



Supplement

The following supplementary materials are available for this article: Chen, H.L., Deng, Z.H., Yang, X.X., Liu, Y., Huang, Y.S. 2025 *Isotrema leyeense*, a new species of Aristolochiaceae from Guangxi, China. *Taiwania* 70(1): 8-26. doi: 10.6165/tai.2024.70.8

Table S1. Sources for developing the plant list for landslide revegetation.

We gathered plant species from three data sources: (1) 11 plant guidebooks focused on landslide revegetation, counting repeated mentions of species by the same author as a single record; (2) data from 186 sites recorded in previous studies that conducted vegetation surveys on landslide areas with succession times of less than five years; (3) expert suggestions obtained through a 2023 questionnaire survey, involving 52 experts with backgrounds in forestry, ecology, and soil and water conservation.

● Plant Guidebooks (11 sources)

No	Guidebook title	Year	Author(s)
1	Soil and Water Conservation Plants 水土保持植物	1984	Yan, Z.-P.,
2	Study on the habit and adaptability of plants used for slope soil and water conservation 坡地水土保持應用植物習性與適應性之研究	1993	Fan, J.-N.
3	Greening engineering technology 綠化工技術	1997	Kurata Masajiro
4	Application and explanation of plant materials for engineering environmental greening and landscaping 工程環境綠美化植物材料之應用與解說	1997	Lin, S.-H. & Hong, D.-X.
5	Soil and water conservation plants suitable for Taiwan 臺灣水土保持適生植物	1997	You, P.J. <i>et al.</i>
6	Introduction to soil and water conservation plants: Grass chapter 水土保持植物簡介-禾草篇	1999	Lin, S.-H. <i>et al.</i>
7	Grasses and green manure plants for slope vegetation 坡地植生草類與綠肥植物	2006	Lin, S.-H.
8	Vegetation engineering and application plants for landslide in the Shimen reservoir 石門水庫集水區崩塌地植生工程與應用植物	2007	Lin, S.-H.
9	Native plants for slope soil and water conservation applications 坡地水土保持應用原生植物	2008	Lin, S.-H.
10	Vegetation restoration handbook for national forest landslide management 崩塌地處理之植生復育手冊	2012	Lin, S.-H.
11	Lecture on soil and water conservation plants 水土保持植物講義	2014	Hsieh, S.-C.

● Sites recorded in previous studies (186 sites)

No.	County /City	Township /District	Latitude (°N)	Longitude (°E)	Succession Year
1	Nantou county	Yuchi Township	23°50'35"	120°53'45"	1
2	Nantou county	Yuchi Township	23°50'38"	120°53'51"	1
3	Nantou county	Yuchi Township	23°52'01"	120°55'60"	1
4	Nantou county	Yuchi Township	23°50'35"	120°54'09"	1
5	Nantou county	Yuchi Township	23°49'15"	120°52'21"	1
6	Nantou county	Yuchi Township	23°49'20"	120°52'16"	1
7	Yilan county	Datong Township	24°32'21"	121°30'44"	2
8	Nantou county	Ren-ai Township	23°54'05"	121°01'00"	2
9	Nantou county	Ren-ai Township	24°03'08"	121°12'59"	2
10	Nantou county	Ren-ai Township	23°57'28"	121°09'21"	2
11	Nantou county	Ren-ai Township	24°02'12"	121°12'34"	2
12	Nantou county	Ren-ai Township	24°03'08"	121°12'59"	2
13	Nantou county	Caotun Township	24°00'00"	120°45'00"	2
14	Nantou county	Caotun Township	24°00'00"	120°45'00"	2
15	Nantou county	Caotun Township	24°00'00"	120°45'00"	2
16	Nantou county	Caotun Township	24°00'00"	120°45'00"	2
17	Taoyuan City	Fuxing District	24°40'45"	121°22'24"	2
18	Taoyuan county	Fuxing Township	24°39'53"	121°24'27"	2
19	Yunlin county	Gukeng Township	23°34'54"	120°40'57"	2



20	Chiayi county	Alishan Township	23°25'13"	120°32'24"	2
21	Chiayi county	Alishan Township	23°25'46"	120°32'15"	2
22	Chiayi county	Alishan Township	23°25'46"	120°32'15"	2
23	Chiayi county	Alishan Township	23°25'48"	120°36'22"	2
24	Chiayi county	Alishan Township	23°25'49"	120°36'23"	2
25	Chiayi county	Alishan Township	23°25'13"	120°32'24"	2
26	Chiayi county	Alishan Township	23°25'46"	120°32'15"	2
27	Chiayi county	Alishan Township	23°25'46"	120°32'15"	2
28	Chiayi county	Alishan Township	23°25'48"	120°36'22"	2
29	Chiayi county	Alishan Township	23°25'49"	120°36'23"	2
30	Chiayi county	Zhongpu Township	23°22'41"	120°32'03"	2
31	Chiayi county	Zhongpu Township	23°22'40"	120°32'49"	2
32	Chiayi county	Zhongpu Township	23°22'41"	120°32'03"	2
33	Chiayi county	Zhongpu Township	23°22'40"	120°32'49"	2
34	Chiayi county	Zhongpu Township	23°22'41"	120°32'03"	2
35	Chiayi county	Zhongpu Township	23°22'40"	120°32'49"	2
36	Chiayi county	Zhongpu Township	23°22'41"	120°32'03"	2
37	Chiayi county	Alishan Township	23°25'13"	120°32'24"	2
38	Chiayi county	Alishan Township	23°25'46"	120°32'15"	2
39	Chiayi county	Alishan Township	23°25'46"	120°32'15"	2
40	Chiayi county	Alishan Township	23°25'48"	120°36'22"	2
41	Chiayi county	Alishan Township	23°25'49"	120°36'23"	2
42	Changhua county	Ershui Township	23°49'43"	120°36'45"	2
43	Changhua county	Ershui Township	23°49'43"	120°36'45"	2
44	Changhua county	Changhua City	24°04'50"	120°33'12"	2
45	Changhua county	Changhua City	24°04'50"	120°33'12"	2
46	Taichung City	Beitun District	24°10'23"	120°47'15"	2
47	Taichung City	Heping District	24°16'00"	120°54'60"	2
48	Taichung City	Heping District	24°11'00"	120°55'00"	2
49	Taichung City	Heping District	24°16'00"	120°54'60"	2
50	Taichung City	Heping District	24°11'00"	120°55'00"	2
51	Taichung county	Xinshe Township	24°14'09"	120°46'30"	2
52	Taichung county	Xinshe Township	24°14'09"	120°46'30"	2
53	Tainan City	Danei District	23°07'04"	120°23'28"	3
54	Nantou county	Ren-ai Township	23°54'05"	121°01'00"	3
55	Nantou county	Ren-ai Township	24°03'08"	121°12'59"	3
56	Nantou county	Ren-ai Township	23°53'49"	121°01'04"	3
57	Nantou county	Caotun Township	24°00'00"	120°45'00"	3
58	Nantou county	Caotun Township	24°00'00"	120°45'00"	3
59	Nantou county	Caotun Township	24°00'00"	120°45'60"	3
60	Nantou county	Caotun Township	24°00'00"	120°45'00"	3
61	Nantou county	Caotun Township	24°00'00"	120°45'00"	3
62	Nantou county	Caotun Township	24°00'00"	120°45'60"	3
63	Nantou county	Caotun Township	24°00'00"	120°45'60"	3
64	Nantou county	Caotun Township	24°00'00"	120°45'00"	3
65	Nantou county	Caotun Township	24°00'00"	120°45'00"	3
66	Nantou county	Caotun Township	24°00'00"	120°45'60"	3
67	Nantou county	Guoxing Township	24°06'00"	120°49'60"	3
68	Yunlin county	Gukeng Township	23°34'54"	120°40'57"	3
69	Hsinchu county	Jianshi Township	24°41'11"	121°17'52"	3
70	Changhua county	Ershui Township	23°49'43"	120°36'45"	3
71	Taichung City	Beitun District	24°10'23"	120°47'15"	3
72	Taichung City	Heping District	24°11'00"	120°55'00"	3
73	Taichung City	Heping District	24°16'00"	120°54'60"	3
74	Taichung City	Heping District	24°16'00"	120°54'60"	3
75	Taichung City	Heping District	24°11'00"	120°55'00"	3
76	Taichung City	Heping District	24°16'00"	120°54'60"	3
77	Taichung City	Heping District	24°11'00"	120°55'00"	3
78	Nantou county	Ren-ai Township	23°57'28"	121°09'21"	4



