

Supplement of Web Ecol., 17, 69–77, 2017
<https://doi.org/10.5194/we-17-69-2017-supplement>
© Author(s) 2017. This work is distributed under
the Creative Commons Attribution 4.0 License.



Supplement of

Modelling plant invasion pathways in protected areas under climate change: implication for invasion management

Chun-Jing Wang et al.

Correspondence to: Zhi-Xiang Zhang (zxzhang@bjfu.edu.cn)

The copyright of individual parts of the supplement might differ from the CC BY 4.0 License.

1 **Supporting information**

2 **Table S1 Environmental variables used.** Environmental variables were used as
3 environmental layers for modelling the habitat suitability of IPS using Maxent; C of
4 V represents the coefficient of variation; SD: standard deviation.

Code	Environmental variables	Unit	References
Bio1	Annual mean temperature	°C	Average climate
Bio4	Temperature seasonality	SD	Standard deviation of climate
Bio12	Annual precipitation	mm	Average climate
Bio15	Precipitation seasonality	C of V	Standard deviation of climate

Table S2. IPS, AUC values, and the results of the Maxent jackknife test. Codes as described in Table S1.

Name	Type	Record	AUC _{Training}	AUC _{Test}	Bio 1	Bio 4	Bio 12	Bio 15
<i>Abelmoschus moschatus</i>	Herb	482	0.929	0.926	22.431	18.693	58.012	0.863
<i>Abrus precatorius</i>	Shrub	1,059	0.915	0.914	49.521	15.270	31.103	4.105
<i>Acacia farnesiana</i>	Tree	1,823	0.865	0.863	62.807	19.586	11.756	5.850
<i>Acacia longifolia</i>	Tree	834	0.957	0.957	40.648	52.378	5.372	1.603
<i>Acacia mangium</i>	Tree	198	0.946	0.941	29.381	30.111	40.046	0.462
<i>Acacia mearnsii</i>	Tree	597	0.964	0.963	42.284	39.702	15.543	2.471
<i>Acacia melanoxylon</i>	Tree	1,199	0.940	0.940	33.911	47.429	16.152	2.508
<i>Acacia nilotica</i>	Tree	662	0.924	0.921	31.944	36.808	21.472	9.776
<i>Acacia retinodes</i>	Tree	282	0.977	0.972	48.693	43.250	5.451	2.606
<i>Acacia saligna</i>	Tree	796	0.953	0.953	54.852	37.958	6.678	0.512
<i>Acanthopora spicifera</i>	Alga	130	0.938	0.929	38.912	49.787	7.175	4.126
<i>Acanthus mollis</i>	Herb	332	0.970	0.969	48.354	32.692	16.947	2.006
<i>Acer ginnala</i>	Tree	116	0.966	0.961	53.601	15.274	26.814	4.312
<i>Acer platanoides</i>	Tree	6,061	0.815	0.815	50.635	17.913	25.467	5.986
<i>Acroptilon repens</i>	Herb	266	0.939	0.935	57.880	26.211	12.396	3.514
<i>Adenantha pavonina</i>	Tree	158	0.943	0.939	20.497	20.115	57.249	2.140
<i>Aegilops triuncialis</i>	Herb	1,405	0.921	0.921	68.425	16.801	11.970	2.804
<i>Agapanthus praecox</i>	Herb	161	0.987	0.986	33.998	44.572	15.198	6.232
<i>Agave americana</i>	Herb	460	0.949	0.946	55.494	32.979	8.219	3.308
<i>Ageratina adenophora</i>	Shrub	398	0.968	0.967	44.351	42.625	11.183	1.841
<i>Ageratina riparia</i>	Herb	192	0.984	0.982	34.915	21.486	35.517	8.082
<i>Ageratum conyzoides</i>	Herb	1,236	0.886	0.884	20.993	42.884	35.289	0.834

<i>Agrostis capillaris</i>	Herb	12,366	0.723	0.723	42.640	21.103	31.631	4.627
<i>Agrostis gigantea</i>	Herb	6,746	0.788	0.788	59.094	19.739	19.637	1.529
<i>Ailanthus altissima</i>	Tree	1,473	0.915	0.914	67.887	13.939	11.057	7.118
<i>Akebia quinata</i>	Vine	153	0.979	0.977	33.452	16.548	46.931	3.069
<i>Albizia julibrissin</i>	Tree	273	0.956	0.953	53.047	14.343	32.158	0.452
<i>Albizia lebbek</i>	Tree	394	0.919	0.915	53.218	19.065	24.039	3.678
<i>Aleurites moluccana</i>	Tree	112	0.944	0.937	17.036	35.628	45.361	1.975
<i>Alliaria petiolata</i>	Herb	6,086	0.813	0.813	49.737	14.539	25.098	10.627
<i>Alnus glutinosa</i>	Tree	8,732	0.770	0.769	45.339	19.665	28.944	6.052
<i>Alternanthera philoxeroides</i>	Aquatic Plant	228	0.955	0.951	32.770	15.480	33.932	17.819
<i>Alternanthera sessilis</i>	Herb	624	0.886	0.883	36.994	37.033	24.005	1.969
<i>Ambrosia artemisiifolia</i>	Herb	2,604	0.862	0.861	47.055	7.699	30.281	14.965
<i>Ammophila arenaria</i>	Herb	1,683	0.922	0.922	41.162	41.845	14.345	2.649
<i>Ampelopsis brevipedunculata</i>	Vine	201	0.975	0.972	13.630	24.011	59.889	2.471
<i>Andropogon gayanus</i>	Herb	536	0.934	0.932	40.415	40.278	11.856	7.451
<i>Andropogon virginicus</i>	Herb	607	0.941	0.939	40.447	9.972	44.399	5.184
<i>Angiopteris evecta</i>	Fern	97	0.944	0.939	18.917	13.208	67.343	0.532
<i>Annona glabra</i>	Tree	280	0.953	0.950	19.133	38.346	38.547	3.974
<i>Annona squamosa</i>	Tree	182	0.927	0.921	23.216	41.478	31.450	3.856
<i>Anredera cordifolia</i>	Vine	381	0.961	0.960	49.387	33.839	13.055	3.719
<i>Antigonon leptopus</i>	Vine	402	0.902	0.895	46.329	39.923	9.427	4.322
<i>Archontophoenix cunninghamiana</i>	Tree	176	0.989	0.986	24.314	31.865	32.998	10.823
<i>Ardisia crenata</i>	Shrub	229	0.969	0.967	9.081	14.855	68.654	7.410
<i>Arundo donax</i>	Herb	1,280	0.893	0.891	67.193	22.487	8.652	1.669
<i>Asparagus densiflorus</i>	Herb	121	0.954	0.947	29.453	47.713	13.337	9.497

