

Figure S1 Geographical extent of plant data (Aitoff World Projection).

Figure S2 Geographical extent of vertebrate data (Aitoff World Projection).

Figure S3 β sim dissimilarity of all plant assemblages versus geographical distance in km and climatic dissimilarity, based on Euclidean distance of five averaged, standardized climatic variables.

Figure S4 β sim dissimilarity of native and non-native plant species assemblages versus geographical distance in North America and Europe.

Figure S5 β sim dissimilarity of all vertebrate species assemblages versus geographical distance in km and climatic dissimilarity, based on Euclidean distance of five averaged, standardized climatic variables

Table S1 Numbers of native and non-native species by continent and origin status (native and different groups of non-natives).

Appendix S1 Geographical extent of the vascular plant and vertebrate data.

Appendix S2 Species numbers and correlations of species dissimilarities and climatic or geographic distance, respectively.

Appendix S1 Geographical extent of the vascular plant and vertebrate data

In Europe, the Aegean Islands Azores, Baleares, Canary Islands, Corse, Crete, Cyprus, Franz Josef Land, Novaja Zemlya, Sardegna, Sicily and Svalbard, were excluded. Data of very small countries/districts were added to data of neighbouring countries/states, due to its small size and the often predominant urban character: in Europe data from Andorra were added to those of Spain, those of Vatican and San Marino to Italy, those of Luxembourg to Belgium, those of Liechtenstein to Austria, in North America those of the District of Columbia to Maryland.

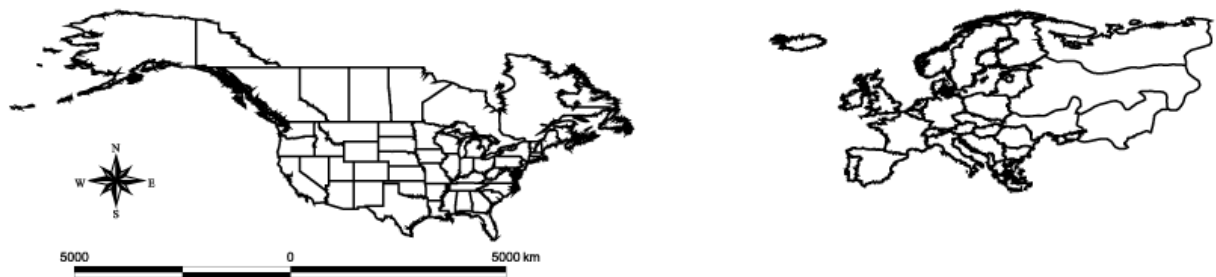


Figure S1 Geographic extent of plant data (Aitoff World Projection). We excluded the Northwest Territories and the Nunavut territory due to a lack of reliable information about non-native plants in these high latitude regions (Qian & Ricklefs, 2006).

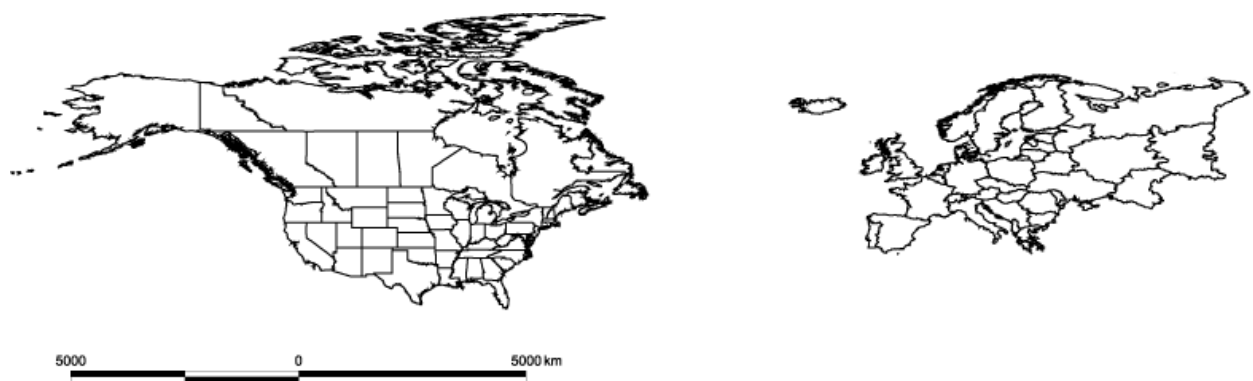


Figure S2 Geographic extent of vertebrate data (Aitoff World Projection). Data of Kaliningrad were added to those of ‘Russia West’ due to data availability.

REFERENCES

Qian, H. & Ricklefs, R. E. (2006) The role of exotic species in homogenizing the North American flora. *Ecology Letters*, **9**, 1293-1298.