79	Nantou county	Ren-ai Township	24°02'12"	121°12'34"	4
80	Nantou county	Ren-ai Township	23°54'05"	121°01'00"	4
81	Nantou county	Ren-ai Township	23°53'49"	121°01'04"	4
82	Nantou county	Ren-ai Township	23°57'28"	121°09'21"	4
83	Nantou county	Ren-ai Township	24°02'12"	121°12'34"	4
84	Nantou county	Caotun Township	24°00'00"	120°45'00"	4
85	Nantou county	Caotun Township	24°00'00"	120°45'00"	4
86	Nantou county	Caotun Township	24°00'00"	120°45'60"	4
87	Nantou county	Caotun Township	24°00'00"	120°45'00"	4
88	Nantou county	Caotun Township	24°00'00"	120°45'00"	4
89	Nantou county	Caotun Township	24°00'00"	120°45'60"	4
90	Nantou county	Guoxing Township	24°06'00"	120°49'60"	4
91	Nantou county	Guoxing Township	24°06'00"	120°49'60"	4
92	Nantou county	Lugu Township	23°42'48"	120°47'17"	4
93	Nantou county	Lugu Township	23°42'48"	120°47'17"	4
94	Nantou county	Lugu Township	23°42'48"	120°47'17"	4
95	Nantou county	Lugu Township	23°42'43"	120°46'05"	4
96	Nantou county	Lugu Township	23°42'43"	120°46'05"	4
97	Nantou county	Lugu Township	23°42'43"	120°46'05"	4
98	Taoyuan county	Fuxing Township	24°40'45"	121°22'24"	4
99	Yunlin county	Gukeng Township	23°34'54"	120°40'57"	4
100	Changhua county	Ershui Township	23°49'43"	120°36'45"	4
101	Changhua county	Changhua City	24°04'50"	120°33'12"	4
102	Taichung City	Beitun District	24°10'23"	120°47'15"	4
103	Taichung City	Heping District	24°16'00"	120°54'60"	4
104	Taichung City	Heping District	24°11'00"	120°55'00"	4
105	Taichung City	Heping District	24°16'00"	120°54'60"	4
106	Taichung City	Heping District	24°11'00"	120°55'00"	4
107	Taichung City	Heping Township	24°17'27"	120°54'25"	5
108	Taichung City	Heping Township	24°17'28"	120°54'26"	5
109	Taichung City	Heping Township	24°17'30"	120°54'28"	5
110	Taichung City	Heping Township	24°17'31"	120°54'29"	5
111	Taichung City	Dongshi Township	24°16'12"	120°50'01"	5
112	Taichung City	Dongshi Township	24°16'12"	120°50'01"	5
113	Taichung City	Dongshi Township	24°16'12"	120°50'01"	5
114	Taichung City	Dongshi Township	24°16'12"	120°50'01"	5
115	Tainan City	Danei District	23°07'06"	120°23'28"	5
116	Tainan City	Danei District	23°07'03"	120°23'29"	5
117	Nantou county	Zhongliao Township	23°57'02"	120°51'22"	5
118	Nantou county	Zhongliao Township	23°57'01"	120°51'22"	5
119	Nantou county	Zhongliao Township	23°57'01"	120°51'20"	5
120	Nantou county	Zhongliao Township	23°57'01"	120°51'20"	5
121	Nantou county	Zhongliao Township	23°57'01"	120°51'17"	5
122	Nantou county	Ren-ai Township	24°03'08"	121°12'59"	5
123	Nantou county	Ren-ai Township	23°54'05"	121°01'00"	5
124	Nantou county	Ren-ai Township	23°53'49"	121°01'04"	5
125	Nantou county	Ren-ai Township	23°57'28"	121°09'21"	5
126	Nantou county	Ren-ai Township	24°02'12"	121°12'34"	5
127	Nantou county	Ren-ai Township	24°03'08"	121°12'59"	5
128	Nantou county	Ren-ai Township	23°54'05"	121°01'00"	5
129	Taoyuan City	Fuxing District	24°41'30"	121°19'36"	5
130	Taoyuan City	Fuxing District	24°40'07"	121°22'12"	5
131	Taoyuan City	Fuxing District	24°39'39"	121°21'31"	5
132	Taoyuan City	Fuxing District	24°39'33"	121°21'18"	5
133	Taoyuan City	Fuxing District	24°40'19"	121°20'34"	5
134	Taoyuan City	Fuxing District	24°40'19"	121°20'36"	5
135	Taoyuan City	Fuxing District	24°40'30"	121°22'07"	5
136	Taoyuan City	Fuxing District	24°40'42"	121°22'15"	5
137	Taoyuan City	Fuxing District	24°41'51"	121°22'34"	5



138	Taoyuan City	Fuxing District	24°41'55"	121°21'56"	5
139	Taoyuan City	Fuxing District	24°42'04"	121°21'27"	5
140	Taoyuan City	Fuxing District	24°42'04"	121°21'27"	5
141	Taoyuan City	Fuxing District	24°44'39"	121°20'51"	5
142	Yunlin county	Gukeng Township	23°34'54"	120°40'57"	5
143	Yunlin county	Gukeng Township	23°34'54"	120°40'57"	5
144	Hsinchu county	Jianshi Township	24°38'08"	121°16'19"	5
145	Hsinchu county	Jianshi Township	24°37'43"	121°16'51"	5
146	Hsinchu county	Jianshi Township	24°35'22"	121°15'26"	5
147	Hsinchu county	Jianshi Township	24°35'50"	121°17'52"	5
148	Hsinchu county	Jianshi Township	24°35'39"	121°18'15"	5
149	Hsinchu county	Jianshi Township	24°35'01"	121°17'52"	5
150	Hsinchu county	Jianshi Township	24°36'44"	121°17'12"	5
151	Hsinchu county	Jianshi Township	24°35'39"	121°17'12"	5
152	Hsinchu county	Jianshi Township	24°39'18"	121°19'30"	5
153	Hsinchu county	Jianshi Township	24°39'14"	121°21'07"	5
154	Hsinchu county	Jianshi Township	24°39'28"	121°21'04"	5
155	Hsinchu county	Jianshi Township	24°39'40"	121°20'48"	5
156	Hsinchu county	Jianshi Township	24°39'46"	121°20'31"	5
157	Hsinchu county	Jianshi Township	24°39'30"	121°20'23"	5
158	Hsinchu county	Jianshi Township	24°39'26"	121°20'11"	5
159	Hsinchu county	Jianshi Township	24°39'05"	121°20'09"	5
160	Hsinchu county	Jianshi Township	24°39'04"	121°19'43"	5
161	Hsinchu county	Jianshi Township	24°38'53"	121°19'09"	5
162	Hsinchu county	Jianshi Township	24°38'53"	121°19'09"	5
163	Hsinchu county	Jianshi Township	24°39'06"	121°18'36"	5
164	Hsinchu county	Jianshi Township	24°39'13"	121°18'31"	5
165	Hsinchu county	Jianshi Township	24°39'23"	121°18'38"	5
166	Hsinchu county	Jianshi Township	24°39'43"	121°19'20"	5
167	Hsinchu county	Jianshi Township	24°39'44"	121°19'31"	5
168	Hsinchu county	Jianshi Township	24°40'02"	121°19'48"	5
169	Hsinchu county	Jianshi Township	24°40'27"	121°17'03"	5
170	Hsinchu county	Jianshi Township	24°40'23"	121°17'06"	5
171	Hsinchu county	Jianshi Township	24°40'16"	121°16'55"	5
172	Hsinchu county	Jianshi Township	24°38'04"	121°16'26"	5
173	Hsinchu county	Jianshi Township	24°37'07"	121°17'14"	5
174	Hsinchu county	Jianshi Township	24°36'41"	121°16'56"	5
175	Hsinchu county	Jianshi Township	24°36'37"	121°17'09"	5
176	Hsinchu county	Jianshi Township	24°39'22"	121°16'47"	5
177	Hsinchu county	Jianshi Township	24°39'27"	121°17'32"	5
178	Hsinchu county	Jianshi Township	24°39'31"	121°17'46"	5
179	Hsinchu county	Jianshi Township	24°39'23"	121°17'42"	5
180	Hsinchu county	Fuxing District	24°39'17"	121°21'16"	5
181	Hsinchu county	Fuxing District	24°39'17"	121°21'16"	5
182	Changhua county	Ershui Township	23°49'43"	120°36'45"	5
183	Changhua county	Ershui Township	23°49'43"	120°36'45"	5
184	Changhua county	Ershui Township	23°49'43"	120°36'45"	5
185	Changhua county	Changhua City	24°04'50"	120°33'12"	5
186	Changhua county	Changhua City	24°04'50"	120°33'12"	5

