

Supplementary Materials

Table S1. Checklist of endemic species of the genus *Viburnum* in China, with their endangered status, and AUC values for species distribution model results. NT: Near Threatened; VU: Vulnerable; EN: Endangered; CR: Critically Endangered; NE: Not Evaluated; RS: Rare species. DD: Data Deficient.

Checklist of Endemic Taxa of <i>Viburnum</i> L. (Adoxaceae) in China				Conservation		Species Distribution Model (MaxEnt)	
Section Groups	Chinese Name	Species Name	Altitude Range	Current IUCN Categories	Rare species	Number of Records	AUC
裸芽组 Sect. <i>Viburnum</i>	醉鱼草状荚蒾	<i>V. buddleifolium</i> C. H. Wright	0~2000 m	NE	RS	36	0.989
	金佛山荚蒾	<i>V. chinshanense</i> Graebner	0~2000 m	NE	NA	101	0.973
	密花荚蒾	<i>V. congestum</i> Rehder	500~3000 m	NE	NA	99	0.970
	壮大荚蒾	<i>V. glomeratum</i> D. Don subsp. <i>magnificum</i> (P. S. Hsu) P. S. Hsu	0~1500 m	NE	NA	21	0.969
	圆叶荚蒾	<i>V. glomeratum</i> D. Don subsp. <i>rotundifolium</i> (P. S. Hsu) P. S. Hsu	2000~3500 m	NE	RS	3	NA
	绣球荚蒾	<i>V. Macrocephalum</i> Fortune f. <i>macrocephalum</i>	0~1000 m	NE	RS	1	NA
	琼花	<i>V. Macrocephalum</i> Fortune f. <i>keteleeri</i> (Carrière) Rehder	0~1000 m	NE	NA	41	0.972
	皱叶荚蒾	<i>V. rhytidophyllum</i> Hemsley	0~2500 m	NE	NA	238	0.968
	陕西荚蒾	<i>V. schensianum</i> Maximowicz	0~3500 m	NE	NA	356	0.959
	烟管荚蒾	<i>V. utile</i> Hemsley	0~2000 m	NE	NA	524	0.955
合轴组 Sect. <i>Pseudotinus</i> C. B. Clarke	合轴荚蒾	<i>V. sympodiale</i> Graebner	500~3500 m	NE	NA	163	0.952
球核组 Sect. <i>Tinus</i> (Miller) C. B. Clarke	樟叶荚蒾	<i>V. cinnamomifolium</i> Rehder	500~2500 m	NE	NA	83	0.978
	川西荚蒾	<i>V. davidii</i> Franchet	1000~3500 m	NE	RS	26	0.994
	毛枝荚蒾	<i>V. atrocyaneum</i> C. B. Clarke f. <i>harryanum</i> (Rehder) P.S. Hsu	1000~3000 m	NE	NA	20	0.976
	狭叶球核荚蒾	<i>V. Propinquum</i> Hemsley var. <i>mairei</i> W. W. Smith	0~1000 m	NE	NA	51	0.959
	三脉叶荚蒾	<i>V. triplinerve</i> Handel-Mazzetti	0~1000 m	VU	RS	67	0.985
圆锥组 Sect. <i>Solenotinus</i> Candolle	短序荚蒾	<i>V. brachybotryum</i> Hemsley	0~2000 m	NE	NA	169	0.963
	短筒荚蒾	<i>V. brevitubum</i> (P. S. Hsu) P. S. Hsu	1000~3000 m	NE	NA	23	0.953
	漾濞荚蒾	<i>V. chingii</i> P. S. Hsu var. <i>chingii</i>	1500~3000 m	NE	NA	72	0.983
	伞房荚蒾	<i>V. corymbiflorum</i> P. S. Hsu subsp. <i>corymbiflorum</i>	500~3500 m	NE	NA	150	0.958
	苹果叶荚蒾	<i>V. corymbiflorum</i> P. S. Hsu subsp. <i>malifolium</i> P. S. Hsu	1500~2500 m	DD	RS	9	0.992