Appendix S2 Species numbers and correlations of species dissimilarities and climatic or geographic distance, respectively

Table S1 Numbers of native and non-native species by continent and origin status (native and different groups of non-natives). The different groups of non-native species were defined according to their native and introduced range, i.e. global non-natives: originating outside of North America and Europe; continental non-natives: native in one continent and non-native in the other; regional non-natives: native in a region of the continent but non-native in another.

	North America	Europe	Plants	Vertebrates
	Native	/	14,663	1,981
Natives	/	Native	7,878	1,042
	Native	Native	605	272
	Non-native	Non-native	336	9
Global non-natives	Non-native	/	1,549	118
	/	Non-native	326	27
Continental non-natives	Non-native	Native	1,276	17
	Native	Non-native	214	10
	Non-native/Native	/	/	160
	/	Non-native/Native	/	51
Regional non-natives	Non-native/Native	Non-native	/	19
	Non-native/Native	Native	/	13
	Non-native/Native	Non-native/Native	/	3
	Non-native	Non-native/Native	/	22
	Native	Non-native/Native	/	3
Σ	Plants 18,643	10,635		
	(Native/Non-native)	(9,759/876)		
	(15,482/3,161)			
Σ	Vertebrates 2,627	1,488		
	(Native/Non-native)	(1,344/144)		
	(2,266/361)			