● Experts Questionnaire Survey (52 respondents)

No.	Affiliated Institution	Field of Expertise	Years of practice
1	Academia	Forestry	10–15
2	Academia; Industry	Agronomy	30–40
3	Academia	Forestry	10–15
4	Public sector	Soil and water conservation	15–20
5	Public sector	Soil and water conservation	30–40
6	Public sector	Soil and water conservation	30–40
7	Industry	Soil and water conservation	20–30



8	Public sector	Soil and water conservation	30–40
9	Public sector	Hydraulic engineering	10–15
10	Public sector	Forestry	5–10
11	Academia	Forestry	15–20
12	Public sector	Civil engineering	20–30
13	Public sector	Ecological conservation	20–30
14	Industry	Soil and water conservation	5–10
15	Public sector	Forestry	0–5
16	Academia	Forestry	40–50
17	Industry	Landscape architecture	20–30
18	Academia	Forestry	30–40
19	Academia	Forestry	40–50
20	Academia	Forestry	20–30
21	Native Plant Association	Forestry	20–30
22	Public sector	Forestry	20–30
23	Academia	Plant taxonomy	5–10
24	Public sector	Forestry	0–5
25	Academia	Forestry	10–15
26	Academia	Soil and water conservation	30–40
27	Industry	Soil and water conservation	20–30
28	Public sector	Forestry	30–40
29	Academia	Forestry	30–40
30	Public sector	Forestry	15–20
31	Academia	Forestry	15–20
32	Academia	Soil and water conservation	15–20
33	Industry	Soil and water conservation	30–40
34	Public sector	Forestry	5–10
35	Academia	Forestry	30–40
36	Academia	Life sciences	20–30
37	Academia	Botany	15–20
38	Academia	Soil and water conservation	40–50
39	Public sector	Forestry	30–40
40	Academia	Soil and water conservation	30–40
41	Academia	Soil and water conservation	40–50
42	Industry	Soil and water conservation	20–30
43	Public sector	Forestry	5–10
44	Academia	Forestry	10–15
45	Public sector	Forestry and agronomy	40–50
46	Public sector	Forestry	15–20
47	Academia	Forestry	40–50
48	Industry	Forestry	5–10
49	Industry	Soil and water conservation	30–40
50	Industry	Forestry	10–15
51	Industry	Forestry	15–20
52	Public sector	Forestry	20–30

Table S2. Topography factor loadings of variables on principal components analysis.

Variables	PC 1	PC 2	PC 3	PC 4	PC 5
Elevation	0.903	0.194	0.100	-0.087	-0.041
Aspect	0.077	0.514	-0.112	0.135	-0.068
Moisture gradient	-0.028	-0.324	0.130	-0.142	0.089
Slope steepness	0.276	-0.104	0.530	0.189	-0.112
TWI	-0.126	0.162	-0.410	-0.184	0.092
Eigenvalue (%)	35.006	27.837	20.008	9.714	7.434



Table S3. The average elevation and percentage of landslides in each cluster from clustering analyses. The elevation range represents the minimum to maximum elevation of landslides in different elevation groups for each year. The average elevation represents the average values of landslides at different elevation groups for each year, while Percentage indicates the proportion of landslides in that elevation category compared to the total landslides in that year. From these results, it can be observed that Taiwan's PLH can be roughly divided into five elevation groups: 0–500 m, 500–1,000 m, 1,000–1,600 m, 1,600–2,300 m, and 2,300–3,800 m. This classification outcome closely resembles Su's (1984) elevation classification of vegetation zones in Taiwan.

Year	Elevation classification	Elevation range (m)	Average elevation(m)	Percentage (%)
2007	Group 1	0–510	225	14.31
	Group 2	510–1,078	818	20.36
	Group 3	1,078–1,590	1,334	24.72
	Group 4	1,590–2,374	1,940	27.66
	Group 5	2,374–3,835	2,795	12.94
2009	Group 1	32–500	253	18.05
	Group 2	500–1,134	822	26.35
	Group 3	1,134–1,651	1,385	23.80
	Group 4	1,651–2,347	1,952	20.53
	Group 5	2,347–3,746	2,787	11.28
2011	Group 1	2–539	284	15.42
	Group 2	539–1,178	870	26.33
	Group 3	1,178–1,795	1,477	26.88
	Group 4	1,795–2,473	2,103	20.04
	Group 5	2,473–3,822	2,871	11.33
2013	Group 1	21–470	240	10.90
	Group 2	470–1,101	804	25.43
	Group 3	1,101–1,714	1,402	29.29
	Group 4	1,714–2,406	2,023	21.74
	Group 5	2,406–3,864	2,841	12.64
2015	Group 1	17–551	279	13.33
	Group 2	551–1,085	831	20.93
	Group 3	1,085–1,687	1,385	28.69
	Group 4	1,687–2,353	1,988	23.20
	Group 5	2,353–3,800	2,770	13.85
2017	Group 1	16–518	254	14.46
	Group 2	518–1,058	802	21.15
	Group 3	1,058–1,675	1,366	28.70
	Group 4	1,675–2,352	1,979	22.31
	Group 5	2,352–3,825	2,772	13.39



Table S4. Data Sources and API for 319 herbaceous plants. According to the standards of adduce frequency (≥ 2) and adduce accumulated value ($\geq 25\%$), a total of 73 herbaceous species were filtered that meet the adduce frequency standard and 79 that meet the adduce accumulated value standard out of 319 herbaceous species. Among these, there were 69 herbaceous species (58 genera, 17 families) that simultaneously met both criteria, comprising 38 native species and 31 exotic species.