	香荚蒾	<i>V. farreri</i> Stearn	1500~3000 m	NE	NA	24	0.878
	巴东荚蒾	<i>V. henryi</i> Hemsley	500~3000 m	NE	NA	195	0.969
	长梗荚蒾	<i>V. longipedunculatum</i> (P. S. Hsu) P. S. Hsu	1000~2000 m	NE	NA	7	0.933
	台湾珊瑚树	<i>V. Odoratissimum</i> Ker Gawler var. <i>arboricola</i> (Hayata) Yamamoto	1500~2500 m	NE	RS	1	NA
	少花荚蒾	<i>V. oliganthum</i> Batalin	500~2500 m	NE	NA	302	0.964
	峨眉荚蒾	<i>V. omeiense</i> P. S. Hsu	1000~1500 m	CR	RS	2	NA
	台东荚蒾	<i>V. taitoense</i> Hayata	500~2500 m	NE	RS	46	0.985
	腾越荚蒾	<i>V. tengyuehense</i> (W. W. Smith) P. S. Hsu var. <i>tengyuehense</i>	1000~3000 m	NE	NA	17	0.973
	多脉腾越荚蒾	<i>V. tengyuehense</i> (W. W. Smith) P. S. Hsu var. <i>polyneurum</i> (P. S. Hsu) P. S. Hsu	2000~2500 m	NT	RS	1	NA
	横脉荚蒾	<i>V. trabeculosum</i> C. Y. Wu ex P. S. Hsu	1500~2500 m	VU	RS	10	0.998
	云南荚蒾	<i>V. yunnanense</i> Rehder	2000~3000 m	EN	RS	5	0.974
蝶花组 Sect. <i>Tomentosa</i> (Maximowicz) Nakai	蝶花荚蒾	<i>V. hanceanum</i> Maximowicz	0~1000 m	NE	NA	133	0.975
	台湾蝴蝶戏珠花	<i>V. plicatum</i> Thunberg var. <i>formosanum</i> Y. C. Liu & C. H. Ou	1500~3000 m	NE	RS	6	0.997
大叶组 Sect. <i>Megalotinus</i> (Maximowicz) Rehder	广叶荚蒾	<i>V. amplifolium</i> Rehder	1000~2000 m	NE	RS	21	0.995
	侧花荚蒾	<i>V. laterale</i> Rehder	500~1000 m	NE	RS	1	NA
	光果荚蒾	<i>V. leiocarpum</i> P. S. Hsu var. <i>leiocarpum</i>	1000~2000 m	NE	NA	14	0.993
	斑点光果荚蒾	<i>V. leiocarpum</i> P. S. Hsu var. <i>punctatum</i> P. S. Hsu	1000~2500 m	NE	RS	22	0.998
	大果鳞斑荚蒾	<i>V. punctatum</i> Buchanan-Hamilton ex D. Don var. <i>lepidotulum</i> (Merrill & Chun) P. S. Hsu	0~1500 m	NE	NA	56	0.987
	三叶荚蒾	<i>V. ternatum</i> Rehder	0~1500 m	NE	NA	108	0.969
齿叶组 Sect. <i>Odontotinus</i> Rehder	桦叶荚蒾	<i>V. betulifolium</i> Batalin	0~4000 m	NE	NA	1265	0.912
	金腺荚蒾	<i>V. chunii</i> P. S. Hsu	0~2000 m	NE	NA	103	0.973
	粤赣荚蒾	<i>V. dalzielii</i> W. W. Smith	0~1500 m	NE	NA	24	0.974
	直角荚蒾	<i>V. foetidum</i> Wallich var. <i>rectangulatum</i> (Graebner) Rehder	500~3000 m	NE	NA	192	0.959
	珍珠荚蒾	<i>V. foetidum</i> Wallich var. <i>ceanothoides</i> (C. H. Wright) Handel-Mazzetti	500~3000 m	EN	RS	203	0.969
	南方荚蒾	<i>V. fordiae</i> Hance	0~1500 m	NE	NA	918	0.937
	台中荚蒾	<i>V. formosanum</i> (Hance) Hayata var. <i>formosanum</i>	0~2000 m	NE	RS	23	0.998

