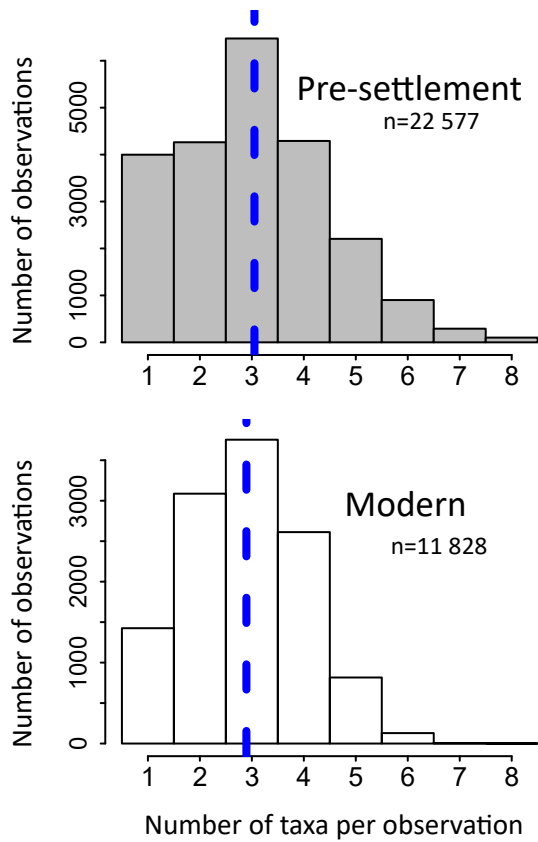


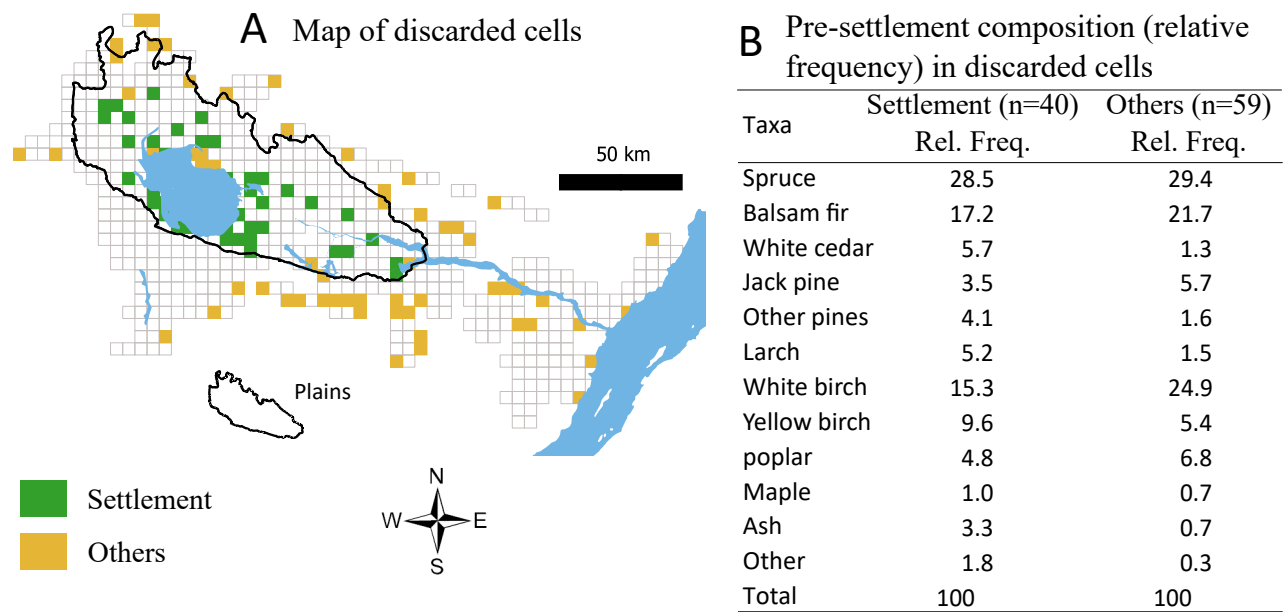
Supplementary Material for

**Forest Transformation Following European Settlement  
in the Saguenay-Lac-St-Jean