<i>Asparagus officinalis</i>	Herb	3,708	0.856	0.856	55.900	13.832	11.958	18.310
<i>Asystasia gangetica</i>	Herb	526	0.917	0.914	15.208	67.199	14.908	2.685
<i>Austroeupeatorium inulifolium</i>	Herb	119	0.977	0.973	21.616	70.422	4.597	3.365
<i>Azolla pinnata</i>	Aquatic Plant	379	0.944	0.940	35.352	36.581	17.070	10.997
<i>Bacopa monnieri</i>	Herb	595	0.905	0.900	52.793	28.273	12.138	6.796
<i>Bambusa vulgaris</i>	Herb	152	0.916	0.906	10.871	61.446	25.350	2.333
<i>Begonia cucullata</i>	Herb	136	0.947	0.941	34.556	16.891	45.252	3.301
<i>Bellis perennis</i>	Herb	7,632	0.788	0.787	40.742	33.390	23.138	2.730
<i>Berberis darwinii</i>	Tree	313	0.983	0.982	35.878	46.356	11.987	5.779
<i>Berberis thunbergii</i>	Shrub	895	0.944	0.944	52.762	11.853	23.712	11.673
<i>Bidens pilosa</i>	Herb	2,356	0.847	0.846	50.435	21.144	27.146	1.275
<i>Bothriochloa pertusa</i>	Herb	325	0.926	0.923	55.793	10.789	27.130	6.288
<i>Brassica elongata</i>	Herb	210	0.965	0.962	42.667	28.770	8.467	20.096
<i>Brassica tournefortii</i>	Herb	1,712	0.911	0.910	61.237	23.444	11.491	3.828
<i>Bromus inermis</i>	Herb	4,361	0.826	0.825	64.766	18.369	13.469	3.396
<i>Bromus rubens</i>	Herb	2,692	0.882	0.881	70.893	22.782	5.943	0.382
<i>Bromus tectorum</i>	Herb	4,759	0.820	0.820	70.181	26.200	3.505	0.114
<i>Buddleja davidii</i>	Shrub	2,423	0.901	0.900	42.827	16.782	20.096	20.295
<i>Buddleja madagascariensis</i>	Vine	112	0.980	0.976	33.344	34.433	29.200	3.023
<i>Butomus umbellatus</i>	Aquatic Plant	3,207	0.877	0.877	43.134	17.757	21.138	17.972
<i>Cabomba caroliniana</i>	Aquatic Plant	218	0.958	0.955	19.815	20.604	47.068	12.512
<i>Caesalpinia decapetala</i>	Tree	252	0.958	0.955	44.576	4.500	40.962	9.963
<i>Calluna vulgaris</i>	Herb	12,530	0.721	0.721	39.715	23.134	31.872	5.279
<i>Camelina sativa</i>	Herb	1,548	0.921	0.920	49.469	19.197	15.342	15.993
<i>Campuloclinium macrocephalum</i>	Herb	151	0.978	0.974	30.076	33.290	28.808	7.826

<i>Canna indica</i>	Herb	674	0.907	0.904	19.548	38.563	37.298	4.592
<i>Cardamine flexuosa</i>	Herb	5,446	0.822	0.822	33.657	30.089	33.430	2.824
<i>Cardiospermum grandiflorum</i>	Vine	428	0.937	0.934	29.007	34.584	26.039	10.369
<i>Carduus nutans</i>	Herb	3,865	0.859	0.859	55.670	11.815	13.684	18.831
<i>Carpobrotus edulis</i>	Succulent	433	0.968	0.967	43.148	51.273	4.362	1.217
<i>Castilla elastica</i>	Tree	194	0.956	0.951	10.242	31.375	54.402	3.982
<i>Casuarina equisetifolia</i>	Tree	528	0.916	0.913	30.216	38.459	29.342	1.983
<i>Caulerpa taxifolia</i>	Alga	111	0.941	0.928	19.663	59.791	9.723	10.823
<i>Cecropia peltata</i>	Tree	366	0.942	0.940	2.232	53.717	34.052	9.999
<i>Cecropia schreberiana</i>	Tree	379	0.942	0.940	1.615	54.552	33.449	10.383
<i>Cedrela odorata</i>	Tree	517	0.919	0.916	10.107	56.170	32.339	1.384
<i>Celastrus orbiculatus</i>	Vine	328	0.973	0.972	30.923	18.581	48.586	1.911
<i>Cenchrus ciliaris</i>	Herb	1,858	0.877	0.876	61.520	15.758	20.173	2.549
<i>Cenchrus echinatus</i>	Herb	1,162	0.856	0.853	72.286	11.483	13.049	3.182
<i>Cenchrus polystachios</i>	Herb	104	0.938	0.933	34.412	42.759	11.595	11.234
<i>Centaurea diffusa</i>	Herb	308	0.960	0.959	54.713	39.933	3.823	1.531
<i>Centaurea melitensis</i>	Herb	2,593	0.881	0.880	60.702	32.019	6.444	0.835
<i>Centaurea solstitialis</i>	Herb	1,445	0.918	0.918	51.308	40.160	8.018	0.513
<i>Cerastium fontanum</i>	Herb	11,681	0.728	0.728	44.356	24.378	28.480	2.786
<i>Ceratophyllum demersum</i>	Aquatic Plant	2,064	0.831	0.829	55.671	8.534	29.414	6.381
<i>Cestrum nocturnum</i>	Shrub	433	0.941	0.938	18.205	34.172	43.665	3.958
<i>Cestrum parqui</i>	Shrub	399	0.962	0.960	34.925	51.230	9.468	4.378
<i>Chromolaena odorata</i>	Herb	673	0.912	0.909	12.124	48.250	36.387	3.239
<i>Chrysanthemoides monilifera</i>	Herb	341	0.978	0.978	40.042	51.332	4.684	3.943
<i>Chrysobalanus icaco</i>	Tree	499	0.949	0.947	15.401	43.757	38.429	2.414