毛枝台中莢蒾	<i>V. formosanum</i> (Hance) Hayata var. <i>pubigerum</i> P. S. Hsu	0~1500 m	NE	NA	50	0.980
光萼莢蒾	<i>V. formosanum</i> (Hance) Hayata subsp. <i>leiogynum</i> P. S. Hsu	0~2500 m	NE	NA	59	0.979
衡山莢蒾	<i>V. hengshanicum</i> Tsiang ex P. S. Hsu	500~1500 m	NE	NA	41	0.980
全葉莢蒾	<i>V. integrifolium</i> Hayata	1500~2000 m	NE	RS	8	0.996
甘肅莢蒾	<i>V. kansuense</i> Batalin	2000~4000 m	VU	RS	120	0.974
披針形莢蒾	<i>V. lancifolium</i> P. S. Hsu	0~1000 m	NE	NA	53	0.990
長傘梗莢蒾	<i>V. longiradiatum</i> P. S. Hsu & S. W. Fan	500~3000 m	NT	RS	38	0.990
黑果莢蒾	<i>V. melanocarpum</i> P. S. Hsu	500~1500 m	NT	RS	35	0.988
小葉莢蒾	<i>V. parvifolium</i> Hayata	2500~3500 m	NE	RS	3	NA
常綠莢蒾	<i>V. sempervirens</i> K. Koch var. <i>sempervirens</i>	0~2000 m	NE	NA	221	0.973
具毛常綠莢蒾	<i>V. sempervirens</i> K. Koch var. <i>trichophorum</i> Handel-Mazzetti	0~1500 m	NE	NA	146	0.964
茶莢蒾	<i>V. setigerum</i> Hance	0~2000 m	NE	NA	386	0.946
瑤山莢蒾	<i>V. squamulosum</i> P. S. Hsu	500~1000 m	DD	RS	4	NA
夙陽山莢蒾	<i>V. fengyangshanense</i> Z. H. Chen, P. L. Chiu & L. X. Ye	1000~2000 m	NE	RS	3	NA

Table S2. Spearman's rank correlation coefficients for 8 bio-climate predictors (spearman's rho < 0.80). BIO2 = Mean Diurnal Range, BIO3 = Isothermality (BIO2/BIO7) ($\times 100$), BIO4 = Temperature Seasonality (standard deviation $\times 100$), BIO10 = Mean Temperature of Warmest Quarter, BIO11 = Mean Temperature of Coldest Quarter, BIO15 = Precipitation Seasonality (Coefficient of Variation), BIO19 = Precipitation of Coldest Quarter.

	Bio2	Bio3	Bio4	Bio10	Bio11	Bio15	Bio18	Bio19
bio2	1	0.3062	0.3883	-0.4943	-0.6677	0.5899	-0.7062	-0.7322
bio3		1	-0.7187	-0.4854	0.2107	0.2374	0.0951	-0.1252
bio4			1	0.1394	-0.6841	0.2155	-0.4875	-0.406
bio10				1	0.6267	-0.4593	0.3371	0.4298
bio11					1	-0.5084	0.6321	0.6381
bio15						1	-0.256	-0.6269
bio18							1	0.6186
bio19								1