Valley in Eastern Québec,  
Canada**

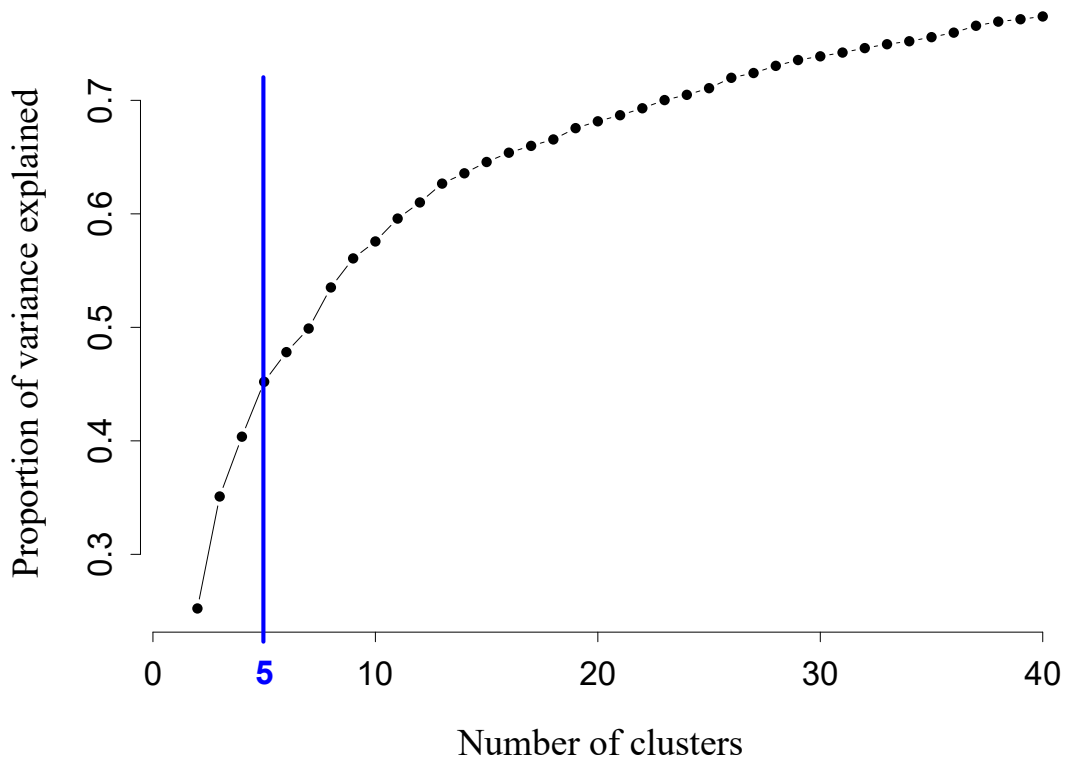
Sébastien Dupuis, Victor Danneyrolles, Jason Laflamme, Yan Boucher and Dominique  
Arseneault



