

Table S1. Climatic and environmental variables included in all Maxent models, including a description of the variable and units, if applicable. Variables and descriptions of climatic data from Fick and Hijmans [42]. All bioclimatic data (Bio“xx”) are representative of the averages from the years 1970–2000.

Variable	Description	Detailed Description	Unit
Bio1	Annual Mean Temperature.	The annual mean temperature.	°C
Bio2	Mean Diurnal Range (Mean of monthly (max temp–min temp)).	The mean of the monthly temperature ranges (monthly maximum minus monthly minimum).	°C
Bio3	Isothermality (BIO2/BIO7) (×100).	Isothermality quantifies how large the day to-night temperatures oscillate relative to the summer to-winter (annual) oscillations.	%
Bio4	Temperature Seasonality (standard deviation × 100).	The amount of temperature variation over a given year (or averaged years) based on the standard deviation (variation) of monthly temperature averages.	%
Bio5	Max Temperature of Warmest Month.	The maximum monthly temperature occurrence over a given year (time-series) or averaged span of years (normal).	°C
Bio6	Min Temperature of Coldest Month.	The minimum monthly temperature occurrence over a given year (time-series) or averaged span of years (normal).	°C
Bio7	Temperature Annual Range (BIO5–BIO6).	A measure of temperature variation over an annual period.	°C
Bio8	Mean Temperature of Wettest Quarter.	This quarterly index approximates mean temperatures that prevail during the wettest season.	°C
Bio9	Mean Temperature of Driest Quarter.	This quarterly index approximates mean temperatures that prevail during the driest quarter.	°C
Bio10	Mean Temperature of Warmest Quarter.	This quarterly index approximates mean temperatures that prevail during the warmest quarter.	°C
Bio11	Mean Temperature of Coldest Quarter.	This quarterly index approximates mean temperatures that prevail during the coldest quarter.	°C
Bio12	Annual Precipitation.	This is the sum of all total monthly precipitation values.	mm
Bio13	Precipitation of Wettest Month.	This index identifies the total precipitation that prevails during the wettest month.	mm
Bio14	Precipitation of Driest Month.	This index identifies the total precipitation that prevails during the driest month.	mm
Bio15	Precipitation Seasonality (Coefficient of Variation).	This is a measure of the variation in monthly precipitation totals over the course of the year. This index is the ratio of the standard deviation of the monthly total precipitation to the mean monthly total precipitation (also known as the coefficient of variation) and is expressed as a percentage.	%
Bio16	Precipitation of Wettest Quarter.	This quarterly index approximates total precipitation that prevails during the wettest quarter.	mm
Bio17	Precipitation of Driest Quarter.	This quarterly index approximates total precipitation that prevails during the driest quarter.	mm
Bio18	Precipitation of Warmest Quarter.	This quarterly index approximates total precipitation that prevails during the warmest quarter.	mm
Bio19	Precipitation of Coldest Quarter.	This quarterly index approximates total precipitation that prevails during the coldest quarter.	mm
Population_Density	Human population density.	Human population density during 2015 as 30 arc-second resolution.	Persons/km ²
GAP/LANDFIRE	Thematic land cover map representing ecological systems throughout the continuous US.	The map legend includes types described by NatureServe's Ecological Systems Classification [46] as well as land use classes described in the National Land Cover Dataset 2011	

		[47]. These data cover the entire continental U.S. and are a continuous data layer. These raster data have a 30 m × 30 m cell resolution. [45]	
NLCD_2016_LandCover	Details land cover throughout the continuous US. Includes layers for open water, urban intensities, barren land, forest types, shrublands, grassland types, wetlands, and agriculture.	The National Land Cover Database (NLCD) provides nationwide data on land cover and land cover change at a 30 m resolution with a 16-class legend based on a modified Anderson Level II classification system.	
NLCD_2016_Impervious	Details impervious surfaces (roads, homes, etc.) throughout the continuous US.	NLCD imperviousness products represent urban impervious surfaces as a percentage of developed surface over every 30-meter pixel in the United States.	
NLCD_2016_TreeCanopy	Details tree canopy coverage throughout the continuous US.	These data contain percent tree canopy estimates, as a continuous variable, for each pixel across all land covers and types and are generated by the United States Forest Service (USFS). The USFS derives tree canopy cover from multi-spectral Landsat imagery and other available ground and ancillary information.	
NDVI_2020	Details living vegetation throughout the continuous US.	A normalized difference vegetation index assessing living vegetation throughout the continuous United States in early 2020.	

