

Applied Vegetation Science in 2010: new opportunities for the vegetation scientists

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Applied Vegetation Science in 2010

With this issue, *Applied Vegetation Science* is starting its thirteenth year of life. Under an anthropomorphic point of view, it is not anymore a child but a teenager. In reality, *Applied Vegetation Science* is now, together with its sister periodical *Journal of Vegetation Science*, a consolidated reference for the whole vegetation science community all over the world and the leader publication venue for applied uses and investigations on vegetation science, such as vegetation restoration, management and conservation.

The inclusion of the journal in the Wiley-Blackwell package greatly enlarged the number of institutions that subscribes to *Applied Vegetation Science* and, consequently, the potential readership and authorship. In 2009, the number of downloaded papers was extremely high, exceeding ten thousand! The number of downloads was really exceptional for some papers, even for recent ones. One of the papers published in the last volume (Pickett et al. 2009) at the end of November 2009, so in the same year of publication, has already been downloaded 277 times. This paper showed that some of the Clements' insights about community-level processes are well recognized in the present theoretical and practical framework of vegetation science and that these concepts are used to address the role community-level processes for applied issues such as ecological restoration (Pickett et al. 2009). This paper well

idealise the 'niche' of *Applied Vegetation Science*, i.e. the application theory and empirical knowledge of vegetation science for specific applications. Another thirteen papers published in 2009 have already been downloaded more than 100 times in 2009, confirming the high attention that vegetation scientists are dedicating to *Applied Vegetation Science*.

The online system provided by Wiley-Blackwell for journal management is allowing *Applied Vegetation Science* to increase the speed of paper management, including all phases from submission to production. Number of submissions is ca. 180 papers each year and acceptance rate is ca. 25%. This means that we can publish only a fraction of good papers. In 2009, almost 200 researchers were involved as reviewers for the journal (see App. 1) and we express our gratitude to all of them.

New Editors and new editorial focuses

The team of Editors of *Applied Vegetation Science* will be enlarged in 2010 by the appointments of Angelika Schwabe-Kratochwil, from the Technical University of Darmstadt, Germany, and Joop Schaminée, from Wageningen University, The Netherlands, as new Associate Editors. These scientists increase the number of editors who can perfectly deal with papers related to vegetation survey and description, two topics that have always been covered by the journal but that we are trying to promote and increase in importance. This is also reflected by the refined description of the journal aims and scope, which specify that the applied fields covered by *Applied Vegetation Science* include human impact on vegetation, particularly eutrophication and global change, nature conservation, nature management, restoration of plant communities and habitats of threatened plant species, and the planning of semi-natural and urban landscapes. Vegetation classification, survey, ecoinformatics, modelling and remote-sensing applications are especially welcome.

We are going to publish special features on vegetation survey and ecoinformatics. Moreover, we have collected relevant papers from both our

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journals into a virtual special issue accessible at our Wiley InterScience homepage. Our publisher Wiley-Blackwell kindly granted open access to this virtual special issue – all vegetation scientists all over the world can read these papers for free.

Editors' Award

Several papers published in 2009 were selected by Associate Editors or Chief Editors as particularly interesting. The Editors' Award goes to the paper by Chytrý et al. (2009) that reported the results emerging from one of the oldest well-designed fertilizer experiments in Central Europe and compared these data to the existing syntaxonomic units. Artifacts by Ellenberg indicator values due to the covariation of environmental factors were also revealed and reported. These authors found that long-term fertilizer application can 'create' different plant communities, i.e. vegetation units belonging to different phytosociological alliances and classes within a distance of a few metres, and highlighted the ecological causes that determine the floristic differences known by phytosociological knowledge. Another interesting result of this paper was that in phosphorus-limited habitats, the Ellenberg indicator values for nutrients derived from species composition can indicate availability of this nutrient rather than nitrogen.

The second nominated paper was the research published by Kalusova et al. (2009), showing that site-based factors, such as area, geographical location and average climate were more important than soil factors directly associated to productivity, such as the degree of waterlogging, phosphorous availability and pH, in determining species composition in plant communities of mesotrophic grasslands of Great Britain. The authors of this paper highlighted the ecological factors controlling species composition and evidenced the potential effects of their results in assessing the conservation and restoration potential of these plant communities. This is a clear way to use vegetation science methods and knowledge for applied themes.

The third nominated paper, by Reynolds & Haubensak (2009), was a review devoted to understanding the role of three soil-based drivers of plant communities: soil fertility, soil heterogeneity and microbes. Soil fertility and heterogeneity are classic topics in applied vegetation science, while the role of

microbial communities on vegetation processes is less known. Reynolds & Haubensak (2009) showed that the available studies in grassland communities do not always support theoretical expectations. In particular, ecological theory assumes a unimodal relationship between soil fertility and plant community diversity, but the mechanisms underlying these patterns are not well understood, and the attempts to manipulate soil fertility for applied scopes are variable. The theoretical expectations predict positive relations between soil heterogeneity and plant community diversity, but results of experimental works are discordant. About the effects of microbes they found little support for the hypothesis of microbially mediated niche partitioning, while they found a certain support for the plant-microbe feedbacks with some applications for restoration purposes. Reynolds & Haubensak (2009) concluded that understanding the interactions between these three soil drivers may better elucidate grassland functioning and promote our capacity of restoration.

The above mentioned papers only represent a fraction of the topics and approaches covered by *Applied Vegetation Science*, but exemplify the quality of these studies and their potential for both the advancement of ecological research or science and applied issues such as management or conservation.

