51-61

Sengupta R, et al. Landscape characteristics of *Rhizophora mangle* forests and propagule deposition in coastal environments of Florida (USA). pp. 63-72

Fisher JT, et al. The protean relationship between boreal forest landscape structure and red squirrel distribution at multiple spatial scales. pp. 73-82

Heinz SK, et al. Dispersal behaviour in fragmented landscapes: Deriving a practical formula for patch accessibility. pp. 83-99

Mouillot F, et al. Long-term forest dynamic after land abandonment in a fire prone Mediterranean landscape (central Corsica, France). pp. 101-112

Kearns FR, et al. A method for the use of landscape metrics in freshwater research and management. pp. 113-125

Landscape & Urban Planning (selected papers)

Szaro RC, et al. 2005 The challenges associated with developing science-based landscape scale management plans. Vol. 72 (1-3): 3-12

Pithon JA, et al. J 2005 The influence of coniferous afforestation on lowland farmland bird communities in Ireland: different seasons and landscape contexts. Vol. 71 (2-4): 91-103

Tanner RA & Gange AC 2005 Effects of golf courses on local biodiversity. Vol. 71 (2-4): 137-146

Balram S & Dragicevic S 2005 Attitudes toward urban green spaces: integrating questionnaire survey and collaborative GIS techniques to improve attitude measurements. Vol. 71 (2-4): 147-162

Phua MH & Minowa M 2005 A GIS-based multi-criteria decision making approach to forest conservation planning at a landscape scale: a case study in the Kinabalu Area, Sabah, Malaysia. Vol. 71 (2-4): 207-222

Marulli J & Mallarach JM 2005 A GIS methodology for assessing ecological connectivity: application to the Barcelona Metropolitan Area. Vol. 71 (2-4): 243-262

Dumont B, et al. 2005 Estimation of off-track visits in a nature reserve: a case study in central Belgium. Vol. 71 (2-4): 311-321

Lee JT & Thompson S 2005 Targeting sites for habitat creation: an investigation into alternative scenarios. 71 (1): 17-28

A few others of interest maybe...

Kim KH, Pauleit S 2005 Landscape metrics to assess the ecological conditions of city regions: Application to Kwangju City, South Korea. *International Journal of Sustainable Development and World Ecology* 12 (3): 227-244

Li XZ, He HS, Bu RC, et al. 2005 The adequacy of different landscape metrics for various landscape patterns. *Pattern Recognition* 38 : 2626-2638

- Reunanen I, Grubb TC 2005 Densities of eastern chipmunks (*Tamias striatus*) in farmland woodlots decline with increasing area and isolation. *American Midland Naturalist* 154 (2): 433-441
- Lunt ID, Spooner PG 2005 Using historical ecology to understand patterns of biodiversity in fragmented agricultural landscapes. *Journal of Biogeography* 32 : 1859-1873
- Dai E, et al. 2005 Modeling change-pattern-value dynamics on land use: An integrated GIS and artificial neural networks approach. *Environmental Management* 36 (4): 576-591
- Bierwagen BG 2005 Predicting ecological connectivity in urbanizing landscapes. *Environment and Planning B-Planning & Design* 32 (5): 763-776
- Hoffmeister TS, et al. 2005 Ecological and evolutionary consequences of biological invasion and habitat fragmentation. *Ecosystems* 8 (6): 657-667
- Purtauf T, et al. 2005 Scaling properties of multivariate landscape structure. *Ecological Indicators* 5 (4): 295-304
- Burel F, Baudry J 2005 Habitat quality and connectivity in agricultural landscapes: The role of land use systems at various scales in time. *Ecological Indicators* 5 (4): 305-313
- Oja T, et al. 2005 Modelling bird habitat suitability based on landscape parameters at different scales. *Ecological Indicators* 5 (4): 314-321
- Armstrong DP 2005 Integrating the metapopulation and habitat paradigms for understanding broad-scale declines of species. *Conservation Biology* 19 (5): 1402-1410
- Binckley CA, Resetarits WJ 2005 Habitat selection determines abundance, richness and species composition of beetles in aquatic communities. *Biology Letters* 1 (3): 370-374
- Hovd H, Skogen A 2005 Plant species in arable field margins and road verges of central Norway. *Agriculture Ecosystems & Environment* 110 (3-4): 257-265
- Orczewska A, Glista A 2005 Floristic analysis of the two woodland-meadow ecotones differing in orientation of the forest edge. *Polish Journal of Ecology* 53 (3): 365-382
- Keagy JC, et al. 2005 Replacing sources with sinks: When do populations go down the drain? *Restoration Ecology* 13 (3): 529-535
- Angeler DG, Alvarez-Cobelas M 2005 Island biogeography and landscape structure: Integrating ecological concepts in a landscape perspective of anthropogenic impacts in temporary wetlands. *Environmental Pollution* 138 (3): 420-424
- Jopp F, Reuter H 2005 Dispersal of carabid beetles - emergence of distribution patterns. *Ecological Modelling* 186 (4): 389-405
- Wagner HH, Fortin MJ 2005 Spatial analysis of landscapes: Concepts and statistics *Ecology* 86 (8): 1975-1987

Belisle M 2005 Measuring landscape connectivity: The challenge of behavioral landscape ecology. *Ecology* 86 (8): 1988-1995

Deckers B, et al. 2005 Long-term spatio-temporal dynamics of a hedgerow network landscape in Flanders, Belgium. *Environmental Conservation* 32 (1): 20-29

Polasky S, et al. 2005 Conserving species in a working landscape: Land use with biological and economic objectives. *Ecological Applications* 15 (4): 1387-1401

Keddy P 2005 Putting the plants back into plant ecology: Six pragmatic models for understanding and conserving plant diversity. *Annals of Botany* 96 (2): 177-189

Prato T 2005 Modeling ecological impacts of landscape change. *Environmental Modelling & Software* 20 : 1359-1363

Hodgson JG, et al. 2005 The impacts of agricultural change (1963-2003) on the grassland flora of Central England: processes and prospects. *Basic and Applied Ecology* 6 (2): 107-118

Harper KA, et al. 2005 Edge influence on forest structure and composition in fragmented landscapes. *Conservation Biology* 19 (3): 768-782

Bastian O, Lutz M 2004 Development of landscape-ecologically sound local agri-environmental programmes. *Ekologia-Bratislava* 23: 23-34 Suppl. 1

Sklenicka P, Pixova K 2004 Importance of spatial heterogeneity to landscape planning and management. *Ekologia-Bratislava* 23: 310-319 Suppl. 1

Diary

IALE Meetings:

- | | |
|------|--|
| 2006 | Water and the Landscape: The Landscape Ecology of Freshwater Ecosystems Annual Conference of IALE (UK), September 2006, Oxford Brookes University
See notice in this issue |
| 2007 | World Congress, Wageningen, The Netherlands. 25 years Landscape Ecology: Scientific Principles in Practice. See: http://www.landscape-ecology.org/ |

See <http://www.landscape-ecology.org/events/regional.htm> for diary of future IALE events.