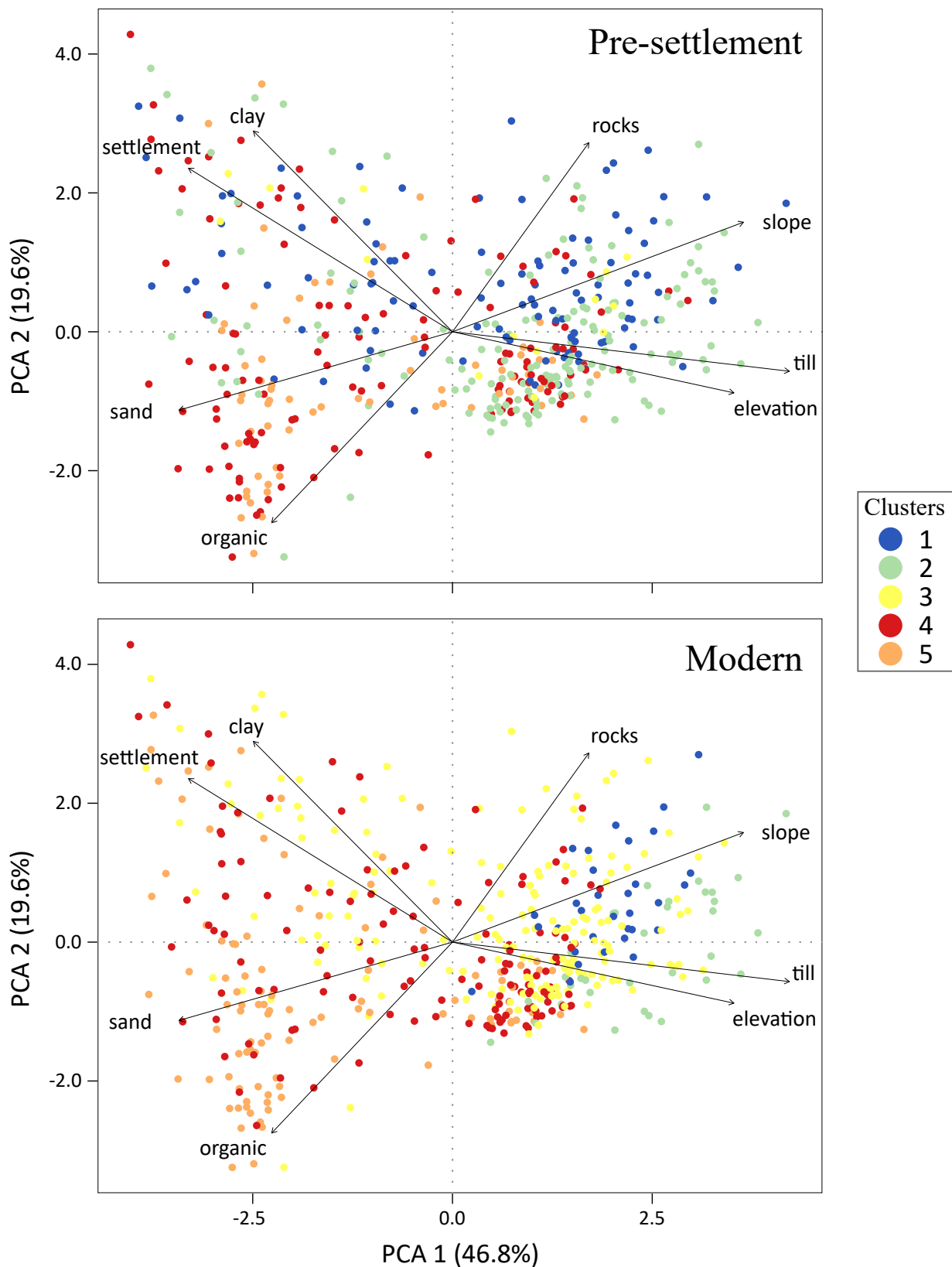
**Supplementary Figure 1.** Number of taxa per observation for pre-settlement and modern periods (after excluding taxa representing less than 5 % of the total basal area in each plot. Blue dashed lines represent the mean number of taxa per observation for each data set (pre-settlement = 3.1, modern = 2.9).