<i>Cinchona pubescens</i>	Tree	223	0.976	0.975	26.103	68.126	4.531	1.240
<i>Cinnamomum camphora</i>	Tree	416	0.958	0.956	34.968	18.077	40.373	6.581
<i>Cirsium arvense</i>	Herb	10,017	0.747	0.747	58.700	22.390	15.046	3.863
<i>Cirsium vulgare</i>	Herb	11,024	0.734	0.734	48.442	27.659	19.833	4.066
<i>Clematis terniflora</i>	Vine	366	0.970	0.969	30.498	15.702	51.485	2.315
<i>Clematis vitalba</i>	Vine	4,525	0.848	0.848	40.639	30.648	12.044	16.670
<i>Clidemia hirta</i>	Shrub	614	0.939	0.937	3.250	57.038	34.851	4.862
<i>Coccinia grandis</i>	Vine	150	0.918	0.911	16.778	79.042	3.276	0.903
<i>Colubrina asiatica</i>	Shrub	258	0.949	0.945	25.312	21.255	52.932	0.501
<i>Commelina benghalensis</i>	Herb	572	0.902	0.898	50.904	26.910	19.546	2.639
<i>Coronilla varia</i>	Herb	356	0.949	0.946	56.155	18.778	18.584	6.482
<i>Cortaderia jubata</i>	Herb	148	0.980	0.978	39.924	56.140	2.617	1.319
<i>Cortaderia selloana</i>	Herb	671	0.952	0.951	45.248	49.411	4.682	0.660
<i>Cotinus coggygria</i>	Tree	228	0.966	0.964	39.328	32.796	25.594	2.282
<i>Crassula helmsii</i>	Aquatic Plant	921	0.957	0.956	33.369	37.732	4.599	24.300
<i>Cryptostegia grandiflora</i>	Vine	311	0.949	0.944	44.704	25.414	19.057	10.825
<i>Cryptostegia madagascariensis</i>	Vine	153	0.944	0.940	27.722	43.413	14.549	14.316
<i>Cupaniopsis anacardioides</i>	Tree	535	0.963	0.962	26.634	31.259	37.002	5.106
<i>Cyathea cooperi</i>	Fern	248	0.977	0.975	24.562	34.880	33.768	6.790
<i>Cynara cardunculus</i>	Herb	457	0.961	0.960	54.565	36.028	9.166	0.241
<i>Cynodon dactylon</i>	Herb	5,874	0.773	0.772	63.184	28.544	7.730	0.542
<i>Cynoglossum officinale</i>	Herb	2,814	0.888	0.888	51.003	22.056	12.723	14.218
<i>Cyperus rotundus</i>	Herb	2,307	0.828	0.827	72.768	10.682	13.319	3.231
<i>Cytisus scoparius</i>	Shrub	6,501	0.808	0.808	43.223	35.920	19.293	1.564
<i>Cytisus striatus</i>	Shrub	338	0.971	0.970	46.185	38.549	13.707	1.559

<i>Delairea odorata</i>	Vine	339	0.976	0.975	39.275	54.379	5.342	1.005
<i>Dichrostachys cinerea</i>	Tree	689	0.924	0.922	21.362	48.096	15.147	15.395
<i>Dioscorea bulbifera</i>	Herb	677	0.926	0.923	33.232	7.909	52.128	6.731
<i>Dipogon lignosus</i>	Vine	264	0.980	0.979	37.835	55.907	4.085	2.174
<i>Duchesnea indica</i>	Herb	780	0.940	0.938	56.658	7.684	31.054	4.604
<i>Egeria densa</i>	Aquatic Plant	373	0.933	0.928	54.120	16.575	24.398	4.907
<i>Eichhornia crassipes</i>	Aquatic Plant	797	0.869	0.866	44.198	15.838	37.633	2.330
<i>Elaeagnus angustifolia</i>	Tree	669	0.916	0.914	70.522	25.055	3.147	1.277
<i>Elaeagnus pungens</i>	Shrub	101	0.985	0.981	29.573	19.556	46.266	4.605
<i>Elaeagnus umbellata</i>	Tree	408	0.959	0.958	49.943	3.895	45.190	0.972
<i>Elaeis guineensis</i>	Palm	139	0.961	0.958	21.002	41.314	30.440	7.244
<i>Elephantopus mollis</i>	Herb	783	0.923	0.920	12.341	33.120	53.895	0.644
<i>Elodea canadensis</i>	Aquatic Plant	1,248	0.911	0.910	51.383	11.145	20.262	17.211
<i>Epipremnum pinnatum</i>	Vine	179	0.934	0.928	7.703	7.770	80.750	3.778
<i>Erigeron karvinskianus</i>	Herb	1,018	0.928	0.927	43.910	34.527	20.456	1.107
<i>Eriobotrya japonica</i>	Tree	302	0.938	0.935	64.629	11.729	19.578	4.065
<i>Erodium cicutarium</i>	Herb	9,366	0.748	0.748	55.175	40.455	1.983	2.387
<i>Eugenia uniflora</i>	Tree	270	0.935	0.931	33.144	11.626	47.898	7.332
<i>Euonymus fortunei</i>	Vine	185	0.971	0.969	48.151	10.821	40.254	0.775
<i>Eupatorium cannabinum</i>	Herb	5,581	0.826	0.826	42.626	30.221	17.166	9.987
<i>Euphorbia esula</i>	Herb	2,694	0.886	0.886	49.077	17.847	18.569	14.507
<i>Ficus rubiginosa</i>	Tree	653	0.958	0.957	29.427	36.855	29.261	4.457
<i>Flacourtia indica</i>	Tree	260	0.930	0.924	23.327	35.169	23.746	17.758
<i>Flemingia strobilifera</i>	Shrub	119	0.950	0.945	10.886	5.171	80.664	3.278
<i>Fragaria vesca</i>	Herb	10,390	0.743	0.743	45.522	19.243	32.756	2.480