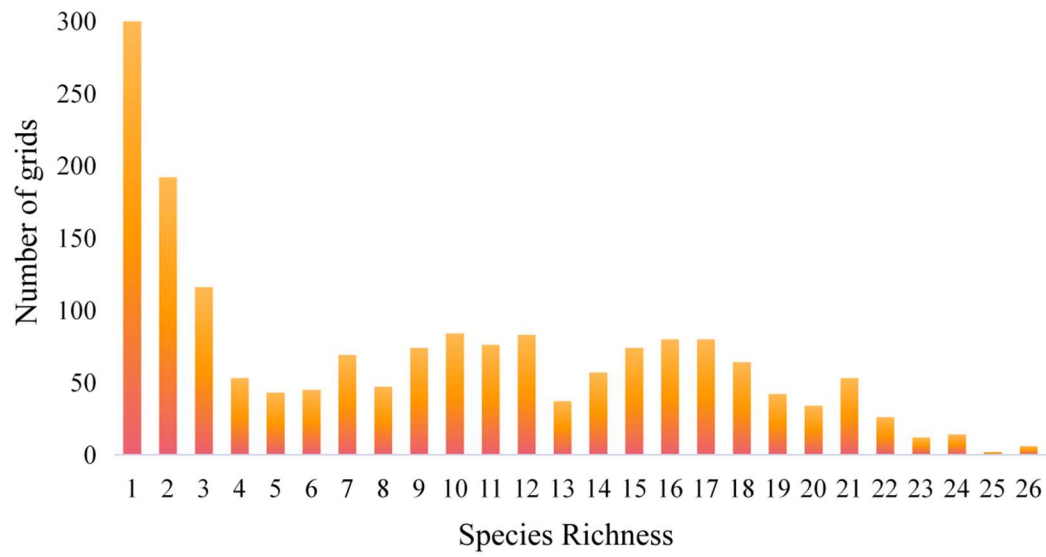


Figure S1. Frequency distribution of endemic richness of genus *Viburnum* in China within the 50 × 50 km grids.

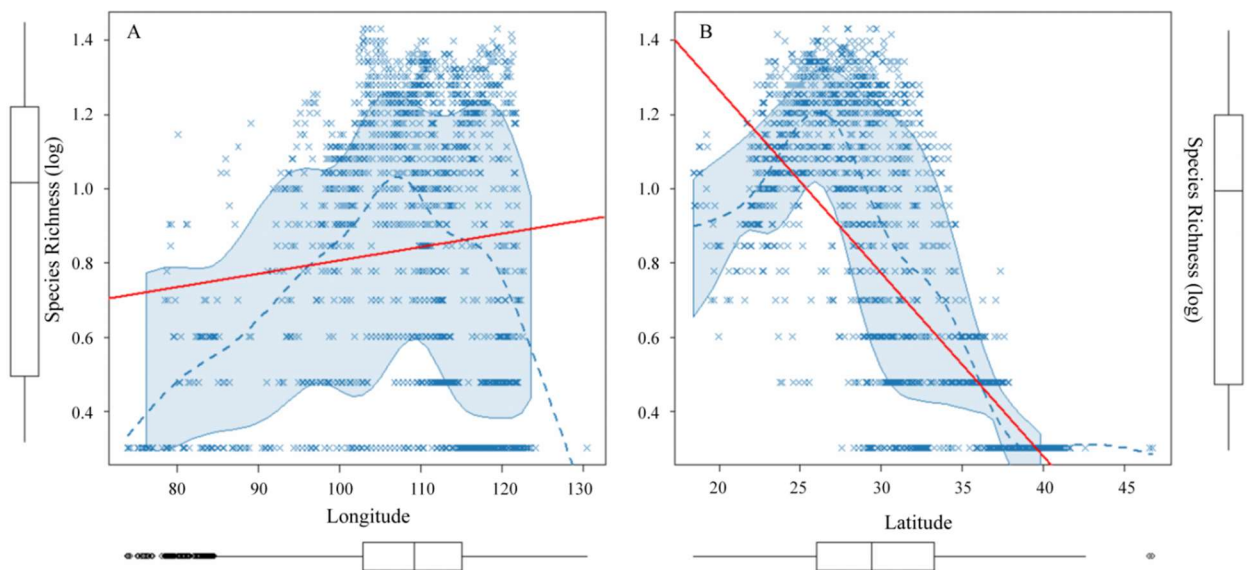


Figure S2. Correlation between the endemic richness of genus *Viburnum* and longitude (A) and latitude (B) in China.