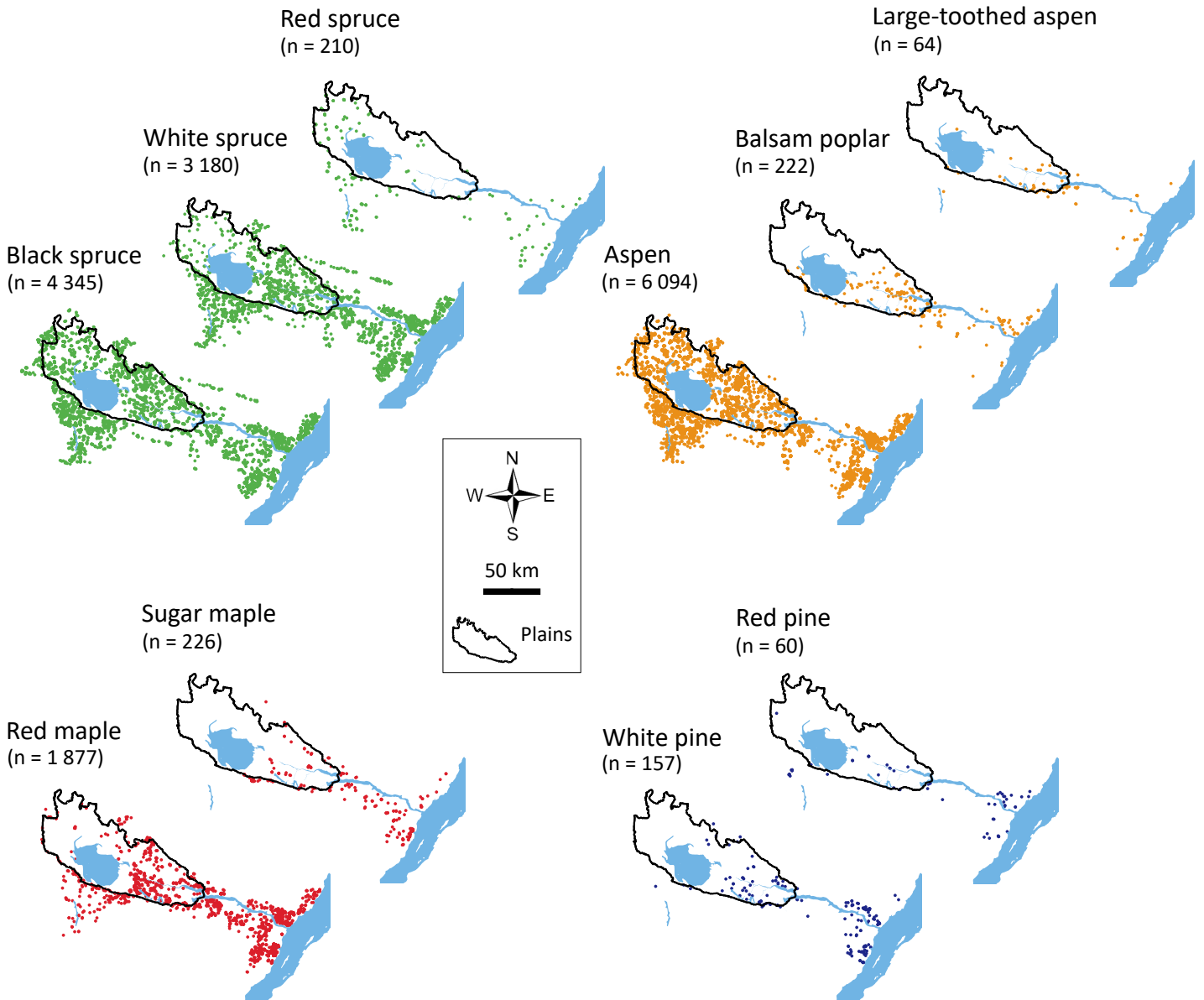
**Supplementary Figure 2.** Map (A) and pre-settlement composition (B) of the 99 grid cells discarded due to insufficient sample size (number of modern plots < 4). Green cells are covered by at least 10% (mean = 62%) of settlement areas (agriculture plus urban).



**Supplementary Figure 3.** Number of clusters and proportion of variance explained by the Ward-like hierarchical clustering of the 960 grid cells. The clustering was performed using a Bray-Curtis dissimilarity matrix calculated between each pair of cells based on their taxa relative frequency. An optimal number of five clusters was retained in order to minimize the number of clusters while maximizing the proportion of variance explained by the clustering.



**Supplementary Figure 4.** Principal component analysis (PCA) where axes 1 and 2 explain 46.8% and 19.6% of the environmental variability, respectively. Biplots show cell scores and correlations of environmental variables with axes 1 and 2. Cell colors represent the result of the Ward-like hierarchical clustering for pre-settlement (top) and modern (bottom) periods.



**Supplementary Figure 5.** Modern plots with presence of each species that were grouped at the genus level in this study.

**Supplementary Table 1.** Frequency of white and black spruces in modern plots within clusters.

Clusters	Modern plots	Frequency (%)	
	n	Black spruce	White spruce
1	688	28.8	36.9
2	419	57.5	32.7
3	4 219	25.9	34.0
4	3 385	47.7	30.1
5	2 534	38.3	5.3