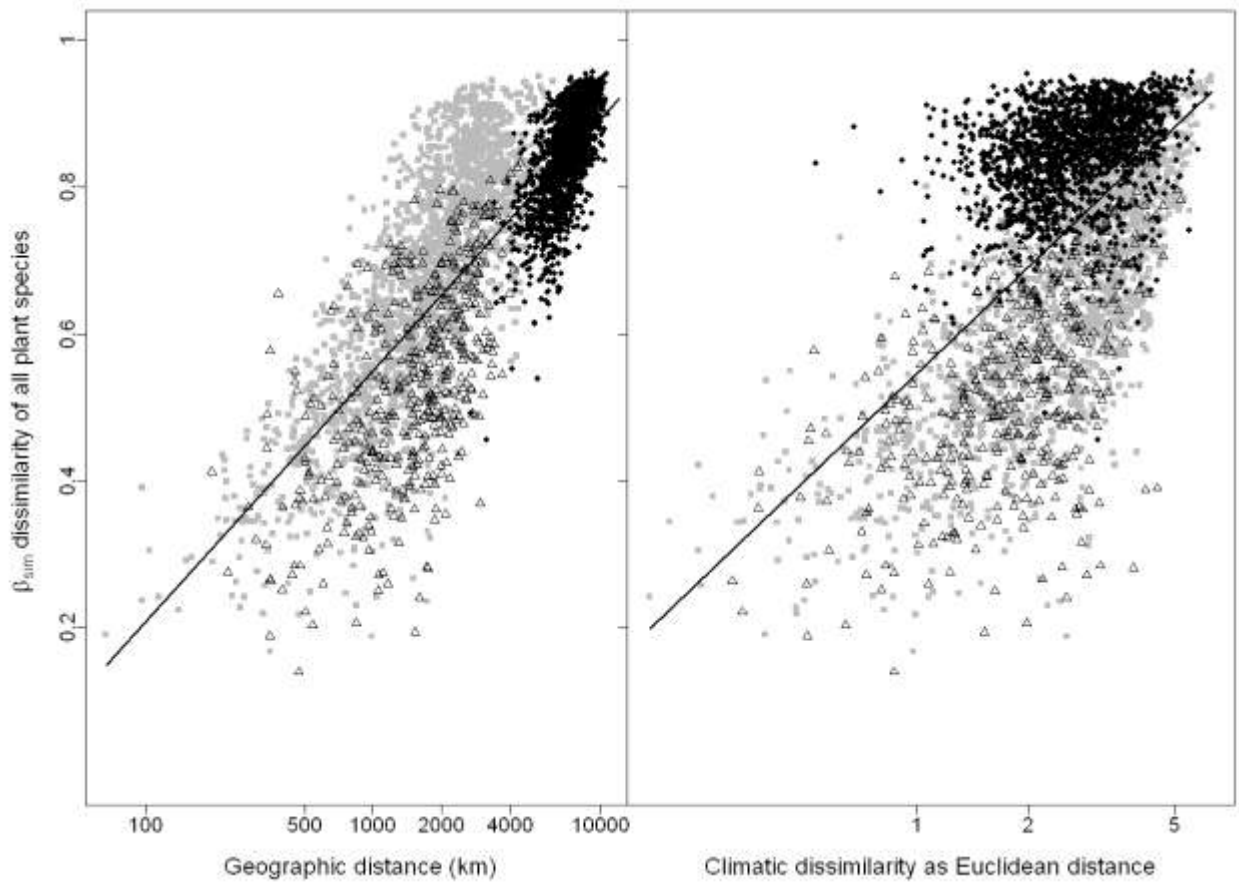


Figure S3 β_{sim} dissimilarity of all plant assemblages vs. geographic distance in km ($R^2 = 0.69$, $y = 0.152 \log(x) - 0.490$; 999 permutations, $z\text{-score} = 46.992$, $p < 0.001$) and climatic dissimilarity, based on Euclidean distance of 5 averaged, standardized climatic variables (maximum temperature of the warmest month, minimum temperature of the coldest month, precipitation seasonality, precipitation of July and January; $R^2 = 0.36$, $y = 0.208 \log(x) + 0.548$; 999 permutations, $z\text{-score} = 33.098$, $p < 0.001$). Points represent pair-wise dissimilarities between regions, namely black circles: cross-continental comparisons between North American and European regions; grey squares: North American regions; open triangles: European regions.

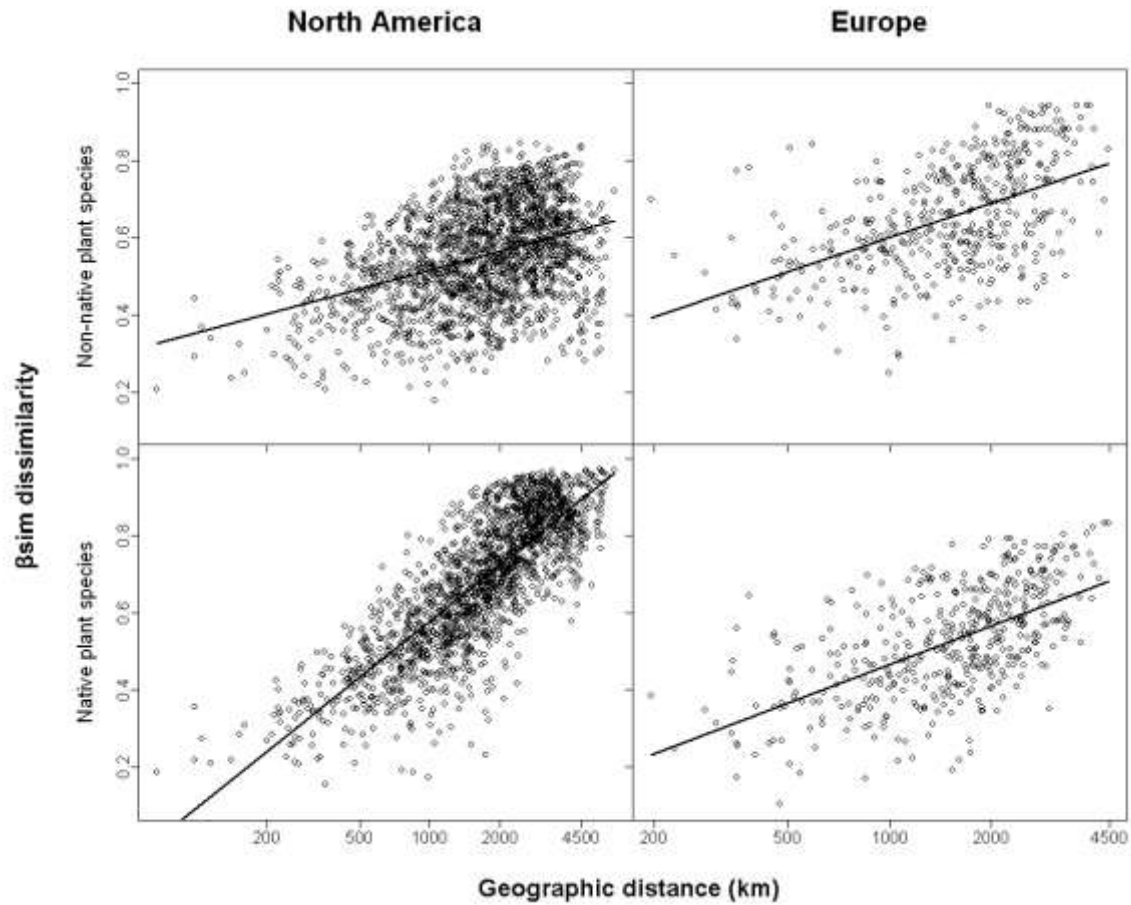


Figure S4 β_{sim} dissimilarity of native and non-native plant species assemblages vs. geographic distance in North America and Europe. Lines are ordinary least square linear fits to the data. For non-native plant species in North America the regression line is calculated as: $y = 0.070 \log(x) + 0.029$ ($R^2 = 0.67$); for native plant species in North America: $y = 0.209 \log(x) - 0.867$ ($R^2 = 0.57$); for non-native plant species in Europe: $y = 0.128 \log(x) - 0.283$ ($R^2 = 0.26$) and for native plant species in Europe: $y = 0.144 \log(x) - 0.528$ ($R^2 = 0.35$). All results are significant at $p < 0.001$ after 999 permutations. The x-axis is log scaled. Points represent pairwise dissimilarities between regions, namely black circles: cross-continental comparisons between North American and European regions; grey squares: North American regions; open triangles: European regions.