Table S2. AUCs (Area under the ROC (receiver operating characteristic) Curve) for each model, using model performance standards defined by Hosmer Jr. et al. [60]).

Model	AUC Training Average	AUC Test Average	Model Performance
California	0.935	0.935	Very Good
Texas	0.972	0.973	Very Good
Florida	0.994	0.995	Very Good
Combined	0.91	0.91	Very Good

Table S3. Percent contribution and permutation importance for all variables in all models. Percent contribution is found by keeping track of the importance that each variable is having during the model training process and should be interpreted with caution since it is heuristically defined and can be influenced by multicollinearity. Permutation importance is found for each variable by altering "...values of that variable on training presence and background data [and] are randomly permuted. The model is reevaluated on the permuted data, and the resulting drop in training AUC is shown in the table, normalized to percentages." [62].

Combined Model			California Only			Florida Only			Texas Only		
Variable	Percent Contribution	Permutation Importance	Variable	Percent Contribution	Permutation Importance	Variable	Percent Contribution	Permutation Importance	Variable	Percent Contribution	Permutation Importance
Population_Density250	57.9	0.6	Bio14_250— Precipitation of Driest Month	36.8	0.8	Bio11_250—Mean Temperature of Coldest Quarter	74.5	78.2	Bio01_250—Annual Mean Temperature	50.7	93.3
Bio15_250— Precipitation Seasonality	7.9	0.6	Population_Density250	27.8	0.7	Bio01_250— Annual Mean Temperature	7.2	5.3	Population_Density250	24.9	0.6
Bio01_250— Annual Mean Temperature	5.9	0.6	Bio15_250— Precipitation Seasonality	17.5	4.7	Population_Density250	6.9	0.6	Bio11_250—Mean Temperature of Coldest Quarter	6.4	0.0
Bio04_250— Temperature Seasonality	5.1	93.2	Bio18_250— Precipitation of Warmest Quarter	3.1	0.2	Bio13_250— Precipitation of Wettest Month	2.4	0.5	Bio18_250— Precipitation of Warmest Quarter	3.4	1.9
Bio06_250— Min Temperature	5.1	0.5	Bio02_250—Mean Diurnal Range	2.5	0.0	Bio18_250— Precipitation of Warmest Quarter	2.2	0.9	Bio06_250—Min Temperature	3.3	1.0
Bio07_250— Temperature Annual Range	4.1	0.3	Bio05_250—Max Temperature	2.1	0.0	Bio06_250—Min Temperature	1.3	1.8	Bio07_250— Temperature Annual Range	2.8	0.0
Bio11_250— Mean Temperature of Coldest Quarter	3.1	1.8	Bio17_250— Precipitation of Driest Quarter	1.7	0.3	Bio16_250— Precipitation of Wettest Quarter	0.7	0.0	Bio05_250—Max Temperature	1.9	0.0
Bio10_250— Mean Temperature of Warmest Quarter	2.5	0.1	Bio04_250— Temperature Seasonality	1.7	0.0	Bio08_250—Mean Temperature of Wettest Quarter	0.7	0.5	Bio17_250— Precipitation of Driest Quarter	1.7	0.3