	No.	Herbaceous species	Family	Source	AF	AAV	API
⊙	1	<i>Miscanthus floridulus</i>	Poaceae	ABC	3	87.27	100.00
⊙	2	<i>Cynodon dactylon</i>	Poaceae	ABC	3	72.92	91.78
⊙	3	<i>Arundo formosana</i>	Poaceae	ABC	3	51.04	79.24
	4	<i>Paspalum notatum</i>	Poaceae	ABC	3	46.04	76.38
	5	<i>Chloris gayana</i>	Poaceae	ABC	3	42.43	74.31
⊙	6	<i>Persicaria chinensis</i>	Polygonaceae	ABC	3	41.96	74.04
	7	<i>Lolium perenne</i>	Poaceae	ABC	3	32.47	68.60
	8	<i>Paspalum conjugatum</i>	Poaceae	ABC	3	31.52	68.06
⊙	9	<i>Saccharum spontaneum</i>	Poaceae	ABC	3	30.87	67.69
⊙	10	<i>Imperata cylindrica</i> var. <i>major</i>	Poaceae	ABC	3	30.00	67.19
	11	<i>Axonopus compressus</i>	Poaceae	ABC	3	29.84	67.10
⊙	12	<i>Eupatorium cannabinum</i> subsp. <i>asiaticum</i>	Asteraceae	ABC	3	28.17	66.14
	13	<i>Megathyrsus maximus</i>	Poaceae	ABC	3	27.95	66.02
⊙	14	<i>Setaria palmifolia</i>	Poaceae	ABC	3	24.71	64.15
⊙	15	<i>Eleusine indica</i>	Poaceae	ABC	3	24.48	64.03
⊙	16	<i>Chrysopogon aciculatus</i>	Poaceae	ABC	3	23.41	63.41
	17	<i>Festuca arundinacea</i>	Poaceae	ABC	3	22.89	63.12
⊙	18	<i>Alpinia zerumbet</i>	Zingiberaceae	ABC	3	19.14	60.97
	19	<i>Dactylis glomerata</i>	Poaceae	ABC	3	17.08	59.78
⊙	20	<i>Nephrolepis cordifolia</i>	Nephrolepidaceae	ABC	3	13.69	57.84
	21	<i>Pennisetum alopecuroides</i>	Poaceae	ABC	3	9.85	55.64
⊙	22	<i>Eremochloa ophiuroides</i>	Poaceae	AC	2	35.76	53.82
	23	<i>Trifolium repens</i>	Fabaceae	AC	2	32.73	52.08
⊙	24	<i>Paspalum distichum</i>	Poaceae	AB	2	30.15	50.60
	25	<i>Conyza canadensis</i> var. <i>canadensis</i>	Asteraceae	AB	2	26.72	48.64
	26	<i>Stenotaphrum secundatum</i>	Poaceae	AC	2	23.03	46.53
	27	<i>Pennisetum purpureum</i>	Poaceae	AB	2	22.01	45.94
	28	<i>Oxalis corymbosa</i>	Oxalidaceae	AB	2	20.15	44.88
	29	<i>Crassocephalum crepidioides</i>	Asteraceae	AB	2	19.63	44.58
	30	<i>Axonopus affinis</i>	Poaceae	AC	2	19.39	44.44
	31	<i>Ageratum conyzoides</i>	Asteraceae	AB	2	18.94	44.18
	32	<i>Ageratum houstonianum</i>	Asteraceae	AB	2	18.34	43.84
	33	<i>Melinis repens</i>	Poaceae	AB	2	18.15	43.73
	34	<i>Digitaria decumbens</i>	Poaceae	AC	2	16.36	42.71
	35	<i>Zoysia japonica</i>	Poaceae	AC	2	16.36	42.71
	36	<i>Vetiveria zizanioides</i>	Poaceae	AC	2	16.36	42.71
⊙	37	<i>Wedelia chinensis</i>	Asteraceae	AC	2	15.76	42.36
⊙	38	<i>Plantago asiatica</i>	Plantaginaceae	AB	2	15.00	41.93
⊙	39	<i>Oxalis corniculata</i>	Oxalidaceae	AB	2	14.84	41.84
⊙	40	<i>Torenia concolor</i>	Linderniaceae	AB	2	14.33	41.54
	41	<i>Bidens pilosa</i>	Asteraceae	AB	2	14.15	41.44
	42	<i>Brachiaria mutica</i>	Poaceae	AB	2	13.70	41.18
	43	<i>Bromus catharticus</i>	Poaceae	AB	2	13.62	41.14
	44	<i>Lolium multiflorum</i>	Poaceae	AB	2	13.62	41.14
⊙	45	<i>Panicum repens</i>	Poaceae	AB	2	13.48	41.06
	46	<i>Pennisetum polystachion</i>	Poaceae	AB	2	12.97	40.76
⊙	47	<i>Miscanthus transmorrisonensis</i>	Poaceae	AC	2	12.73	40.62
⊙	48	<i>Pterocypsela indica</i>	Asteraceae	AB	2	10.44	39.32
⊙	49	<i>Brachiaria subquadrifolia</i>	Poaceae	AC	2	9.70	38.89
⊙	50	<i>Dactyloctenium aegyptium</i>	Poaceae	AC	2	9.70	38.89
⊙	51	<i>Reynoutria japonica</i>	Polygonaceae	AC	2	9.70	38.89
⊙	52	<i>Oplismenus compositus</i>	Poaceae	AB	2	9.53	38.80
	53	<i>Amaranthus viridis</i>	Amaranthaceae	AB	2	8.38	38.13
⊙	54	<i>Artemisia indica</i>	Asteraceae	AB	2	7.95	37.89



◎	55	<i>Alternanthera sessilis</i>	Amaranthaceae	AB	2	7.93	37.87
◎	56	<i>Macleaya cordata</i>	Papaveraceae	AB	2	7.85	37.83
◎	57	<i>Cyperus rotundus</i>	Cyperaceae	AB	2	7.71	37.75
◎	58	<i>Digitaria setigera</i>	Poaceae	AB	2	7.69	37.74
	59	<i>Mimosa pudica</i>	Fabaceae	AB	2	7.53	37.65
◎	60	<i>Dianella ensifolia</i>	Asphodelaceae	AB	2	7.48	37.62
◎	61	<i>Murdannia keisak</i>	Commelinaceae	AB	2	7.30	37.52
◎	62	<i>Centella asiatica</i>	Apiaceae	AB	2	7.27	37.50
◎	63	<i>Commelina diffusa</i>	Commelinaceae	AB	2	7.20	37.46
◎	64	<i>Scirpus ternatanus</i>	Cyperaceae	BC	2	7.14	37.42
	65	<i>Cosmos bipinnatus</i>	Asteraceae	AB	2	7.00	37.35
◎	66	<i>Mazus pumilus</i>	Mazaceae	AB	2	7.00	37.34
◎	67	<i>Indigofera spicata</i>	Fabaceae	AB	2	6.98	37.33
	68	<i>Hedychium coronarium</i>	Zingiberaceae	AB	2	6.89	37.28
◎	69	<i>Hydrocotyle sibthorpioides</i>	Araliaceae	AB	2	6.84	37.25
	70	<i>Dicranopteris linearis</i>	Gleicheniaceae	BC	2	6.31	36.95
◎	71	<i>Chloris barbata</i>	Poaceae	BC	2	4.38	35.84
	72	<i>Thysanolaena latifolia</i>	Poaceae	BC	2	3.64	35.42
	73	<i>Vernonia patula</i>	Asteraceae	BC	2	3.61	35.40
	74	<i>Spinifex littoreus</i>	Poaceae	A	1	26.67	31.94
◎	75	<i>Zoysia matrella</i>	Poaceae	A	1	26.67	31.94
	76	<i>Bidens alba</i> var. <i>radiata</i>	Asteraceae	B	1	21.54	29.00
	77	<i>Eragrostis curvula</i>	Poaceae	A	1	20.00	28.12
	78	<i>Pennisetum clandestinum</i>	Poaceae	A	1	20.00	28.12
	79	<i>Paspalum vaginatum</i>	Poaceae	A	1	20.00	28.12
	80	<i>Gaillardia pulchella</i>	Asteraceae	A	1	20.00	28.12
	81	<i>Glycine max</i>	Fabaceae	A	1	13.33	24.31
	82	<i>Paspalum dilatatum</i>	Poaceae	A	1	13.33	24.31
	83	<i>Zoysia tenuifolia</i>	Poaceae	A	1	13.33	24.31
	84	<i>Cynodon plectostachyus</i>	Poaceae	A	1	6.67	20.49
	85	<i>Digitaria longiflora</i>	Poaceae	A	1	6.67	20.49
	86	<i>Alysicarpus vaginalis</i> var. <i>vaginalis</i>	Fabaceae	A	1	6.67	20.49
	87	<i>Desmodium triflorum</i>	Fabaceae	A	1	6.67	20.49
	88	<i>Rhynchosia minima</i> fo. <i>nuda</i>	Fabaceae	A	1	6.67	20.49
	89	<i>Alternanthera philoxeroides</i>	Amaranthaceae	A	1	6.67	20.49
	90	<i>Dichondra micrantha</i>	Convolvulaceae	A	1	6.67	20.49
	91	<i>Eclipta prostrata</i>	Asteraceae	A	1	6.67	20.49
	92	<i>Euphorbia thymifolia</i>	Euphorbiaceae	A	1	6.67	20.49
	93	<i>Portulaca quadrifida</i>	Portulacaceae	A	1	6.67	20.49
	94	<i>Zebrina pendula</i>	Commelinaceae	A	1	6.67	20.49
	95	<i>Digitaria radicata</i> var. <i>radicata</i>	Poaceae	A	1	6.67	20.49
	96	<i>Desmodium intortum</i>	Fabaceae	A	1	6.67	20.49
	97	<i>Lobelia nummularia</i>	Campanulaceae	A	1	6.67	20.49
	98	<i>Aster indicus</i>	Asteraceae	A	1	6.67	20.49
	99	<i>Tridax procumbens</i>	Asteraceae	A	1	6.67	20.49
	100	<i>Wedelia prostrata</i> var. <i>prostrata</i>	Asteraceae	A	1	6.67	20.49
	101	<i>Ophiopogon japonicus</i>	Asparagaceae	A	1	6.67	20.49
	102	<i>Lupinus luteus</i>	Fabaceae	A	1	6.67	20.49
	103	<i>Eragrostis tenella</i>	Poaceae	A	1	6.67	20.49
	104	<i>Polypogon fugax</i>	Poaceae	A	1	6.67	20.49
	105	<i>Sporobolus indicus</i> var. <i>major</i>	Poaceae	A	1	6.67	20.49
	106	<i>Cenchrus echinatus</i>	Poaceae	A	1	6.67	20.49
	107	<i>Phragmites australis</i>	Poaceae	A	1	6.67	20.49
	108	<i>Typha orientalis</i>	Typhaceae	A	1	6.67	20.49
	109	<i>Cyperus iria</i>	Cyperaceae	A	1	6.67	20.49
	110	<i>Cyperus involucratus</i>	Cyperaceae	A	1	6.67	20.49
	111	<i>Hemerocallis fulva</i>	Asphodelaceae	A	1	6.67	20.49
	112	<i>Coreopsis tinctoria</i>	Asteraceae	A	1	6.67	20.49