<i>Frangula alnus</i>	Shrub	5,653	0.821	0.821	44.062	25.375	25.527	5.037
<i>Fuchsia boliviana</i>	Tree	104	0.981	0.978	34.438	51.830	9.630	4.101
<i>Fuchsia magellanica</i>	Vine	845	0.960	0.960	37.542	40.235	21.506	0.717
<i>Genista monspessulana</i>	Shrub	645	0.958	0.957	50.950	37.771	10.962	0.317
<i>Glyceria maxima</i>	Aquatic Plant	4,565	0.846	0.846	44.556	16.830	22.099	16.515
<i>Grevillea robusta</i>	Tree	299	0.959	0.957	53.089	23.855	16.632	6.424
<i>Gunnera tinctoria</i>	Herb	255	0.986	0.986	36.327	43.677	17.266	2.731
<i>Haematoxylum campechianum</i>	Tree	219	0.975	0.974	34.312	24.739	26.731	14.218
<i>Hedera helix</i>	Vine	7,454	0.791	0.791	46.648	32.544	18.916	1.892
<i>Hedychium coronarium</i>	Herb	309	0.946	0.943	12.687	16.551	69.689	1.073
<i>Hedychium flavescens</i>	Herb	121	0.979	0.975	30.314	31.501	33.419	4.767
<i>Hedychium gardnerianum</i>	Herb	105	0.986	0.984	27.400	36.385	31.871	4.345
<i>Heliotropium curassavicum</i>	Herb	1,642	0.856	0.854	60.256	16.238	18.180	5.326
<i>Heracleum mantegazzianum</i>	Herb	3,279	0.879	0.879	44.306	21.632	19.902	14.160
<i>Heteropogon contortus</i>	Herb	2,595	0.848	0.847	49.502	28.480	14.555	7.463
<i>Hieracium aurantiacum</i>	Herb	1,563	0.926	0.926	42.534	19.564	26.047	11.855
<i>Hieracium floribundum</i>	Herb	195	0.976	0.975	38.433	10.048	27.031	24.488
<i>Hieracium pilosella</i>	Herb	5,058	0.835	0.835	37.220	38.703	19.816	4.262
<i>Holcus lanatus</i>	Herb	9,357	0.760	0.760	44.026	36.425	17.758	1.791
<i>Houttuynia cordata</i>	Shrub	209	0.963	0.956	25.346	20.203	50.271	4.180
<i>Hydrilla verticillata</i>	Aquatic Plant	547	0.907	0.904	39.052	17.063	41.147	2.739
<i>Hydrocharis morsus-ranae</i>	Aquatic Plant	2,762	0.892	0.892	43.492	13.180	23.875	19.453
<i>Hypericum perforatum</i>	Herb	8,903	0.763	0.763	52.781	20.873	24.049	2.298
<i>Hypnea musciformis</i>	Alga	96	0.928	0.916	48.368	28.605	16.234	6.793
<i>Hypochoeris radicata</i>	Herb	9,558	0.757	0.757	43.734	42.452	10.819	2.996

<i>Impatiens glandulifera</i>	Herb	4,709	0.840	0.840	50.125	19.187	25.246	5.443
<i>Impatiens walleriana</i>	Herb	265	0.945	0.942	23.688	28.171	43.554	4.586
<i>Imperata cylindrica</i>	Herb	2,091	0.858	0.857	63.103	12.959	21.384	2.554
<i>Ipomoea aquatica</i>	Vine	370	0.922	0.918	68.147	5.246	20.421	6.187
<i>Ipomoea cairica</i>	Vine	510	0.918	0.915	42.080	38.034	15.988	3.899
<i>Iris pseudacorus</i>	Herb	7,953	0.781	0.780	51.732	20.838	23.482	3.948
<i>Ischaemum polystachyum</i>	Herb	205	0.960	0.956	22.068	48.951	25.232	3.749
<i>Jatropha gossypiiifolia</i>	Herb	403	0.912	0.908	27.959	54.574	14.810	2.657
<i>Juncus tenuis</i>	Herb	5,443	0.817	0.817	56.963	7.939	31.089	4.010
<i>Kalanchoe pinnata</i>	Succulent	381	0.934	0.931	16.292	28.581	51.765	3.362
<i>Lagarosiphon major</i>	Aquatic Plant	543	0.972	0.971	31.477	34.509	16.556	17.459
<i>Landoltia punctata</i>	Aquatic Plant	106	0.952	0.943	40.285	34.829	15.867	9.019
<i>Lantana camara</i>	Shrub	2,335	0.849	0.848	42.493	31.596	23.911	2.000
<i>Launaea intybacea</i>	Shrub	523	0.936	0.933	24.466	54.471	11.623	9.440
<i>Lepidium latifolium</i>	Herb	1,091	0.916	0.915	57.920	32.527	3.950	5.603
<i>Lepidium virginicum</i>	Herb	2,448	0.852	0.851	61.954	15.231	20.387	2.428
<i>Lespedeza cuneata</i>	Herb	392	0.967	0.965	25.449	23.126	50.353	1.072
<i>Leucaena leucocephala</i>	Tree	934	0.881	0.878	42.428	40.498	11.278	5.796
<i>Ligustrum lucidum</i>	Tree	441	0.950	0.948	64.420	10.278	21.906	3.396
<i>Ligustrum sinense</i>	Tree	485	0.961	0.960	44.302	13.260	38.952	3.487
<i>Ligustrum vulgare</i>	Shrub	5,600	0.826	0.826	44.747	26.620	15.152	13.481
<i>Limnocharis flava</i>	Aquatic Plant	190	0.926	0.921	13.124	55.101	30.864	0.911
<i>Linaria vulgaris</i>	Herb	8,279	0.772	0.771	48.118	19.971	27.955	3.956
<i>Litsea glutinosa</i>	Tree	487	0.962	0.960	15.531	7.400	50.450	26.619
<i>Lonicera japonica</i>	Vine	1,174	0.919	0.918	66.785	3.765	25.825	3.625