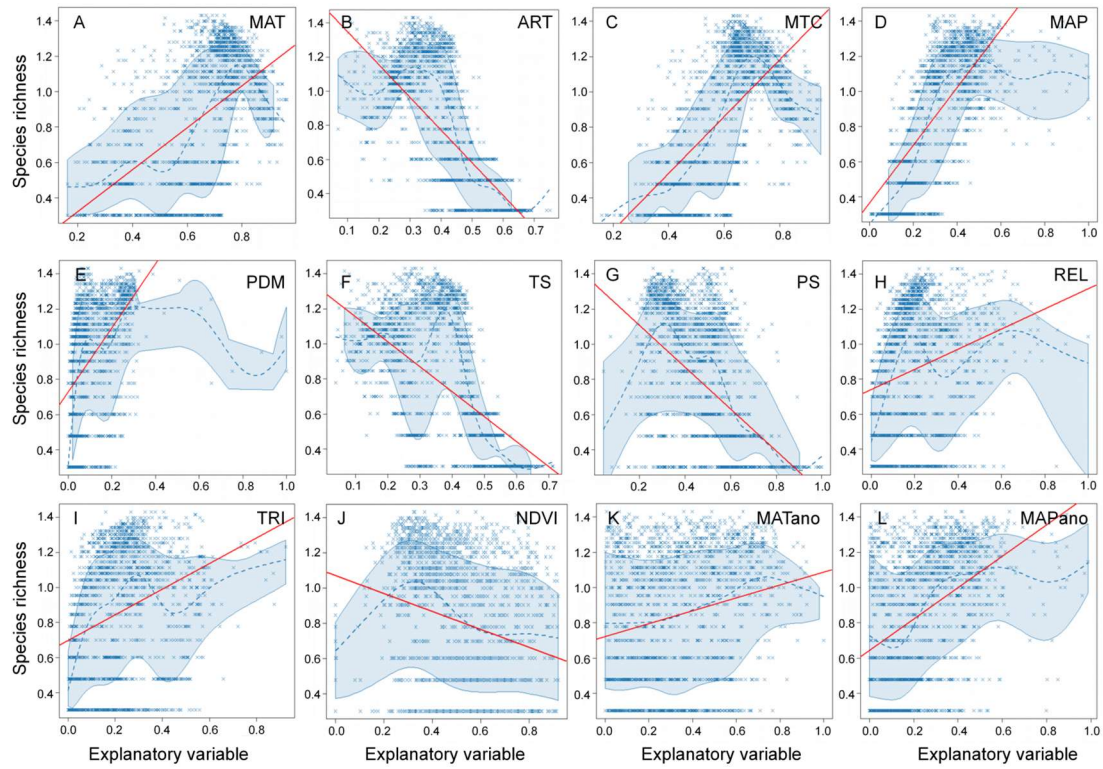


Figure S3. Linear relationships between explanatory variables and endemic richness of genus *Viburnum*. (A) Mean annual temperature (MAT); (B) Annual range of temperature (ART); (C) Mean temperature of the coldest quarter (MTC); (D) Mean annual precipitation (MAP); (E) Mean precipitation of the driest month (PDM); (F) temperature seasonality (TS); (G) Precipitation seasonality (PS); (H) The range in elevation of each grid cell (maximum minus minimum elevation, REL); (I) Terrain ruggedness index (TRI); (J) Normalized difference vegetation index (NDVI); (K) MAT change since the Last Glacial Maximum (MATano); (L) MAP change since the Last Glacial Maximum (MAPano).

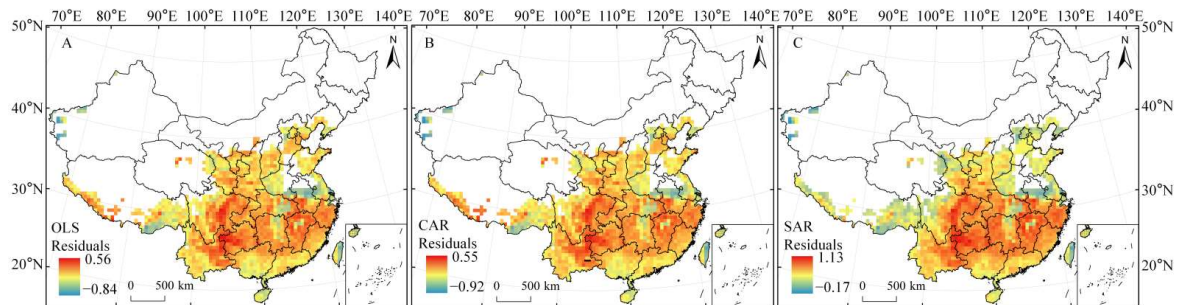


Figure S4. Geographic distribution of residuals for the three model tests for endemic richness of genus *Viburnum* in China. (A) simple ordinary least squares (OLS) model; (B) simple conditional autoregressive (CAR) model; (C) the simultaneous autoregressive in (SAR) model.