113	<i>Digitalis purpurea</i>	Plantaginaceae	A	1	6.67	20.49
114	<i>Aloe vera</i> var. <i>chinensis</i>	Asphodelaceae	A	1	6.67	20.49
115	<i>Sesuvium portulacastrum</i>	Aizoaceae	A	1	6.67	20.49
116	<i>Artemisia kawakamii</i>	Asteraceae	A	1	6.67	20.49
117	<i>Miscanthus sinensis</i> fo. <i>glaber</i>	Poaceae	B	1	6.37	20.32
118	<i>Conyza sumatrensis</i>	Asteraceae	B	1	6.36	20.31
119	<i>Alocasia odora</i>	Araceae	B	1	6.32	20.29
120	<i>Solanum nigrum</i>	Solanaceae	B	1	6.31	20.28
© 121	<i>Bidens pilosa</i> var. <i>minor</i>	Asteraceae	B	1	5.77	19.97
122	<i>Sonchus arvensis</i>	Asteraceae	B	1	4.58	19.29
123	<i>Carex baccans</i>	Cyperaceae	B	1	3.87	18.88
124	<i>Oplismenus hirtellus</i>	Poaceae	B	1	3.70	18.79
125	<i>Christella acuminata</i>	Thelypteridaceae	B	1	3.63	18.74
126	<i>Christella dentata</i>	Thelypteridaceae	B	1	3.50	18.67
127	<i>Elatostema lineolatum</i> var. <i>majus</i>	Urticaceae	B	1	3.20	18.50
128	<i>Miscanthus sinensis</i> var. <i>formosanus</i>	Poaceae	C	1	3.03	18.40
129	<i>Capillipedium parviflorum</i>	Poaceae	C	1	3.03	18.40
130	<i>Blumea balsamifera</i>	Asteraceae	C	1	3.03	18.40
131	<i>Digitaria henryi</i>	Poaceae	C	1	3.03	18.40
132	<i>Ichnanthus vicinus</i>	Poaceae	C	1	3.03	18.40
133	<i>Thuarea involuta</i>	Poaceae	C	1	3.03	18.40
134	<i>Zoysia sinica</i>	Poaceae	C	1	3.03	18.40
135	<i>Gonostegia hirta</i>	Urticaceae	B	1	2.97	18.37
136	<i>Pteris vittata</i>	Pteridaceae	B	1	2.92	18.34
137	<i>Urena lobata</i>	Malvaceae	B	1	2.82	18.28
138	<i>Pseudocyclosorus esquirolii</i>	Thelypteridaceae	B	1	2.81	18.28
139	<i>Pteris wallichiana</i>	Pteridaceae	B	1	2.66	18.19
140	<i>Emilia sonchifolia</i> var. <i>javanica</i>	Asteraceae	B	1	2.51	18.10
141	<i>Chromolaena odorata</i>	Asteraceae	B	1	2.49	18.10
142	<i>Microlepia strigosa</i>	Dennstaedtiaceae	B	1	2.45	18.07
143	<i>Elatostema platyphylloides</i>	Urticaceae	B	1	2.33	18.00
144	<i>Setaria geniculata</i>	Poaceae	B	1	2.31	17.99
145	<i>Alpinia intermedia</i>	Zingiberaceae	B	1	2.24	17.95
146	<i>Amisotolype hispida</i>	Commelinaceae	B	1	1.87	17.74
147	<i>Lycianthes biflora</i>	Solanaceae	B	1	1.82	17.71
148	<i>Cyperus cyperoides</i>	Cyperaceae	B	1	1.77	17.68
149	<i>Microlepia speluncae</i>	Dennstaedtiaceae	B	1	1.75	17.67
150	<i>Alpinia shimadae</i>	Zingiberaceae	B	1	1.67	17.63
151	<i>Elephantopus mollis</i>	Asteraceae	B	1	1.63	17.60
152	<i>Celosia argentea</i>	Amaranthaceae	B	1	1.62	17.59
153	<i>Selaginella delicatula</i>	Selaginellaceae	B	1	1.51	17.53
154	<i>Pityrogramma calomelanos</i>	Pteridaceae	B	1	1.51	17.53
155	<i>Microstegium ciliatum</i>	Poaceae	B	1	1.40	17.47
156	<i>Costus speciosus</i>	Costaceae	B	1	1.35	17.44
157	<i>Onychium japonicum</i>	Pteridaceae	B	1	1.33	17.43
158	<i>Tectaria impressa</i>	Tectariaceae	B	1	1.31	17.42
159	<i>Liriope spicata</i>	Liliaceae	B	1	1.24	17.38
160	<i>Richardia scabra</i>	Rubiaceae	B	1	1.24	17.37
161	<i>Musa basjoo</i> var. <i>formosana</i>	Musaceae	B	1	1.23	17.37
162	<i>Christella parasitica</i>	Thelypteridaceae	B	1	1.21	17.36
163	<i>Equisetum ramosissimum</i>	Equisetaceae	B	1	1.20	17.36
164	<i>Urtica thunbergiana</i>	Urticaceae	B	1	1.18	17.35
165	<i>Solanum americanum</i>	Solanaceae	B	1	1.16	17.33
166	<i>Colocasia konishii</i>	Araceae	B	1	1.10	17.30
167	<i>Lepidagathis formosensis</i>	Acanthaceae	B	1	1.09	17.29
168	<i>Talinum paniculatum</i>	Talinaceae	B	1	1.09	17.29
169	<i>Blumea lanceolaria</i>	Asteraceae	B	1	1.07	17.28
170	<i>Begonia laciniata</i>	Begoniaceae	B	1	1.06	17.28