<i>Lonicera maackii</i>	Shrub	131	0.978	0.976	28.699	29.913	39.687	1.702
<i>Lotus corniculatus</i>	Herb	10,820	0.739	0.739	41.236	33.836	21.719	3.210
<i>Ludwigia peruviana</i>	Aquatic Plant	332	0.947	0.944	25.149	44.301	27.774	2.776
<i>Lupinus polyphyllus</i>	Herb	4,885	0.834	0.833	53.694	22.100	22.347	1.860
<i>Luzula campestris</i>	Herb	7,036	0.799	0.799	44.787	30.303	21.510	3.400
<i>Lygodium japonicum</i>	Vine	322	0.952	0.949	12.804	15.110	70.467	1.618
<i>Lygodium microphyllum</i>	Fern	663	0.927	0.925	35.828	22.445	40.140	1.588
<i>Lythrum salicaria</i>	Aquatic Plant	8,797	0.763	0.763	49.238	18.293	26.412	6.058
<i>Macfadyena unguis-cati</i>	Vine	676	0.913	0.911	27.765	34.807	34.139	3.289
<i>Melaleuca quinquenervia</i>	Tree	378	0.963	0.962	16.398	29.970	46.189	7.444
<i>Melia azedarach</i>	Tree	1,185	0.883	0.881	60.766	13.444	22.538	3.253
<i>Melilotus alba</i>	Herb	429	0.918	0.915	70.174	7.102	7.981	14.744
<i>Melinis minutiflora</i>	Herb	473	0.944	0.941	18.064	44.632	33.758	3.545
<i>Merremia tuberosa</i>	Vine	138	0.960	0.956	8.397	46.946	38.037	6.620
<i>Miconia calvescens</i>	Tree	258	0.947	0.942	10.935	70.454	16.063	2.548
<i>Microstegium vimineum</i>	Herb	282	0.973	0.971	21.543	21.738	55.751	0.969
<i>Mikania micrantha</i>	Vine	741	0.917	0.915	6.275	49.414	42.873	1.438
<i>Mimosa diplotricha</i>	Vine	190	0.938	0.933	16.487	29.574	53.307	0.633
<i>Mimosa pigra</i>	Shrub	930	0.896	0.893	20.933	61.909	16.593	0.565
<i>Mimosa pudica</i>	Herb	773	0.915	0.913	11.730	28.163	59.141	0.966
<i>Miscanthus sinensis</i>	Herb	395	0.949	0.946	25.686	21.763	51.851	0.700
<i>Montia fontana</i>	Aquatic Plant	6,878	0.789	0.789	43.054	29.227	25.455	2.265
<i>Morus alba</i>	Tree	910	0.898	0.896	81.039	4.892	11.157	2.911
<i>Myriophyllum aquaticum</i>	Aquatic Plant	828	0.937	0.936	49.132	18.660	20.724	11.485
<i>Myriophyllum heterophyllum</i>	Aquatic Plant	204	0.965	0.963	31.191	11.289	24.250	33.270

<i>Myriophyllum spicatum</i>	Aquatic Plant	4,538	0.837	0.837	46.413	21.751	19.855	11.981
<i>Najas minor</i>	Aquatic Plant	346	0.965	0.963	33.055	14.303	18.822	33.820
<i>Nassella neesiana</i>	Herb	409	0.959	0.957	41.575	52.691	4.202	1.532
<i>Nassella tenuissima</i>	Herb	177	0.968	0.965	39.677	50.854	7.335	2.134
<i>Nephrolepis cordifolia</i>	Fern	500	0.945	0.944	35.991	11.805	47.081	5.123
<i>Nicotiana glauca</i>	Shrub	1,539	0.902	0.901	67.317	22.282	10.159	0.242
<i>Nymphaea odorata</i>	Aquatic Plant	406	0.931	0.928	16.042	16.208	40.498	27.252
<i>Nymphoides peltata</i>	Aquatic Plant	1,215	0.942	0.942	43.596	12.377	17.059	26.968
<i>Ocimum gratissimum</i>	Herb	366	0.928	0.924	18.912	63.510	15.523	2.055
<i>Olea europaea</i>	Tree	1,779	0.907	0.907	70.055	22.269	6.683	0.993
<i>Onopordum acanthium</i>	Herb	3,407	0.873	0.873	38.483	25.350	10.378	25.789
<i>Opuntia monacantha</i>	Tree	139	0.957	0.950	45.245	33.873	10.246	10.636
<i>Opuntia stricta</i>	Shrub	674	0.951	0.949	39.034	33.261	9.792	17.913
<i>Oxalis corniculata</i>	Herb	5,330	0.803	0.802	48.728	29.357	19.014	2.901
<i>Oxalis latifolia</i>	Herb	560	0.936	0.934	44.158	42.880	11.695	1.268
<i>Oxalis pes-caprae</i>	Herb	1,090	0.938	0.937	66.371	29.483	3.767	0.379
<i>Oxycaryum cubense</i>	Aquatic Plant	211	0.932	0.926	29.369	42.583	23.101	4.948
<i>Paederia foetida</i>	Vine	287	0.959	0.954	12.787	17.446	64.277	5.491
<i>Panicum repens</i>	Herb	523	0.914	0.911	54.947	25.621	17.260	2.173
<i>Parthenium hysterophorus</i>	Herb	795	0.908	0.906	46.067	28.616	18.280	7.037
<i>Paspalum scrobiculatum</i>	Herb	1,496	0.884	0.882	36.639	27.839	34.742	0.779
<i>Paspalum urvillei</i>	Herb	614	0.947	0.945	54.788	16.105	25.584	3.523
<i>Paspalum vaginatum</i>	Herb	740	0.907	0.904	41.683	39.010	11.832	7.475
<i>Passiflora edulis</i>	Vine	569	0.935	0.933	25.348	20.633	49.246	4.773
<i>Passiflora foetida</i>	Vine	2,577	0.837	0.836	35.138	47.291	15.351	2.220

