

Ecography

**E7762**

Blanchet, F. G., Bergeron, J. A. C., Spence, J. R. and He, F. 2012. Landscape effects of disturbance, habitat heterogeneity and spatial autocorrelation for a ground beetle (Carabidae) assemblage in mature boreal forest. – *Ecography* 35: xxx–xxx.

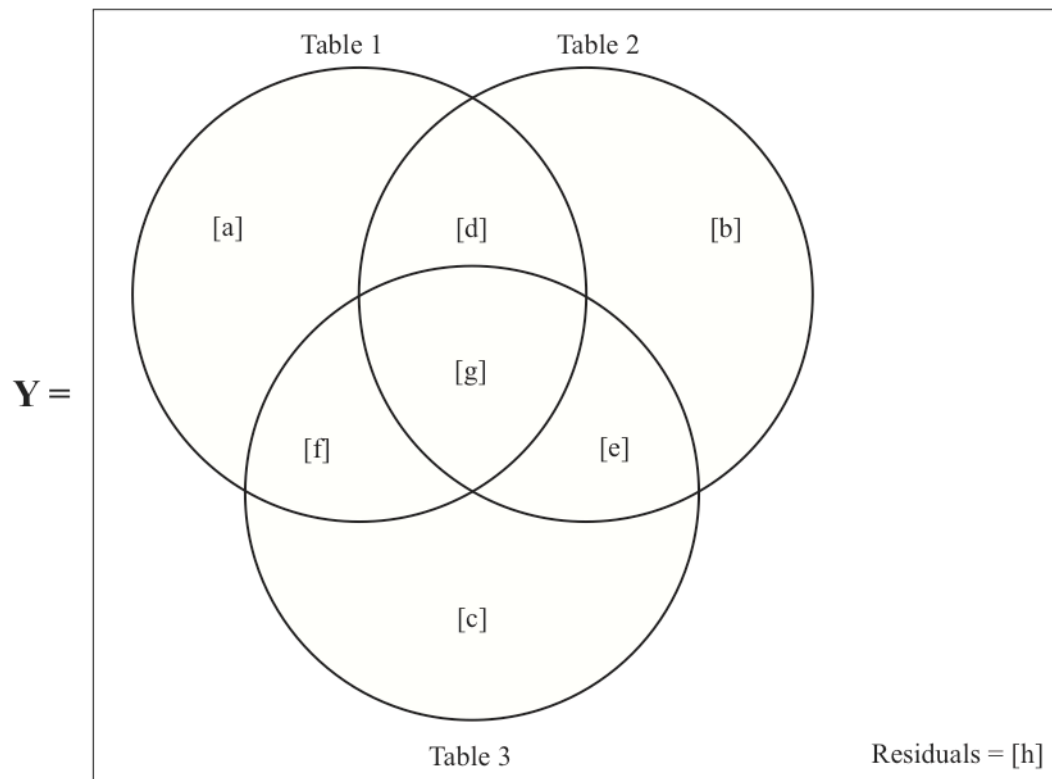
**Supplementary material**

## Appendix 1

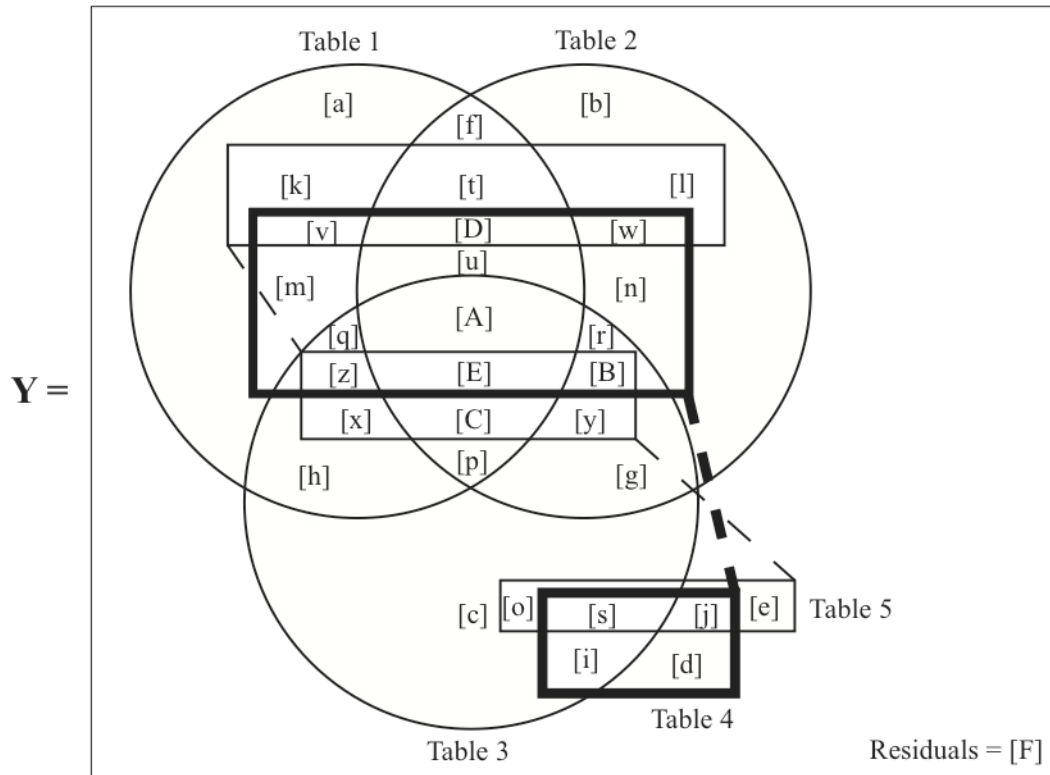
**Table A1** Soil drainage classification used in the study in comparison with Beckingham et al. (1996) classification.

Beckingham et al. (1996) classification	Drainage classification used in this study
Very Rapidly Drained	Extremely Rapidly Drained
Rapidly Drained	Very Rapidly Drained Rapidly Drained
Well Drained	Somewhat Rapidly Drained Well Drained
Moderately Well Drained	Somewhat Well Drained Moderately Well Drained
Imperfectly Drained	Somewhat Moderately Well Drained Imperfectly Drained
Poorly Drained	Somewhat Poorly Drained Poorly Drained
Very Poorly Drained	Very Poorly Drained Extremely Poorly Drained

## Appendix 2



**Figure A1** Conceptual Venn diagram presenting the variation partitioning results between three groups of explanatory variables.



**Figure A2** Conceptual Venn diagram presenting the variation partitioning results between five groups of explanatory variables. The contribution of the fourth set of explanatory variables is illustrated by the two rectangles in bold. The contribution of fifth set of explanatory variables is illustrated by the three non-bold rectangles.