171	<i>Asparagus cochinchinensis</i>	Asparagaceae	B	1	1.05	17.27
172	<i>Microglossa pyrifolia</i>	Asteraceae	B	1	0.98	17.23
173	<i>Impatiens walleriana</i>	Balsaminaceae	B	1	0.96	17.22
174	<i>Lepisorus thunbergianus</i>	Polypodiaceae	B	1	0.96	17.22
175	<i>Youngia japonica</i> subsp. <i>japonica</i>	Asteraceae	B	1	0.95	17.21
176	<i>Ixeris chinensis</i>	Asteraceae	B	1	0.95	17.21
177	<i>Spermacoce latifolia</i>	Rubiaceae	B	1	0.94	17.21
178	<i>Commelina communis</i>	Commelinaceae	B	1	0.90	17.18
179	<i>Pteridium aquilinum</i> subsp. <i>wightianum</i>	Dennstaedtiaceae	B	1	0.90	17.18
180	<i>Pilea plataniflora</i>	Urticaceae	B	1	0.88	17.17
181	<i>Hemiboea bicornuta</i>	Gesneriaceae	B	1	0.85	17.16
182	<i>Diplazium dilatatum</i>	Athyriaceae	B	1	0.84	17.15
183	<i>Polia miranda</i>	Commelinaceae	B	1	0.81	17.13
184	<i>Drymaria diandra</i>	Caryophyllaceae	B	1	0.80	17.13
185	<i>Woodwardia prolifera</i>	Blechnaceae	B	1	0.77	17.11
186	<i>Pterocypsela formosana</i>	Asteraceae	B	1	0.75	17.10
187	<i>Christella jaculosa</i>	Thelypteridaceae	B	1	0.74	17.09
188	<i>Rhopalephora scaberrima</i>	Commelinaceae	B	1	0.72	17.08
189	<i>Achyranthes aspera</i> var. <i>indica</i>	Amaranthaceae	B	1	0.68	17.05
190	<i>Kyllinga brevifolia</i>	Cyperaceae	B	1	0.67	17.05
191	<i>Sigesbeckia orientalis</i>	Asteraceae	B	1	0.66	17.04
192	<i>Setaria viridis</i>	Poaceae	B	1	0.65	17.04
193	<i>Astilbe longicarpa</i>	Saxifragaceae	B	1	0.65	17.04
194	<i>Arenga tremula</i>	Arecaceae	B	1	0.64	17.03
195	<i>Gnaphalium luteoalbum</i> subsp. <i>affine</i>	Asteraceae	B	1	0.64	17.03
196	<i>Sphaerostephanos taiwanensis</i>	Thelypteridaceae	B	1	0.62	17.02
197	<i>Oenanthe javanica</i>	Apiaceae	B	1	0.62	17.02
198	<i>Cyrtococcum patens</i>	Poaceae	B	1	0.62	17.02
199	<i>Achyranthes bidentata</i> var. <i>bidentata</i>	Amaranthaceae	B	1	0.61	17.02
200	<i>Justicia procumbens</i> var. <i>procumbens</i>	Acanthaceae	B	1	0.61	17.02
201	<i>Lycopersicon esculentum</i> var. <i>cerasiforme</i>	Solanaceae	B	1	0.61	17.02
202	<i>Pteris fauriei</i> var. <i>fauriei</i>	Pteridaceae	B	1	0.60	17.01
203	<i>Anemone vitifolia</i>	Ranunculaceae	B	1	0.60	17.01
204	<i>Pteris biaurita</i>	Pteridaceae	B	1	0.59	17.01
205	<i>Digitaria violascens</i>	Poaceae	B	1	0.59	17.00
206	<i>Angiopteris lygodiifolia</i>	Marattiaceae	B	1	0.59	17.00
207	<i>Pteris ensiformis</i>	Pteridaceae	B	1	0.58	17.00
208	<i>Physalis peruviana</i>	Solanaceae	B	1	0.58	17.00
209	<i>Gynura japonica</i>	Asteraceae	B	1	0.56	16.99
210	<i>Cibotium barometz</i>	Cibotiaceae	B	1	0.55	16.98
211	<i>Ricinus communis</i>	Euphorbiaceae	B	1	0.55	16.98
212	<i>Blechnopsis orientalis</i>	Blechnaceae	B	1	0.53	16.97
213	<i>Ambrosia artemisiifolia</i>	Asteraceae	B	1	0.52	16.97
214	<i>Macrothelypteris torresiana</i>	Thelypteridaceae	B	1	0.51	16.96
215	<i>Coniogramme intermedia</i>	Pteridaceae	B	1	0.51	16.96
216	<i>Galinsoga quadriradiata</i>	Asteraceae	B	1	0.50	16.96
217	<i>Adiantum capillus-veneris</i> fo. <i>capillus-veneris</i>	Pteridaceae	B	1	0.50	16.96
218	<i>Strobilanthes rankanensis</i>	Acanthaceae	B	1	0.49	16.95
219	<i>Pilea melastomoides</i>	Urticaceae	B	1	0.48	16.94
220	<i>Lilium formosanum</i>	Liliaceae	B	1	0.48	16.94
221	<i>Sonchus oleraceus</i>	Asteraceae	B	1	0.48	16.94
222	<i>Trichodesma calycosum</i>	Boraginaceae	B	1	0.47	16.93
223	<i>Blumea laciniata</i>	Asteraceae	B	1	0.46	16.93
224	<i>Lophatherum gracile</i>	Poaceae	B	1	0.46	16.93
225	<i>Pteris terminalis</i> var. <i>fauriei</i>	Pteridaceae	B	1	0.46	16.93
226	<i>Bothriospermum zeylanicum</i>	Boraginaceae	B	1	0.46	16.93
227	<i>Microstegium geniculatum</i>	Poaceae	B	1	0.45	16.92
228	<i>Cyrtococcum accrescens</i>	Poaceae	B	1	0.44	16.92



229	<i>Praxelis clematidea</i>	Asteraceae	B	1	0.44	16.92
230	<i>Digitaria ciliaris</i>	Poaceae	B	1	0.44	16.92
231	<i>Lemmaphyllum microphyllum</i>	Polypodiaceae	B	1	0.42	16.91
232	<i>Poa annua</i>	Poaceae	B	1	0.39	16.89
233	<i>Selaginella doederleinii</i>	Selaginellaceae	B	1	0.35	16.87
234	<i>Blumea lacera</i>	Asteraceae	B	1	0.34	16.86
235	<i>Nanocnide japonica</i>	Urticaceae	B	1	0.32	16.85
236	<i>Cyclocodon lancifolius</i>	Campanulaceae	B	1	0.32	16.85
237	<i>Stellaria aquatica</i>	Caryophyllaceae	B	1	0.31	16.85
238	<i>Rumex crispus</i> var. <i>japonicus</i>	Polygonaceae	B	1	0.31	16.85
239	<i>Dennstaedtia smithii</i>	Dennstaedtiaceae	B	1	0.31	16.84
240	<i>Hydrocotyle dichondroides</i>	Araliaceae	B	1	0.31	16.84
241	<i>Colocasia formosana</i>	Araceae	B	1	0.31	16.84
242	<i>Vernonia cinerea</i> var. <i>cinerea</i>	Asteraceae	B	1	0.31	16.84
243	<i>Cucubalus baccifer</i>	Caryophyllaceae	B	1	0.30	16.84
244	<i>Anisomeles indica</i>	Lamiaceae	B	1	0.30	16.84
245	<i>Dryopteris formosana</i>	Dryopteridaceae	B	1	0.30	16.84
246	<i>Rhynchoglossum obliquum</i> var. <i>hologlossum</i>	Gesneriaceae	B	1	0.30	16.84
247	<i>Dennstaedtia scabra</i>	Dennstaedtiaceae	B	1	0.30	16.84
248	<i>Spodiopogon tainanensis</i>	Poaceae	B	1	0.29	16.83
249	<i>Apios taiwaniana</i>	Fabaceae	B	1	0.29	16.83
250	<i>Odontosoria chinensis</i>	Lindsaeaceae	B	1	0.29	16.83
251	<i>Cheirostylis takeoi</i>	Orchidaceae	B	1	0.29	16.83
252	<i>Hypoestes purpurea</i>	Acanthaceae	B	1	0.29	16.83
253	<i>Duchesnea indica</i>	Rosaceae	B	1	0.29	16.83
254	<i>Hydrocotyle nepalensis</i>	Araliaceae	B	1	0.29	16.83
255	<i>Chenopodium serotinum</i>	Amaranthaceae	B	1	0.26	16.82
256	<i>Commelina auriculata</i>	Commelinaceae	B	1	0.22	16.79
257	<i>Torilis japonica</i>	Apiaceae	B	1	0.21	16.78
258	<i>Chenopodium ambrosioides</i>	Amaranthaceae	B	1	0.20	16.78
259	<i>Astilbe macroflora</i>	Saxifragaceae	B	1	0.19	16.78
260	<i>Digitaria sanguinalis</i>	Poaceae	B	1	0.19	16.77
261	<i>Paspalum orbiculare</i>	Poaceae	B	1	0.18	16.77
262	<i>Corydalis tashiroi</i>	Papaveraceae	B	1	0.18	16.77
263	<i>Uraria crinita</i>	Fabaceae	B	1	0.17	16.77
264	<i>Commelina paludosa</i>	Commelinaceae	B	1	0.17	16.76
265	<i>Phytolacca japonica</i>	Phytolaccaceae	B	1	0.17	16.76
266	<i>Hemisteptia lyrata</i>	Asteraceae	B	1	0.17	16.76
267	<i>Pilea somai</i>	Urticaceae	B	1	0.17	16.76
268	<i>Rorippa indica</i>	Brassicaceae	B	1	0.16	16.76
269	<i>Woodwardia unigemmata</i>	Blechnaceae	B	1	0.16	16.76
270	<i>Kummerowia stipulacea</i>	Fabaceae	B	1	0.16	16.76
271	<i>Conyza canadensis</i> var. <i>pusilla</i>	Asteraceae	B	1	0.16	16.76
272	<i>Heliotropium formosanum</i>	Heliotropiaceae	B	1	0.16	16.76
273	<i>Diplopterygium glaucum</i>	Gleicheniaceae	B	1	0.16	16.76
274	<i>Carpesium nepalense</i>	Asteraceae	B	1	0.16	16.76
275	<i>Gnaphalium involucratum</i> var. <i>ramosum</i>	Asteraceae	B	1	0.16	16.76
276	<i>Senecio nemorensis</i> var. <i>dentatus</i>	Asteraceae	B	1	0.16	16.76
277	<i>Oenothera laciniata</i>	Onagraceae	B	1	0.16	16.76
278	<i>Erechtites valerianifolia</i>	Asteraceae	B	1	0.16	16.76
279	<i>Catharanthus roseus</i>	Apocynaceae	B	1	0.16	16.76
280	<i>Torilis scabra</i>	Apiaceae	B	1	0.16	16.76
281	<i>Impatiens uniflora</i>	Balsaminaceae	B	1	0.16	16.76
282	<i>Patrinia formosana</i>	Caprifoliaceae	B	1	0.16	16.76
283	<i>Erigeron annuus</i>	Asteraceae	B	1	0.16	16.76
284	<i>Pyrrosia lingua</i>	Polypodiaceae	B	1	0.15	16.76
285	<i>Lepidomicrosorium ningpoense</i>	Polypodiaceae	B	1	0.15	16.76
286	<i>Petasites formosanus</i>	Asteraceae	B	1	0.15	16.75