<i>Passiflora suberosa</i>	Vine	763	0.918	0.916	27.736	50.141	18.623	3.501
<i>Passiflora tarminiana</i>	Vine	111	0.986	0.984	38.798	46.184	11.104	3.914
<i>Paulownia tomentosa</i>	Tree	219	0.967	0.964	55.153	9.746	26.605	8.496
<i>Persicaria perfoliata L</i>	Vine	185	0.975	0.973	19.496	22.217	55.285	3.003
<i>Phalaris arundinacea</i>	Herb	10,360	0.741	0.740	50.972	15.966	28.660	4.402
<i>Phoenix canariensis</i>	Tree	185	0.964	0.961	60.376	34.256	2.701	2.667
<i>Phormium tenax</i>	Shrub	368	0.976	0.975	27.907	39.113	18.549	14.431
<i>Phragmites australis</i>	Herb	12,498	0.704	0.703	46.439	23.780	19.177	10.604
<i>Phymatosorus scolopendria</i>	Herb	493	0.940	0.938	6.402	46.179	43.221	4.199
<i>Physalis peruviana</i>	Shrub	945	0.924	0.922	35.063	31.203	29.331	4.403
<i>Pimenta dioica</i>	Tree	129	0.961	0.955	8.520	35.425	37.526	18.528
<i>Pinus caribaea</i>	Tree	140	0.965	0.960	3.790	35.334	48.103	12.773
<i>Pinus nigra</i>	Tree	3,117	0.883	0.883	45.318	24.348	12.053	18.281
<i>Pinus pinaster</i>	Tree	1,536	0.930	0.929	56.325	31.523	10.138	2.014
<i>Piper aduncum</i>	Tree	994	0.917	0.916	6.271	61.837	30.296	1.596
<i>Pistia stratiotes</i>	Aquatic Plant	648	0.885	0.882	26.234	28.220	42.051	3.495
<i>Pittosporum tenuifolium</i>	Tree	280	0.985	0.984	23.106	40.778	13.528	22.588
<i>Pittosporum undulatum</i>	Tree	597	0.967	0.967	41.454	38.635	17.476	2.435
<i>Pittosporum viridiflorum</i>	Tree	299	0.968	0.966	37.440	44.422	13.128	5.011
<i>Pluchea carolinensis</i>	Shrub	412	0.937	0.934	13.352	70.664	8.996	6.987
<i>Pluchea indica</i>	Shrub	125	0.959	0.953	46.077	25.697	25.325	2.902
<i>Poa annua</i>	Herb	13,678	0.702	0.702	45.435	30.674	21.254	2.637
<i>Polygala paniculata</i>	Herb	629	0.940	0.938	11.987	39.277	45.897	2.839
<i>Polygonum cuspidatum Sieb</i>	Herb	240	0.958	0.953	30.276	15.444	51.763	2.517
<i>Polysiphonia brodiei</i>	Alga	203	0.985	0.984	35.276	42.072	17.679	4.973

<i>Populus alba</i>	Tree	4,012	0.854	0.854	52.560	24.977	11.021	11.442
<i>Potamogeton crispus</i>	Aquatic Plant	3,987	0.845	0.845	40.862	23.446	18.207	17.485
<i>Potamogeton perfoliatus</i>	Aquatic Plant	4,843	0.827	0.827	40.325	23.293	25.617	10.766
<i>Prosopis glandulosa</i>	Tree	572	0.940	0.938	58.135	19.311	14.461	8.094
<i>Prosopis juliflora</i>	Shrub	278	0.902	0.895	29.991	50.090	13.724	6.195
<i>Psidium cattleianum</i>	Tree	107	0.962	0.953	30.886	21.844	38.417	8.853
<i>Psidium guajava</i>	Tree	961	0.900	0.898	21.117	44.130	32.875	1.878
<i>Psoralea pinnata</i>	Shrub	217	0.983	0.980	31.514	57.521	5.574	5.391
<i>Pteris cretica</i>	Fern	518	0.947	0.946	56.477	8.570	32.456	2.497
<i>Pyrus calleryana</i>	Tree	117	0.956	0.948	41.422	21.482	35.199	1.897
<i>Ranunculus ficaria</i>	Herb	7,132	0.796	0.796	41.111	31.865	24.677	2.347
<i>Rauvolfia vomitoria</i>	Tree	412	0.959	0.957	3.988	61.348	29.268	5.397
<i>Rhamnus alaternus</i>	Tree	1,132	0.939	0.939	50.035	36.678	12.460	0.827
<i>Rhamnus cathartica</i>	Tree	4,041	0.860	0.859	48.673	12.981	19.447	18.899
<i>Rhizophora mangle</i>	Aquatic Plant	467	0.924	0.921	33.223	58.288	4.956	3.533
<i>Rhododendron ponticum</i>	Shrub	1,712	0.930	0.930	31.759	39.488	13.972	14.781
<i>Rhus longipes</i>	Tree	103	0.970	0.966	12.010	55.232	19.435	13.324
<i>Ricinus communis</i>	Tree	1,405	0.851	0.850	45.414	43.632	9.773	1.181
<i>Robinia pseudoacacia</i>	Tree	4,777	0.835	0.835	59.505	13.219	15.087	12.189
<i>Rosa multiflora</i>	Shrub	1,006	0.930	0.929	60.267	5.393	27.336	7.005
<i>Rottboellia cochinchinensis</i>	Herb	498	0.898	0.894	31.527	44.225	23.346	0.901
<i>Rubus discolor</i>	Vine	859	0.954	0.954	44.749	22.026	10.437	22.788
<i>Rubus moluccanus</i>	Vine	522	0.960	0.959	23.662	21.346	46.786	8.206
<i>Rubus niveus</i>	Shrub	167	0.959	0.955	32.572	10.861	42.832	13.736
<i>Rubus phoenicolasius</i>	Shrub	231	0.980	0.979	52.672	4.767	32.027	10.535

