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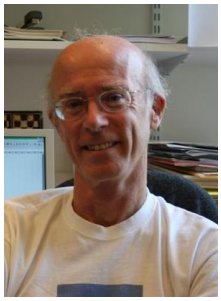
# Editor's Choice

*Journal of Ecology*, Volume 95, Issue 5 (September 2007)

In this new regular section, one of the Editors of the *Journal of Ecology* previews some of the highlights amongst the papers to be published shortly in the forthcoming issue. All of these papers can already be read Online Early. We hope that readers will find these selections interesting, and worth a more detailed look. We also recognise, however, that it is somewhat invidious to make "Editors' Choices", from the output of *Journal of Ecology*, given the large number of high quality submissions the *Journal* receives and publishes. For papers to survive the stringent peer-review process they must be of excellent quality.

As the aims and scope of the journal asserts, papers that are accepted for publication must be of broad interest to a wide range of readers, they must address important and current hypotheses and topics, and they must make significant advances by contributing to answering generic rather than specific questions in plant ecology.

We are confident that readers who explore the latest issues of the *Journal* well beyond the Editors' Selections will discover many papers that are destined to be among the most influential, widely read and cited in the subject for many years to come. This is as true now as it has been throughout the nearly one-hundred years of *Journal of Ecology*'s existence.



Mike Hutchings has selected four papers from Volume 95, Issue 5. Two are from Philip Grime's group. Both address the influence of within-species genetic diversity on community structure and function.

In the first of these (Whitlock *et al.*), DNA markers are used to analyse the relative abundance of genotypes of individual species in experimental grassland communities established five years previously, with different levels of genetic diversity. Striking differences have developed in the relative abundances of genotypes within species in the communities, and relative abundance is consistent across communities with different initial levels of genetic diversity. Thus, under the relatively constant conditions to which these experimental communities have been subjected, species abundance patterns were largely predictable from knowledge of the genetic composition of the component species populations. At the same time, a genotype x environment interaction became increasingly influential in determining genotype abundance at the community level as communities became more genetically impoverished.

*Raj Whitlock, J. Phil Grime, Rosemary Booth, Terry Burke*
The role of genotypic diversity in determining grassland community structure under constant environmental conditions
*Journal of Ecology* (OnlineEarly Articles).
doi:10.1111/j.1365-2745.2007.01275.x

In a companion paper, Fridley *et al.* show that the outcome of competition between two common grassland species (the grass *Koeleria macrantha* and the sedge *Carex caryophyllea*) in the conditions that they most commonly experience (grazed and infertile) depended on their specific genotype. In contrast, when the species competed together in habitat patches where fertility was higher, the grass was consistently competitively superior to

the sedge. Fridley *et al.* suggest that high within-species diversity may promote maintenance of diversity at the species level within communities where conditions are less favourable for growth, because the tendency of one species to consistently out-compete another may be prevented because of differences in competitive strategies and competitive ability. Together, these two papers expose new and important aspects of the ways in which genetic diversity determines the structure and diversity of grassland plant communities.

*Jason D. Fridley, J. Philip Grime, Mark Bilton*
Genetic identity of interspecific neighbours mediates plant responses to competition and environmental variation in a species-rich grassland
*Journal of Ecology* (OnlineEarly Articles).
doi:10.1111/j.1365-2745.2007.01256.x

In other important papers in Volume 95 Issue 5, Parmentier *et al.* identify climate and the size of the regional tree species pool as causes of lower tree α-diversity in African rain forests than in Amazonian rain forests, and Cramer *et al.* show that N2 fixation by African species of *Acacia* is strongly enhanced as a result of increased root nodulation when they are exposed to competition with grass for nitrogen.

*Ingrid Parmentier, Yadvinder Malhi, Bruno Senterre, Robert J. Whittaker, A. T. D. N., Alfonso Alonso, Michael P. B. Balinga, Adama Bakayoko, Frans Bongers, Cyrille Chatelain, James A. Comiskey, Renaud Cortay, Marie-Noël Djuikouo Kamdem, Jean-Louis Doucet, Laurent Gautier, William D. Hawthorne, Yves A. Issembe, François N. Kouamé, Lazare A. Kouka, Miguel E. Leal, Jean Lejoly, Simon L. Lewis, Louis Nusbaumer, Marc P. E. Parren, Kelvin S.-H. Peh, Oliver L. Phillips, Douglas Sheil, Bonaventure Sonké, Marc S. M. Sosef, Terry C. H. Sunderland, Juliana Stropp, Hans Ter Steege, Mike D. Swaine, M. G. P. Tchouto,*
The odd man out? Might climate explain the lower tree α-diversity of African rain forests relative to Amazonian rain forests?
*Journal of Ecology* (OnlineEarly Articles).
doi:10.1111/j.1365-2745.2007.01273.x

*M.D. Cramer, S.B.M. Chimphango, A. Van Cauter, M.S. Waldram And W.J. Bond*
Grass competition induces $N_2$ fixation in some species of African *Acacia*
*Journal of Ecology* (OnlineEarly Articles, available from 3 August 2007)
doi: 10.1111/j.1365-2745.2007.01285.x

As well as these contributions, this issue of the *Journal* contains many other papers assembled under the headings “Plant genetic and species diversity”, “Plant population dynamics and life history traits”, “Invasion ecology”, “Forest ecology”, “Plant-soil symbiotic interactions” and “Ecological networks”, and, as usual, the authors of these papers include many ecological “stars” and several young ecologists with stellar futures ahead of them. We hope you will enjoy reading the latest outputs from the *Journal of Ecology*. If you have any comments about our published output we would be pleased to hear them. Please write to Barney Davies at JEcol@britishecologicalsociety.org.