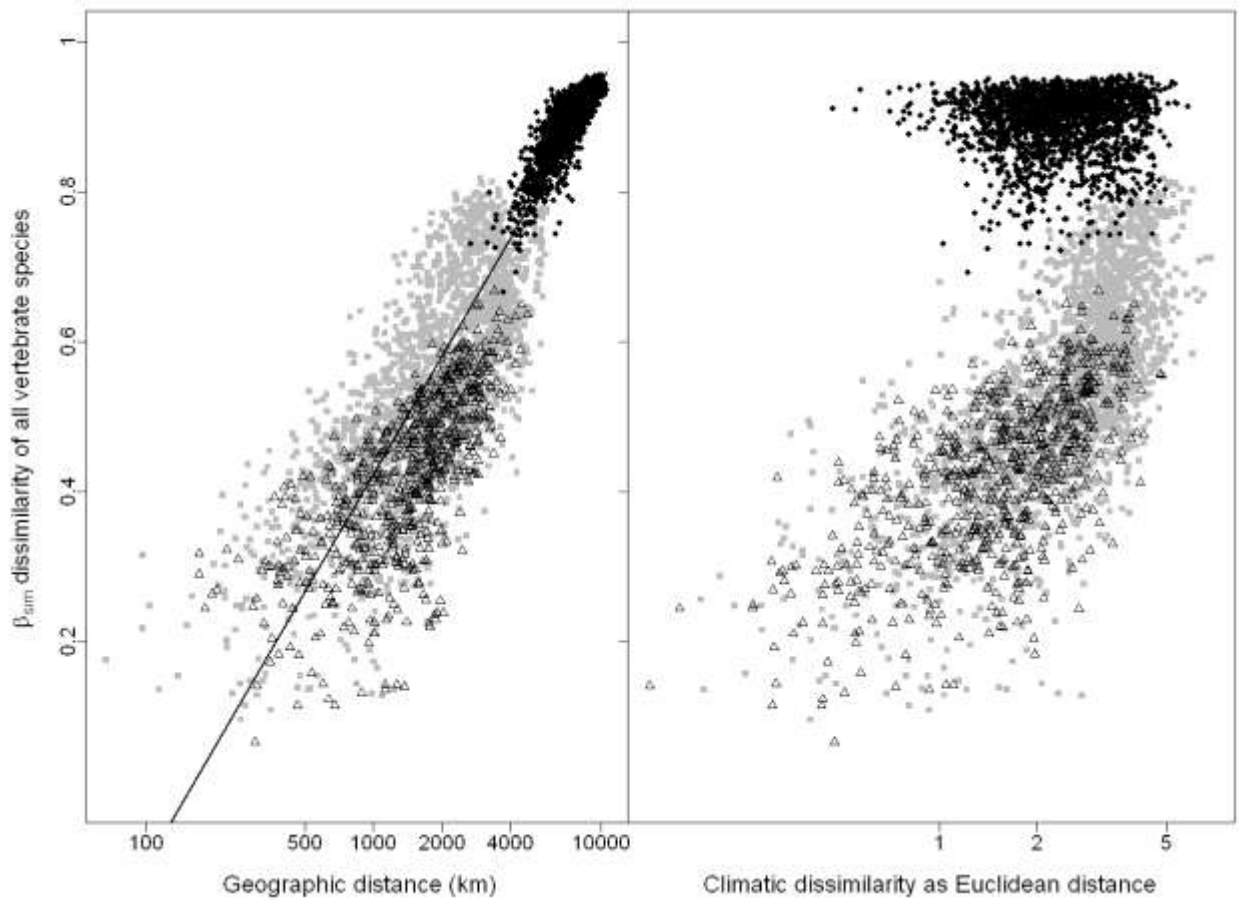


Figure S5 β_{sim} dissimilarity of all vertebrate species assemblages vs. geographic distance in km ($y = 0.226 \log(x) - 1.138$; $R^2 = 0.86$; 999 permutations, $z\text{-score} = 64.775$, $p < 0.001$) and climatic dissimilarity, based on Euclidean distance of 5 averaged, standardized climatic variables (maximum temperature of the warmest month, minimum temperature of the coldest month, precipitation seasonality, precipitation of July and January). Points represent pair-wise dissimilarities between regions, namely black circles: cross-continental comparisons between North American and European regions; grey squares: North American regions; open triangles: European regions. Linear regression for the relationship with climate was not applicable. X-axes are log scaled.