<i>Rubus pinnatus</i>	Shrub	141	0.982	0.980	29.314	50.356	14.198	6.132
<i>Rubus rosifolius</i>	Tree	592	0.960	0.959	35.145	15.128	43.643	6.084
<i>Rubus ulmifolius</i>	Vine	3,727	0.864	0.863	50.327	40.076	8.989	0.609
<i>Ruellia brevifolia</i>	Herb	150	0.948	0.942	26.087	44.620	22.915	6.378
<i>Rumex acetosella</i>	Herb	13,513	0.706	0.706	43.052	22.913	29.396	4.640
<i>Rumex crispus</i>	Herb	10,067	0.743	0.743	59.610	24.014	13.150	3.225
<i>Rumex obtusifolius</i>	Herb	7,533	0.787	0.786	49.372	24.579	22.538	3.511
<i>Sacciolepis indica</i>	Herb	757	0.925	0.923	22.051	7.295	65.588	5.066
<i>Sagina procumbens</i>	Herb	9,976	0.750	0.750	42.618	19.996	32.786	4.600
<i>Sagittaria platyphylla</i>	Aquatic Plant	157	0.977	0.974	50.315	11.198	20.803	17.684
<i>Sagittaria sagittifolia</i>	Aquatic Plant	3,197	0.878	0.878	40.952	14.462	23.712	20.874
<i>Salix babylonica</i>	Tree	850	0.935	0.934	60.331	18.248	12.587	8.834
<i>Salix cinerea</i>	Tree	7,545	0.788	0.788	45.942	15.680	30.706	7.673
<i>Salix humboldtiana</i>	Tree	324	0.918	0.913	8.232	73.912	13.409	4.447
<i>Salsola tragus</i>	Shrub	3,189	0.843	0.842	42.657	29.751	22.086	5.506
<i>Salvinia minima</i>	Aquatic Plant	167	0.942	0.936	29.546	14.946	45.656	9.852
<i>Salvinia molesta</i>	Aquatic Plant	268	0.929	0.921	45.997	26.382	21.802	5.819
<i>Samanea saman</i>	Tree	182	0.935	0.930	7.003	61.858	26.281	4.857
<i>Sansevieria hyacinthoides</i>	Succulent	118	0.966	0.962	18.650	50.328	17.946	13.075
<i>Sargassum muticum</i>	Aquatic Plant	328	0.975	0.974	43.068	36.509	17.419	3.004
<i>Scaevola sericea</i>	Shrub	144	0.958	0.954	20.767	16.574	58.393	4.266
<i>Schefflera actinophylla</i>	Tree	236	0.962	0.959	18.982	29.607	45.431	5.980
<i>Schinus terebinthifolius</i>	Tree	299	0.961	0.958	40.457	45.270	7.640	6.634
<i>Schismus arabicus</i>	Herb	436	0.947	0.945	47.142	15.554	34.778	2.527
<i>Schismus barbatus</i>	Herb	1,860	0.909	0.909	64.649	14.790	16.869	3.692

<i>Sechium edule</i>	Vine	134	0.951	0.945	28.132	36.169	33.389	2.309
<i>Senecio angulatus</i>	Herb	149	0.986	0.985	45.861	40.642	9.666	3.831
<i>Senecio inaequidens</i>	Shrub	1,537	0.926	0.925	37.102	31.172	15.152	16.574
<i>Senecio jacobaea</i>	Herb	6,499	0.808	0.807	42.995	31.627	23.042	2.336
<i>Senecio squalidus</i>	Herb	1,128	0.947	0.947	30.226	37.939	8.908	22.928
<i>Senecio viscosus</i>	Herb	5,316	0.830	0.830	47.109	20.900	24.956	7.035
<i>Senecio vulgaris</i>	Herb	9,577	0.751	0.751	47.518	30.139	18.907	3.436
<i>Sesbania punicea</i>	Shrub	133	0.970	0.967	58.307	20.035	17.179	4.479
<i>Setaria verticillata</i>	Herb	2,886	0.858	0.858	41.261	43.164	9.299	6.276
<i>Solanum mauritianum</i>	Tree	470	0.965	0.964	38.861	34.103	23.058	3.978
<i>Solanum seafortianum</i>	Vine	475	0.934	0.931	39.635	21.277	32.486	6.602
<i>Solanum sisymbriifolium</i>	Herb	286	0.935	0.932	24.516	33.186	37.451	4.847
<i>Solanum torvum</i>	Shrub	1,034	0.912	0.911	8.431	36.640	52.616	2.313
<i>Solidago canadensis</i>	Herb	4,881	0.825	0.825	62.821	11.827	19.298	6.054
<i>Sorghum halepense</i>	Herb	2,460	0.840	0.839	71.230	14.294	13.832	0.645
<i>Spartina alterniflora</i>	Herb	197	0.955	0.953	13.610	11.292	41.235	33.863
<i>Spartina anglica</i>	Herb	360	0.981	0.981	33.951	33.362	12.705	19.982
<i>Spartium junceum</i>	Shrub	979	0.940	0.939	54.451	36.157	9.370	0.022
<i>Spathodea campanulata</i>	Tree	243	0.927	0.922	6.006	70.954	21.338	1.702
<i>Spermacoce verticillata</i>	Shrub	677	0.914	0.911	7.742	64.707	25.115	2.436
<i>Sphagneticola trilobata</i>	Herb	458	0.942	0.939	15.255	26.974	53.802	3.970
<i>Spiraea japonica</i>	Shrub	533	0.949	0.947	44.417	28.207	26.659	0.717
<i>Stellaria alsine</i>	Herb	6,420	0.806	0.806	36.727	30.294	30.348	2.631
<i>Stellaria media</i>	Herb	12,825	0.710	0.710	43.497	28.496	24.518	3.489
<i>Striga asiatica</i>	Herb	289	0.921	0.916	21.309	39.235	26.074	13.382