Bio02_250— Mean Diurnal Range	1.6	0.0	Bio06_250— Min Temperature	1.1	83.6	NLCD_2016_Lan dCover250	0.6	0.2	Bio08_250— Mean Temperature of Wettest Quarter	1.3	0.0
Bio05_250— Max Temperature	1.3	0.0	NLCD_2016_Land Cover250	0.9	0.3	Bio03_250— Isothermality	0.6	0.0	Bio02_250— Mean Diurnal Range	0.6	2.3
Bio09_250— Mean Temperature of Driest Quarter	1.1	0.3	Bio10_250— Mean Temperature of Warmest Quarter	0.7	0.3	Bio05_250— Max Temperature	0.5	0.0	Bio15_250— Precipitation Seasonality	0.6	0.3
NLCD_2016_L andCover250	1.3	0.1	Bio19_250— Precipitation of Coldest Quarter	1.0	4.4	Bio12_250— Annual Precipitation	0.6	11.5	NLCD_2016_Imper vious250	0.6	0.0
Bio03_250— Isothermality	0.7	0.0	Bio01_250— Annual Mean Temperature	0.6	0.2	Bio07_250— Temperature Annual Range	0.3	0.0	Bio10_250— Mean Temperature of Warmest Quarter	0.5	0.0
NLCD_2016_Tr eeCanopy250	0.4	0.0	Bio11_250— Mean Temperature of Coldest Quarter	0.6	0.1	Bio10_250— Mean Temperature of Warmest Quarter	0.3	0.0	Bio09_250— Mean Temperature of Driest Quarter	0.3	0.0
Bio14_250— Precipitation of Driest Month	0.4	0.0	Bio03_250— Isothermality	0.6	0.0	Bio09_250— Mean Temperature of Driest Quarter	0.3	0.0	GAPlandfire250	0.3	0.0
Bio18_250— Precipitation of Warmest Quarter	0.4	1.3	NLCD_2016_Impe rvious250	0.4	0.0	Bio04_250— Temperature Seasonality	0.3	0.0	Bio03_250— Isothermality	0.2	0.0
Bio12_250— Annual Precipitation	0.2	0.0	GAPlandfire250	0.1	0.3	GAPlandfire250	0.1	0.2	NLCD_2016_Land Cover250	0.1	0.0
GAPlandfire25 0	0.2	0.0	Bio09_250— Mean Temperature of Driest Quarter	0.3	0.1	Bio14_250— Precipitation of Driest Month	0.1	0.0	Bio04_250— Temperature Seasonality	0.1	0.0
NLCD_2016_I mpervious250	0.3	0.0	Bio07_250— Temperature Annual Range	0.3	0.0	Bio02_250— Mean Diurnal Range	0.2	0.0	NLCD_2016_TreeC anopy250	0.1	0.0
NDVI_2020_25 0	0.0	0.0	NDVI_2020_250	0.0	0.1	NDVI_2020_250	0.0	0.0	Bio19_250— Precipitation of Coldest Quarter	0.0	0.1

Bio08_250— Mean Temperature of Wettest Quarter	0.1	0.0	Bio08_250—Mean Temperature of Wettest Quarter	0.1	0.6	NLCD_2016_Imp ervious250	0.1	0.1	NDVI_2020_250	0.0	0.0
Bio16_250— Precipitation of Wettest Quarter	0.1	0.3	Bio16_250— Precipitation of Wettest Quarter	0.0	0.0	Bio15_250— Precipitation Seasonality	0.0	0.1	Bio14_250— Precipitation of Driest Month	0.0	0.0
Bio19_250— Precipitation of Coldest Quarter	0.2	0.0	Bio12_250— Annual Precipitation	0.1	3.3	Bio17_250— Precipitation of Driest Quarter	0.1	0.0	Bio13_250— Precipitation of Wettest Month	0.0	0.0
Bio17_250— Precipitation of Driest Quarter	0.0	0.0	Bio13_250— Precipitation of Wettest Month	0.0	0.0	NLCD_2016_Tree Canopy250	0.0	0.0	Bio16_250— Precipitation of Wettest Quarter	0.0	0.0
Bio13_250— Precipitation of Wettest Month	0.0	0.0	NLCD_2016_Tree Canopy250	0.0	0.0	Bio19_250— Precipitation of Coldest Quarter	0.0	0.0	Bio12_250— Annual Precipitation	0.0	0.0