References

- Chytrý, M., Hejman, M., Hennekens, S.M. & Schellberg, J. 2009. Changes in vegetation types and Ellenberg indicator values after 65 years of fertilizer application in the Rengen Grassland Experiment, Germany. *Applied Vegetation Science* 12: 167–176.
- Kalusova, V., Le Duc, M.G., Gilbert, J.C., Lawson, C.S., Gowing, D.J.G. & Marrs, R.H. 2009. Determining the important environmental variables controlling plant species community composition in mesotrophic grasslands in Great Britain. *Applied Vegetation Science* 12: 459–471.
- Pickett, S.T.A., Cadenasso, M.L. & Meiners, S.J. 2009. Ever since Clements: from succession to vegetation dynamics and understanding to intervention. *Applied Vegetation Science* 12: 9–21.
- Reynolds, H.L. & Haubensak, K.A. 2009. Soil fertility, heterogeneity, and microbes: towards an integrated understanding of grassland structure and dynamics. *Applied Vegetation Science* 12: 33–44.

Appendix 1

Table A1. Referees who served Applied Vegetation Science during 2009. Data from 01 January to 24 November 2009. Several referees kindly served multiple times. Spelling of names is based on ScholarOne database.

Raf Aerts
 Sami Aikio
 Thomas Allen
 Hans Andersen
 Andrew Ash
 Mark Atkinson
 Fabio Attorre
 Gunnar Austrheim
 Ingvar Backeus
 Suzanne Bayley
 Daniel Bebbler
 Boudewijn Beltman
 Pierre Binggeli
 Matthias Boer
 Terrance Booth
 Daniel Borcard
 Gudrun Bornette
 Zoltan Botta-Dukat
 Luca Bragazza
 Andrea Britton
 Mark Broich
 Hans Henrik Bruun
 Elise Buisson
 Neil Burgess
 Neil Burrows
 Richard Busing
 J. Jose Camarero
 Victoria Campanella
 Kimberly Carlson
 Jorge Castro
 Luis Cayuela
 Daniel Chapman
 Carolyn Copenheaver
 Eric Cosyns
 Matteo Dainese
 John David
 Miquel De Cáceres
 Jürgen Dengler
 Thomas Dirnboeck
 Philip Dixon
 Tobias W Donath
 Cecilia Dupré

Table A1. (Continued).

Juan Dupuy
 Regan Early
 Thomas Edwards
 Carsten Eichberg
 Chris Ellis
 Vera Lex Engel
 H. E. Epstein
 Don Faber-Langendoen
 Zhaodong Feng
 Alessandra Fidelis
 Jon Fjeldsa
 Gilles Foody
 Helana Freitas
 Kris French
 Margaret Friedel
 Peter Fule
 Richard Fynn
 Angus Gabutt
 Javier Gamarra
 Sarah Gergel
 Baerbel Gerowitt
 Joel Gramling
 Rossi Graziano
 Sabine Güsewell
 Steven Hall
 Leena Hamberg
 Yann Hautier
 Henrik Hedenås
 Monique Heijmans
 Michal Hejman
 Geoffrey Henebry
 Bruno Herault
 Alison Hester
 Norbert Hoelzel
 Jerry Holechek
 Patricia Holmes
 Olivier Honnay
 Maike Isermann
 J. Isselstein
 Gabi Jakobs
 John Janssen
 Michael Jennings
 Trevor Jones
 Paul Kardol
 Kathrin Kiehl
 Keith Kirby
 Katherine Kirkman
 Till Kleinebecker

Table A1. *(Continued).*

Johannes Kollmann
 Jochen Krauss
 Bernhard Krautzer
 Pavel Krestov
 Jan Kvet
 Mary Leck
 Shiqing Li
 Tatiana Loboda
 Tianxiang Luo
 Maohua Ma
 Simona Maccherini
 Neil MacDonald
 Adrian Manning
 Peter Manning
 Michela Marignani
 Tetsuya Matsui
 Toshikazu Matsumura
 Colin McClean
 Adriano S. Melo
 Francois Mesleard
 Richard Michalet
 Jennifer Miller
 Sue Milton
 Ruth Mitchell
 Scott Mitchell
 Aaron Moody
 John Morgan
 Daniel Moya
 Harini Nagendra
 Juri Nascimbene
 Marisa Nordenstahl
 Gregory Nowacki
 Jennifer Ogden
 Anna Orczewska
 Laszlo Orloci
 Fransisco Padilla
 Robin Pakeman
 V. Pavlu
 Begoña Peco
 George Perry
 Agnieszka Piernik
 Jan Plue
 Peter Potapov
 Karel Prach
 Krishna Prasad
 Katie Predick

Table A1. *(Continued).*

José Quero
 Erin Questad
 Fabien Quétier
 Anja Rammig
 Albert Reif
 Otilia Reyes
 Lydia Ries
 Duccio Rocchini
 Kevin Ryan
 Knut Rydgren
 David Saltz
 Roy Sanderson
 T. Sasaki
 Oliver Schweiger
 Roger Smith
 Nina Smits
 Janne Soininen
 Yi Song
 Jutta Stadler
 Michael Stambaugh
 Rachel Standish
 Dominic Zak
 Michaela Zeiter
 Guoping Tang
 Reyes Tarrega
 Cajo ter Braak
 Kenneth Thompson
 Mitsuru Tsubo
 Shiro Tsuyuzaki
 Susan Walker
 Marlies van der Welle
 Kimberly Van Niel
 Bregje Van Wesenbeeck
 Ilkka Vanha-Majamaa
 Tim Warner
 Maarten Waterloo
 Kris Verheyen
 Silke Werth
 Richard Williams
 Pascal Vittoz
 Annett Wolf
 John Volin
 Monika Wulf
 Weimin Xi
 Andrew Youngblood
