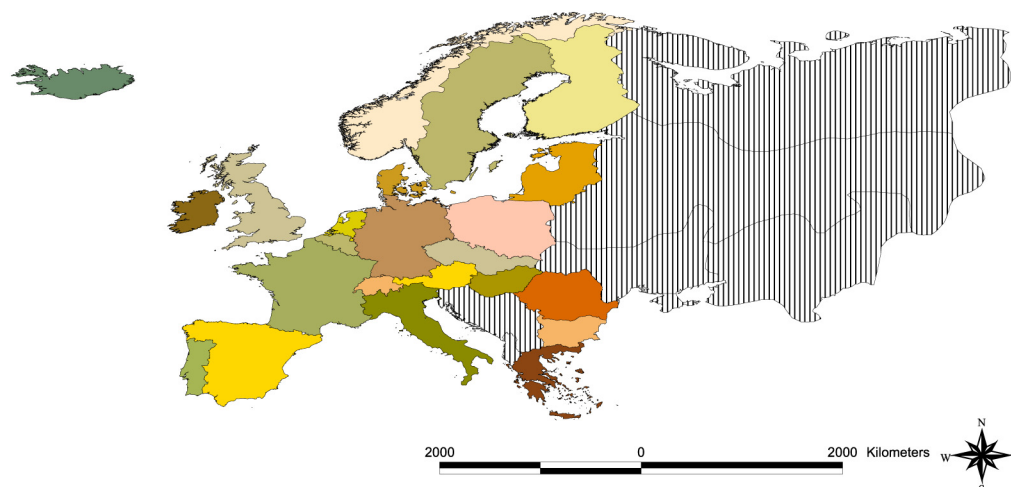


# Supporting Information

Winter et al. 10.1073/pnas.0907088106



**Fig. S1.** Geographic extent of study region was jointly defined by the definition of regions in *Flora Europaea* (1), by the availability of national Red Lists (2–27), and by the availability of data on alien species in the DAISIE database (28) ([www.europe-aliens.org](http://www.europe-aliens.org)). Shaded areas were excluded because of data availability of Red Lists or alien species. On the basis of *Flora Europaea*, some country data had to be merged: the Baltic countries (Estonia, Latvia, Lithuania, and Kaliningrad), Czech Republic and Slovakia, Belgium and Luxembourg, Austria and Liechtenstein, and Northern Ireland and Republic of Ireland. Data of continental Greece could not be disentangled from all island data. For the purpose of this study the region of Greece encompasses continental Greece, the Ionian Islands, West Aegean Islands, North Aegean Islands, and Cyclades. The area of France included the Channel Islands, Finland included the Åland Islands, and Sweden included Öland and Gotland.

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**Table S1. Numbers and percentages of plant species with different status in European regions**

Country	No. of species			Percentages in current flora	
	Extinct	Native	Alien	Extinct species	Alien species
Austria	32	2,943	155	1.1	5.0
Baltic states	15	1,208	396	1.2	24.7
Belgium	53	1,378	425	3.7	23.6
Bulgaria	30	2,957	548	1.0	15.6
Czechoslovakia	87	2,503	272	3.4	9.8
Denmark	22	1,104	757	2.0	40.7
Finland	7	1,078	816	0.7	43.1
France	23	4,395	1,236	0.5	22.0
Germany	38	2,656	415	1.4	13.5
Great Britain	24	1,625	1,133	1.5	41.1
Greece	9	3,990	260	0.2	6.1
Hungary	41	2,678	159	1.5	5.6
Iceland	1	429	80	0.2	15.7
Ireland	12	1,022	320	1.2	23.9
Italy	15	4,674	461	0.3	9.0
Netherlands	45	4,541	225	1.0	4.7
Norway	15	1,340	598	1.1	30.9
Poland	41	2,153	125	1.9	5.5
Portugal	6	2,367	297	0.3	11.2
Romania	61	3,123	100	1.9	3.1
Spain	18	1,501	498	1.2	24.9
Sweden	20	1,475	823	1.3	35.8
Switzerland	41	2,023	244	2.0	10.8
Σ total	537	10,928	3,353	1.3% ± 0.9%*	18.5% ± 12.6%*

See main article text for definition of categories. Species can occur repeatedly in different categories of different countries; for example, horse chestnut (*Aesculus hippocastanum*) is native in Greece but alien in many other European countries. Some countries had to be merged owing to the geographic delimitation of data used in *Flora Europaeae* (see Fig. S1 for details). Alien species could be subdivided into (i) species being alien to all European regions ( $n = 1,621$ ), and (ii) species being native to one region and alien to another ( $n = 1,726$ ); 6 of those species are considered as extinct natives in some regions. Extinct species could be subdivided into (i) species being parts of current flora in other regions ( $n = 468$ ), and (ii) species not occurring in other regions ( $n = 69$ ).

\*Mean ± SD.

Table S2. Phylogenetic  $\alpha$ -diversity calculated as average taxonomic distinctness ( $\Delta^+$ ) per European countries

Country	Combined effect	Extinct effect	Alien effect
Austria	-0.0005	0.0001	-0.0006
Baltic states	-0.0023	-0.0005	-0.0017
Belgium	-0.0094	-0.0026	-0.0069
Bulgaria	-0.0081	0.0009	-0.0090
Czechoslovakia	-0.0052	-0.0010	-0.0042
Denmark	-0.0022	-0.0011	-0.0011
Finland	-0.0124	0.0000	-0.0124
France	-0.0021	-0.0004	-0.0017
Germany	-0.0055	0.0002	-0.0056
Great Britain	-0.0105	0.0008	-0.0113
Greece	-0.0017	0.0003	-0.0020
Hungary	-0.0025	-0.0009	-0.0016
Iceland	0.0058	-0.0004	0.0062
Ireland	-0.0045	-0.0001	-0.0044
Italy	0.0011	-0.0001	0.0012
Netherlands	-0.0015	-0.0004	-0.0010
Norway	-0.0090	0.0005	-0.0095
Poland	-0.0093	-0.0021	-0.0073
Portugal	-0.0048	-0.0004	-0.0044
Romania	-0.0016	0.0000	-0.0016
Spain	-0.0070	0.0004	-0.0074
Sweden	-0.0028	0.0002	-0.0030
Switzerland	-0.0030	-0.0015	-0.0015
$\Sigma$ total	-0.0043 $\pm$ 0.0041*	-0.0004 $\pm$ 0.0008*	-0.004 $\pm$ 0.0042*

See main article text for definition of categories. Some countries had to be merged owing to the geographic delimitation of data used in *Flora Europaea* (see Fig. S1 for details). Combined effect is calculated as  $\Delta^+_{(\text{current total flora})} - \Delta^+_{(\text{original flora})}$ ; extinct effect as  $\Delta^+_{(\text{current native flora})} - \Delta^+_{(\text{original flora})}$ ; and alien effect as  $\Delta^+_{(\text{current total flora})} - \Delta^+_{(\text{current native flora})}$ .

\*Mean  $\pm$  SD.