



## Editors' Award, vegetation survey, remote sensing and restoration

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### Vegetation survey and the Editors' Award 2011

Vegetation survey has always been an important aspect of vegetation science. In the history of International Association for Vegetation Science (IAVS), it was probably the original one. This approach has now been joined, in the science, in the Association, and in its journals, by many others: remote sensing, field experimentation, field and greenhouse experimentation, ecophysiology, and simulation. Still, survey has a major place.

In 2009, the Council of the IAVS agreed to a recommendation that to highlight the place of vegetation survey in the IAVS journals, it should be concentrated in the Association's newer journal, *Applied Vegetation Science*. Such studies can involve gradient analysis (ordination) but will often be classification, by formal phytosociology or by another system. They are often applied in their intent, notably for conservation, and are almost always valued for such applications when complete. We scheduled a Special Feature to mark this initiative, and after 2 yr of planning, soliciting papers, waiting for them to be written, and editing them, the Special Feature on Vegetation Survey appeared in the October issue of 2011, with eight excellent papers. This is not a one-off: it signals our wish to publish vegetation survey work that is of high quality and of interest to our international readership. Usually, this will mean that the work covers an area that is wide (perhaps across national borders) or of special interest or includes a methodological advance. The introduction to the Special Feature (Chytrý

et al. 2011) and the *Applied Vegetation Science* Author Guidelines on [OnlineLibrary.wiley.com/journal/10.1111/\(ISSN\)1654-109X](http://OnlineLibrary.wiley.com/journal/10.1111/(ISSN)1654-109X) elaborate on this. Although we do not normally sectionalize the journal, there will be a continuing Vegetation Survey section to highlight that this is one of the areas that the journal covers.

The *Applied Vegetation Science* Editors' Award for the outstanding paper of 2011 goes to a paper in the Special Feature: Walker et al. (2011) with their survey of pattern-ground ecosystems in North America. They sampled at five representative sites from the Arctic Circle northwards. Besides identifying vegetation patterns and diagnostic species, their data enabled them to describe the processes that cause the fascinating polygons, circles, and hummocks typically found in arctic tundra. Vegetation science needs knowledge of both patterns and processes. As winners of the 2011 Editors' Award, the senior author receives £100 worth of Wiley-Blackwell books of their choice, courtesy of our publishers since 2009, as well as featuring on the journal's web page.

Bölöni et al.'s (2011) monographic classification of Hungarian landscape into 41 types is another type of excellent vegetation survey paper. Their dataset was original, systematically covering the country. This would be enough to make it a worthy paper, but, in addition, they used novel analysis methods, with similarity measures that consider the fact that some predictors are more related and others are less related to each other. This approach has considerable potential for use in landscape ecology.

### Remote sensing

The paper by Wessels et al. (2011), 'Remotely sensed vegetation phenology for describing and predicting the biomes of South Africa', also impressed us. The journal has always had a special interest in vegetation survey by remote sensing, notably papers that survey a large area, or that introduce new techniques. The Wessels et al. paper covered in 3400 subdivisions the whole of southern Africa, a region with a wide range of climates, using daily records at different wavelengths to estimate the phenology of the vegetation. It derives a biome classification based on the data and compares it with a climate-based classification, showing how the phenology adds value. Neither the data source nor the model for fitting the land surface phenology is novel and that is a good thing, because it enables us

to accept the conclusions without wondering just how much of the result is an artifact of some peculiar and possibly misguided scheme. The greatest year-to-year variation in the start of the growing season was in semi-desert karoo. Prediction ability, compared to a more traditionally derived land-cover map, was good. The approach also gives information on phenology, which is difficult to collect on a large scale.

### Conservation and restoration

A quite different topic, but one of great interest to *Applied Vegetation Science*, is vegetation restoration, as in the study by Marchante et al. (2011). They show that the potential of seed pools for the restoration of coastal dunes after the removal of invasives depends on the length of the period from invasion to restoration. This is important for conservation.

Other papers address particular techniques for vegetation restoration. Padilla et al. (2011) investigated the use of shelter tubes to protect newly planted tree seedlings (they did not work for most species). Alday et al. (2011) compared succession on open-cast coal mines where topsoil had been added with those where it had not. With topsoil addition, succession was occurring, but without it the vegetation cover remained static, mainly comprising early successional species. Pouliot et al. (2011) studied cutover peatlands. Most natural bogs comprise a hummock-hollow micro-topography, but this is of course absent after peat mining. Successful vegetation restoration therefore requires that it be recovered. Pouliot et al. discovered that it could appear within 10–30 yr, but only if *Sphagnum* spp. fragments were added. The journal looks for papers that will be of interest to a wide readership, and these three meet the criteria. Seedling tubes are very widely used (and Padilla et al. tested eight species). Treatment after open-cast mining is a very common restoration problem. Restoration of a bog surface is more specialized, but because of the over-exploitation of bogs in many areas, it is a pressing problem (Gottlich & Cooke 1993).

In the April issue this year (vol. 15, issue 2), there will be a Special Feature devoted to vegetation restoration, based on a symposium of the Society for Ecological Restoration.

### The journal

We are very grateful for the excellent co-operation we receive from Wiley-Blackwell Ltd. They have co-operated with us to emphasize that the journal is owned by the IAVS by placing its logo on a slightly re-designed front cover. It now appears also on the first page of each paper, together with a layout re-design, the first major make-over since the journal started in 1998. We shall shortly be

changing the online contents pages for an issue to include a brief summary of each paper, with an image. The publishers are responsible for production and commercial aspects. IAVS, through its editors, is responsible for the content, but they are very ably helped in by the staff at Editorial Office Ltd.

We have been concerned about formats in electronic appendices (Supporting Information). We had allowed formats of the author's choice. However, we have seen how fast formats go out of date. Microfilms were once major archives in libraries, now they are hardly seen. The latest versions of MS-Word cannot read files created by the earliest versions, and new standards for preserving files are developed. *Applied Vegetation Science* appendices can contain a range of material: large figures and tables, raw data, calculation examples, computer program source, extra photographs, etc. All such material should in future be in PDF format. Several figures or photographs can appear in the same PDF, but in any case with the caption embedded in the PDF. Text that the reader might want to extract (including data, tables, and computer program source code) should be duplicated as a plain text file (TXT, or CSV if appropriate), with any data/table-columns separated by tabs. We do not know how future-proof all this will be, but it seems the most likely to survive.

The IAVS Annual Symposium for 2012, the 55th, will be held in Mokpo City, South Korea, on 23–28 Jul, and promises to be very well organized. These Symposia offer an opportunity for the editors to meet other vegetation scientists (notably authors and potential authors) and Wiley-Blackwell representatives. Anyone interested in plant communities should find it well worth attending.

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