<i>Syngonium podophyllum</i>	Vine	581	0.941	0.939	9.501	32.353	55.244	2.902
<i>Syzygium cumini</i>	Tree	151	0.921	0.911	24.922	34.017	37.014	4.047
<i>Syzygium jambos</i>	Tree	444	0.936	0.933	14.103	29.856	53.974	2.067
<i>Tamarix aphylla</i>	Shrub	266	0.934	0.930	66.647	6.298	25.104	1.952
<i>Tamarix parviflora</i>	Tree	288	0.951	0.948	75.300	16.361	5.366	2.972
<i>Tamarix ramosissima</i>	Tree	760	0.920	0.918	64.332	16.615	15.270	3.783
<i>Taraxacum officinale</i>	Herb	4,927	0.809	0.808	53.137	23.658	20.379	2.825
<i>Tecoma capensis</i>	Vine	215	0.961	0.958	45.206	41.750	9.162	3.882
<i>Tecoma stans</i>	Tree	620	0.900	0.896	40.371	44.599	8.925	6.104
<i>Terminalia catappa</i>	Tree	362	0.937	0.935	17.666	53.199	27.617	1.518
<i>Thevetia peruviana</i>	Tree	342	0.919	0.914	31.316	42.798	19.050	6.837
<i>Thunbergia grandiflora</i>	Vine	150	0.935	0.927	12.055	19.904	66.036	2.005
<i>Tithonia diversifolia</i>	Shrub	373	0.940	0.937	14.633	35.141	45.782	4.445
<i>Tradescantia fluminensis</i>	Herb	475	0.964	0.963	42.298	29.712	22.070	5.920
<i>Trapa natans</i>	Aquatic Plant	338	0.953	0.948	30.108	14.523	28.319	27.051
<i>Triadica sebifera</i>	Tree	197	0.969	0.966	33.714	22.678	42.117	1.492
<i>Trifolium dubium</i>	Herb	6,134	0.810	0.810	44.839	31.054	21.430	2.676
<i>Trifolium repens</i>	Herb	13,907	0.701	0.701	45.356	24.880	26.153	3.612
<i>Tussilago farfara</i>	Herb	8,610	0.768	0.768	43.446	19.040	30.313	7.201
<i>Typha latifolia</i>	Aquatic Plant	7,026	0.780	0.779	61.827	13.267	21.506	3.400
<i>Ulex europaeus</i>	Tree	3,749	0.867	0.867	35.517	39.869	16.012	8.602
<i>Urochloa mutica</i>	Herb	308	0.916	0.912	29.555	45.516	22.176	2.754
<i>Utricularia gibba</i>	Aquatic Plant	785	0.885	0.882	28.791	10.270	57.747	3.192
<i>Vallisneria nana</i>	Aquatic Plant	216	0.952	0.947	42.887	33.928	16.741	6.444
<i>Vallisneria spiralis</i>	Aquatic Plant	240	0.954	0.950	21.384	21.180	16.608	40.828

<i>Verbascum thapsus</i>	Herb	6,083	0.803	0.803	53.785	22.179	21.708	2.328
<i>Verbena brasiliensis</i>	Herb	185	0.975	0.973	65.427	8.170	21.179	5.224
<i>Verbena rigida</i>	Herb	560	0.962	0.961	37.398	27.507	28.530	6.565
<i>Vinca major</i>	Herb	2,432	0.899	0.898	44.897	30.663	13.815	10.624
<i>Vitex rotundifolia</i>	Shrub	196	0.967	0.964	18.553	19.162	58.350	3.935
<i>Vulpia bromoides</i>	Herb	4,725	0.836	0.835	54.048	42.092	2.658	1.202
<i>Waterhousea floribunda</i>	Tree	129	0.992	0.991	19.593	36.601	33.202	10.605
<i>Wisteria floribunda</i>	Vine	144	0.983	0.981	28.080	21.493	48.426	2.002
<i>Wisteria sinensis</i>	Vine	159	0.966	0.962	42.912	18.471	14.567	24.050
<i>Xanthium spinosum</i>	Herb	1,932	0.899	0.898	48.147	40.940	8.788	2.126
<i>Zantedeschia aethiopica</i>	Herb	464	0.964	0.963	41.649	51.710	5.889	0.752
<i>Zizania latifolia</i>	Herb	115	0.986	0.984	23.389	20.725	52.030	3.855
<i>Ziziphus mauritiana</i>	Tree	275	0.915	0.909	66.189	9.388	17.199	7.224
Mean		1,864	0.911	0.909	38.442	29.915	25.360	6.283