287	<i>Rubus taiwanicola</i>	Rosaceae	B	1	0.15	16.75
288	<i>Nephrolepis brownii</i>	Nephrolepidaceae	B	1	0.15	16.75
289	<i>Clinopodium gracile</i>	Lamiaceae	B	1	0.15	16.75
290	<i>Eupatorium amabile</i>	Asteraceae	B	1	0.15	16.75
291	<i>Pneumatopteris truncata</i>	Thelypteridaceae	B	1	0.15	16.75
292	<i>Paspalum thunbergii</i>	Poaceae	B	1	0.15	16.75
293	<i>Aster ageratoides</i>	Asteraceae	B	1	0.15	16.75
294	<i>Sida rhombifolia</i> subsp. <i>rhombifolia</i>	Malvaceae	B	1	0.15	16.75
295	<i>Sida cordifolia</i>	Malvaceae	B	1	0.15	16.75
296	<i>Cirsium arisanense</i>	Asteraceae	B	1	0.15	16.75
297	<i>Persicaria lanata</i>	Polygonaceae	B	1	0.15	16.75
298	<i>Cardamine flexuosa</i>	Brassicaceae	B	1	0.15	16.75
299	<i>Bletilla formosana</i>	Orchidaceae	B	1	0.15	16.75
300	<i>Ophiopogon intermedius</i>	Asparagaceae	B	1	0.15	16.75
301	<i>Polystichum parvipinnulum</i>	Dryopteridaceae	B	1	0.15	16.75
302	<i>Arachniodes aristata</i>	Dryopteridaceae	B	1	0.15	16.75
303	<i>Euphorbia hirta</i>	Euphorbiaceae	B	1	0.15	16.75
304	<i>Pilea aquarum</i> subsp. <i>brevicornuta</i>	Urticaceae	B	1	0.15	16.75
305	<i>Ludwigia decurrens</i>	Onagraceae	B	1	0.15	16.75
306	<i>Achyranthes aspera</i> var. <i>rubrofusca</i>	Amaranthaceae	B	1	0.15	16.75
307	<i>Pseudophegopteris subaurita</i>	Thelypteridaceae	B	1	0.15	16.75
308	<i>Galium spurium</i> fo. <i>vaillantii</i>	Rubiaceae	B	1	0.15	16.75
309	<i>Asplenium nidus</i>	Aspleniaceae	B	1	0.15	16.75
310	<i>Pouzolzia zeylanica</i>	Urticaceae	B	1	0.14	16.75
311	<i>Asplenium setoi</i>	Aspleniaceae	B	1	0.14	16.75
312	<i>Davallia trichomanoides</i>	Davalliaceae	B	1	0.14	16.75
313	<i>Panicum notatum</i>	Poaceae	B	1	0.14	16.75
314	<i>Blumea oblongifolia</i>	Asteraceae	B	1	0.14	16.75
© 315	<i>Conyza japonica</i>	Asteraceae	B	1	0.14	16.75
316	<i>Pteris cretica</i>	Pteridaceae	B	1	0.14	16.75
317	<i>Adiantum flabellulatum</i>	Pteridaceae	B	1	0.14	16.75
318	<i>Setaria pallide-fusca</i>	Poaceae	B	1	0.14	16.75
319	<i>Scleria terrestris</i>	Cyperaceae	B	1	0.14	16.75

Note: Symbol and abbreviation: : Compliant with adduce frequency and adduce accumulated value standards. : Compliant with adduce frequency standards. : Compliant with adduce accumulated value standards. © : NHS_{LR}. * : Exotic species. ** : Invasive species. # : Native for replacing exotic. AF : Adduce frequency. AAV : Adduce accumulated value. A : Plant guide books. B : Previous studies field surveys. C : Expert recommendations.

**Table S5.** Traits and habits of NHS_{LR}. The traits and habits of native herbaceous species for landslide revegetation (NHS_{LR}).

No	Herbaceous specie	Family	Life span	Climate zone	Seed type	Seed dispersal methods	Plant reproduction mode	STI	ΔSTI	Invaded country	Drought tolerance	Poor soil tolerance	C4 Plant	API
1	<i>Alpinia zerumbet</i> (Pers.) B.L. Burtt & R.M. Sm.	Zingiberaceae	P	S	Capsule	A	S	22.49	4.81	27	○	-	-	60.97
2	<i>Alternanthera sessilis</i> (L.) R. Br. ex DC.	Amaranthaceae	P	D	Achenes	Wi, Wa	S, R	23.07	3.64	75	○	○	○	37.87
3	<i>Artemisia indica</i> Willd.	Asteraceae	P	T	Achenes	Wi, A	S	22.58	12.15	0	○	-	-	37.89
4	<i>Arundo formosana</i> Hack.	Poaceae	P	S	Caryopsis	Wi	S, R	21.52	7.88	0	○	○	○	79.24
5	<i>Bidens pilosa</i> var. <i>minor</i> (Blume) Sherff	Asteraceae	A	T	Achenes	A	S	21.61	7.46	0	-	-	-	18.67
6	<i>Brachiaria subquadrifida</i> (Trin.) Hitchc.	Poaceae	A	D	Caryopsis	Wi, Wa	S	24.13	3.07	14	○	○	○	38.89
7	<i>Centella asiatica</i> (L.) Urb.	Apiaceae	P	W	Schizocarp	A	R	22.62	5.09	56	○	○	-	37.50
8	<i>Chloris barbata</i> Sw.	Poaceae	A	D	Caryopsis	Wi, A, Wa	S, R	23.96	2.53	64	○	○	○	37.46
9	<i>Chrysopogon aciculatus</i> (Retz.) Trin.	Poaceae	P	D	Caryopsis	Wi, A	S, R	23.90	3.58	32	○	○	○	63.41
10	<i>Commelina diffusa</i> Burm. f.	Commelinaceae	A	D	Capsule	Wa, A	S, R	22.90	3.02	62	-	-	-	37.46
11	<i>Conyza japonica</i> (Thunb.) Less.	Asteraceae	B	T	Achenes	Wi	S	17.35	10.12	0	○	○	-	17.71
12	<i>Cynodon dactylon</i> (L.) Pers.	Poaceae	P	S	Caryopsis	Wi	R, S	23.12	3.19	131	○	○	○	91.78
13	<i>Cyperus rotundus</i> L.	Cyperaceae	P	S	Achenes	Wi, Wa	S, R	23.05	3.17	118	-	○	○	37.75
14	<i>Dactyloctenium aegyptium</i> (L.) Willd.	Poaceae	A	D	Caryopsis	Wa, Wi, A,	S, R	23.90	2.80	84	○	-	○	38.89
15	<i>Dianella ensifolia</i> (L.) DC.	Asphodelaceae	P	W	Berry	Wa, A	S, R	21.78	4.91	2	-	○	-	37.62
16	<i>Digitaria setigera</i> Roth	Poaceae	A	D	Caryopsis	Wa, A	S, R	23.06	5.56	24	○	-	○	37.74
17	<i>Eleusine indica</i> (L.) Gaertn.	Poaceae	A	D	Caryopsis	Wi, A, Wa	S, R	23.05	3.21	162	○	○	○	64.03
18	<i>Eremochloa ophiuroides</i> (Munro) Hack.	Poaceae	P	T	Caryopsis	Wi, A	S, R	23.11	2.85	5	○	○	○	53.82
19	<i>Eupatorium cannabinum</i> subsp. <i>asiaticum</i> Kitam.	Asteraceae	P	T	Achenes	Wi	S	17.72	11.25	0	○	○	-	66.14
20	<i>Hydrocotyle sibthorpioides</i> Lam.	Araliaceae	P	W	Schizocarp	A	R	22.67	6.56	8	-	-	-	37.25
21	<i>Imperata cylindrica</i> var. <i>major</i> (Nees) C.E. Hubb.	Poaceae	P	T	Caryopsis	Wi	R	23.06	4.07	58	○	○	○	67.19
22	<i>Indigofera spicata</i> Forssk.	Fabaceae	A	D	Legume	A	S, R	23.22	5.19	18	○	○	-	37.33
23	<i>Macleaya cordata</i> (Willd.) R. Br.	Papaveraceae	P	T	Capsule	A	S	16.41	11.43	6	○	○	-	37.83
24	<i>Mazus pumilus</i> (Burm. f.) Steenis	Mazaceae	A	T	Capsule	Wa, A	S	22.80	4.74	9	-	-	-	37.34
25	<i>Miscanthus floridulus</i> (Labill.) Warb. ex K. Schum. & Lauterb.	Poaceae	P	W	Caryopsis	Wi	S, R	22.42	11.38	3	○	○	○	100.00
26	<i>Miscanthus transmorrisonensis</i> Hayata	Poaceae	P	T	Caryopsis	Wi	S, R	10.73	7.76	22	○	○	○	40.62
27	<i>Murdannia keisak</i> (Hassk.) Hand.-Mazz.	Commelinaceae	A	W	Capsule	Wa, A	S, R	21.73	5.58	2	○	○	-	37.52
28	<i>Nephrolepis cordifolia</i> (L.) C.Presl	Nephrolepidaceae	P	S	Spore	Wi, Wa	spores, R	19.84	6.41	17	○	○	-	57.84
29	<i>Oplismenus compositus</i> (L.) P. Beauv.	Poaceae	P	D	Caryopsis	A	S, R	21.47	7.34	25	-	-	-	38.80
30	<i>Oxalis corniculata</i> L.	Oxalidaceae	P	S	Capsule	B	S	23.01	5.69	113	○	○	-	41.84
31	<i>Panicum repens</i> L.	Poaceae	P	D	Caryopsis	A, Wi, Wa	S, R	22.90	2.22	29	○	○	○	41.06
32	<i>Paspalum distichum</i> L.	Poaceae	P	D	Caryopsis	Wa, A	S, R	23.09	4.61	76	○	○	○	50.60
33	<i>Persicaria chinensis</i> (L.) H.Gross	Polygonaceae	P	T	Achenes	A	S, R	20.08	9.81	1	○	○	-	74.04
34	<i>Plantago asiatica</i> L.	Plantaginaceae	P	S	Capsule	A	S	21.19	9.02	1	○	○	-	41.93
35	<i>Pterocypsela indica</i> (L.) C. Shih	Asteraceae	B	T	Achenes	Wi	S	22.92	6.12	2	○	○	-	39.32
36	<i>Reynoutria japonica</i> Houtt.	Polygonaceae	P	T	Achenes	A, Wa, Wi	R	10.72	5.41	40	○	○	-	38.89
37	<i>Saccharum spontaneum</i> L.	Poaceae	P	D	Caryopsis	Wi	R	23.13	3.91	28	○	○	○	67.69
38	<i>Scirpus ternatanus</i> Reinw. ex Miq.	Cyperaceae	P	S	Achenes	Wi, Wa	S, R	21.27	9.20	0	○	-	-	37.42
39	<i>Setaria palmifolia</i> (J. Koenig) Stapf	Poaceae	P	W	Caryopsis	Wi, A	S, R	20.98	4.82	26	-	○	○	64.15
40	<i>Torenia concolor</i> Lindl.	Linderniaceae	P	S	Capsule	A	S	20.08	6.08	0	-	○	-	41.54
41	<i>Wedelia chinensis</i> (Osbeck) Merr.	Asteraceae	P	S	Achenes	Wi, A	S, R	22.63	4.21	1	○	○	-	42.36
42	<i>Zoysia matrella</i> (L.) Merr.	Poaceae	P	W	Caryopsis	A	S, R	23.62	6.67	29	○	○	○	20.68