## Appendix 3

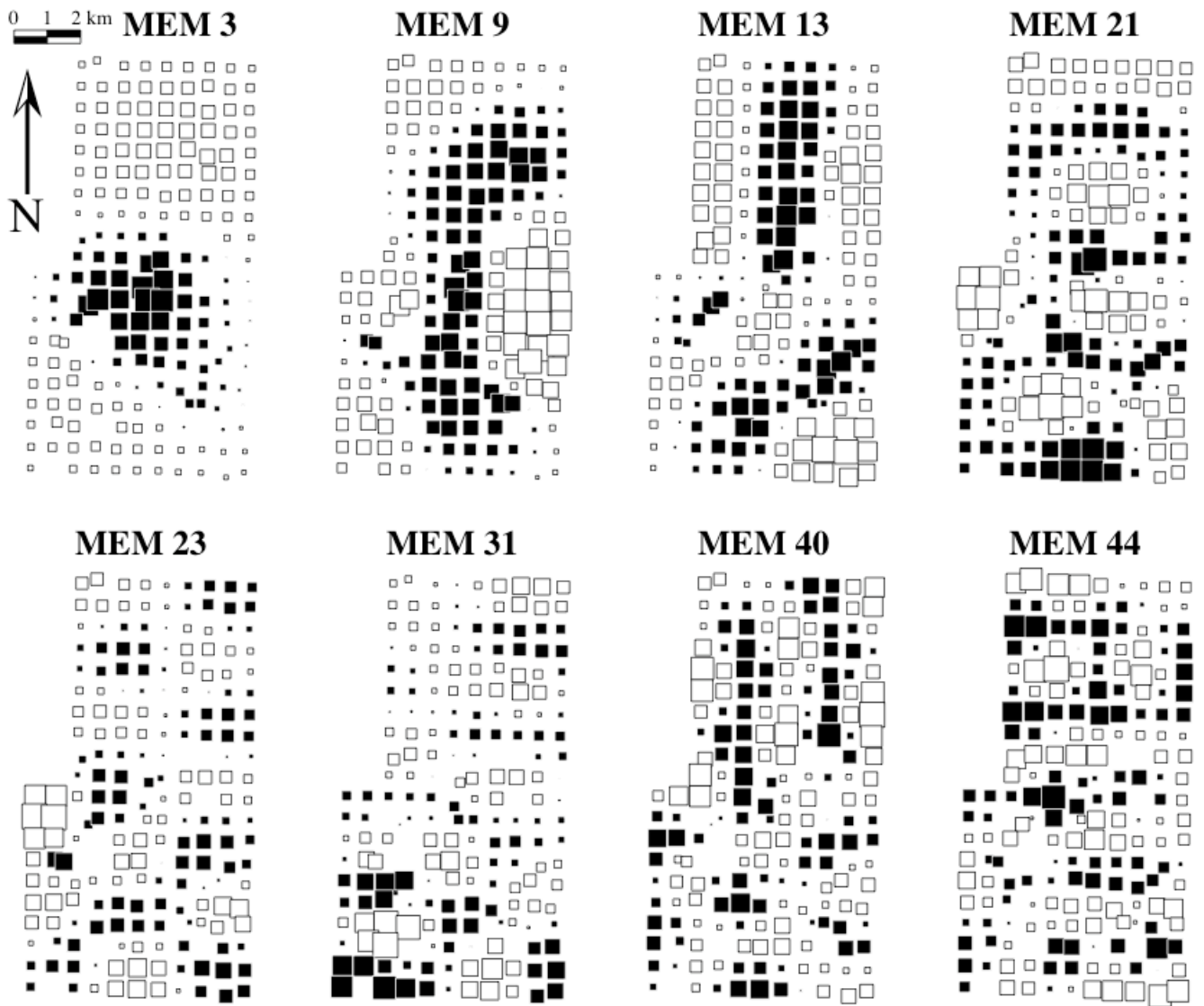
**Table A2**  $R^2_a$  and significance of spatial models (MEM) constructed with the different values of  $\alpha$ ,  $f_1$  and  $f_2$  proposed in the main text. The ground beetle data was Hellinger transformed. The MEM models were computed on detrended data. The results presented for MEM refers to a subset of eigenfunctions measuring positive autocorrelation only (all variables in the subset is associated to a positive Moran's  $I$ ).

Distance function	$\alpha$	$R^2_a$	$P$	$P_{\text{corr}}$
$f_1$	1	4.8%	< 0.001	0.002
	<b>2</b>	<b>5.8%</b>	<b>&lt; 0.001</b>	<b>0.002</b>
$f_2$	1	4.3%	0.002	0.004
	2	4.3%	< 0.001	0.002
Binary		4.3%	< 0.001	0.002

\* A Šidák correction was applied to the  $P$ -values.

\*\* Bold highlights the weight used to compute the results reported in the main text.

Note: The subset MEMs measuring negative autocorrelation are not presented because they yield a corrected  $P$ -value always equal to 1.



**Figure A3** MEM eigenfunctions selected to model ground beetle distribution. A square bubble size is proportional to the value associated to it, whereas the color reflects the signs of the value associated to the bubble (black = positive, white = negative).