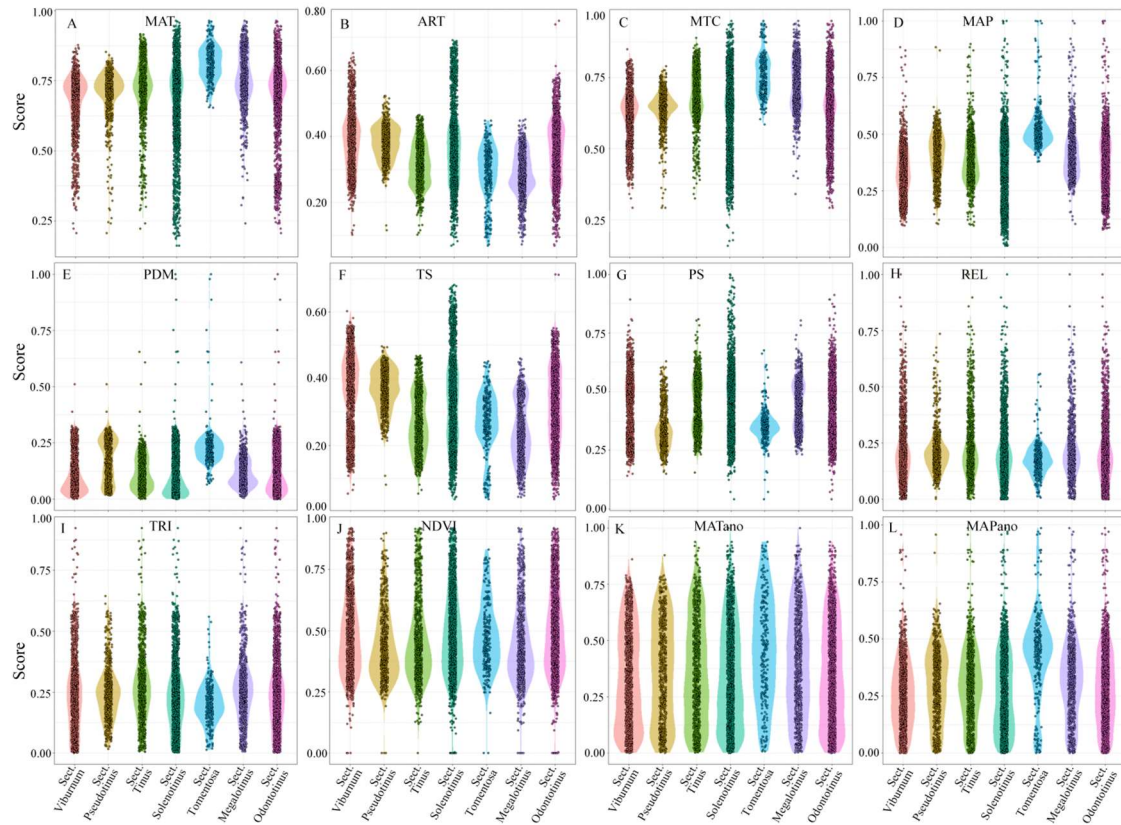


Figure S5. Magnitude of variation in each of the explanatory factors for the richness of seven sections of endemic of genus *Viburnum* in China. (A)(A) Mean annual temperature (MAT); (B) Annual range of temperature (ART); (C) Mean temperature of the coldest quarter (MTC); (D) Mean annual precipitation (MAP); (E) Mean precipitation of the driest month (PDM); (F) temperature seasonality (TS); (G) Precipitation seasonality (PS); (H) The range in elevation of each grid cell (maximum minus minimum elevation, REL); (I) Terrain ruggedness index (TRI); (J) Normalized difference vegetation index (NDVI); (K) MAT change since the Last Glacial Maximum (MATano); (L) MAP change since the Last Glacial Maximum(MAPano).