©Code Description

Life span	Climate zone	Seed dispersal method	Plant reproduction mode
A Annuals	D Dry tropical	A Animals	S Seed
B Biannual	S Subtropical	B Ballistic dispersal	R Rhizomes
P Perennials	T Temperate	Wa Water	
	W Wet tropical	Wi Wind	

"Family" is according to the TaiCOL (<https://taicol.tw/zh-hant/api>). "Climate zone" is classified based from the Kew's Plants of the World Online database (<https://powo.science.kew.org/>). "C3 or C4 plant" is determined according to Sage (2017). "Life span," "Seed type," "Dispersal method," and "Plant reproduction mode" are compiled from illustrated book and plant websites. "STI," is calculated based on temperature data from TCCIP and survey data from TBN, extracted through GIS, and computed the 50th of plant distribution temperatures. "ΔSTI" is calculated based on the temperature difference between the 90th and 10th of plant distribution temperatures. "Invaded country" is according to the GBIF (<https://www.gbif.org/zh-tw/>). "Drought tolerance" and "Tolerance to low soil nutrients" are compiled from literature and websites.

Table S6. Raw data of heatmap of NHS_{LR} for each PLH.

Native herbaceous species	API	0-500				500-1,000				1000-1,500				1,500-2,000				2,000-3,100			
		175-250	100-175	250-355	355-100	175-250	100-175	250-355	355-100	175-250	100-175	250-355	355-100	175-250	100-175	250-355	355-100	175-250	100-175	250-355	355-100
		PLH ₁	PLH ₂	PLH ₃	PLH ₄	PLH ₅	PLH ₆	PLH ₇	PLH ₈	PLH ₉	PLH ₁₀	PLH ₁₁	PLH ₁₂	PLH ₁₃	PLH ₁₄	PLH ₁₅	PLH ₁₆	PLH ₁₇	PLH ₁₈	PLH ₁₉	PLH ₂₀
<i>Miscanthus floridulus</i>	100.00	9.91	9.85	11.26	10.18	4.15	5.30	5.63	5.64	3.77	2.05	2.13	3.78	9.69	4.68	5.24	3.85	3.00	3.01	1.68	1.18
<i>Cynodon dactylon</i>	91.78	25.72	18.90	26.96	20.62	3.53	4.44	4.40	3.58	0.84	1.23	0.99	1.31	0.50	1.23	1.05	0.70	0.37	0.56	0.42	0.52
<i>Arundo formosana</i>	79.24	11.15	13.33	9.44	12.82	12.59	15.04	13.52	14.96	10.68	11.26	9.50	9.15	7.20	9.12	8.04	5.08	2.25	2.44	3.92	3.93
<i>Persicaria chinensis</i>	74.04	12.11	9.45	13.65	12.11	14.90	14.90	19.66	20.27	15.08	11.05	15.88	15.98	28.81	22.93	22.36	13.48	14.04	10.52	16.12	10.47
<i>Saccharum spontaneum</i>	67.69	13.49	16.67	14.95	15.40	4.30	2.58	4.92	3.79	1.68	1.02	0.43	0.44	0.50		0.17			0.19	0.14	
<i>Imperata cylindrica</i> var. <i>major</i>	67.19	8.62	11.10	12.61	8.70	2.00	2.44	2.46	1.84	0.63	0.61	0.85	0.58	0.50	0.74			0.19		0.14	0.13
<i>Eupatorium cannabinum</i> subsp. <i>asiaticum</i>	66.14	4.70	5.04	4.78	4.77	7.06	6.88	8.60	8.67	11.10	8.39	8.93	6.68	17.88	14.30	14.15	11.38	20.04	23.67	15.00	12.82
<i>Setaria palmifolia</i>	64.15	18.27	19.08	20.85	21.46	43.46	40.11	51.20	37.18	19.68	18.63	19.00	19.62	7.45	4.93	3.84	3.15	0.19	0.38		
<i>Eleusine indica</i>	64.03	56.31	55.94	100.00	54.45	15.20	17.33	17.20	15.82	5.44	6.35	5.39	6.25	1.49	0.99	1.92	1.58	0.37	0.75	0.70	0.26
<i>Chrysopogon aciculatus</i>	63.41	2.25	3.12	1.51	1.93	0.15	0.14	0.51	0.33		0.20	0.43									
<i>Alpinia zerumbet</i>	60.97	34.79	42.21	33.13	36.02	27.34	29.37	26.32	25.15	9.21	8.60	9.79	8.43	4.47	2.47	3.49	0.88		0.56	0.14	0.13
<i>Nephrolepis cordifolia</i>	57.84	14.19	17.38	16.61	19.65	40.39	49.57	52.12	60.37	50.46	42.79	40.14	36.76	18.88	16.27	13.10	16.63	2.25	2.82	1.26	1.18
<i>Eremochloa ophiuroides</i>	53.82	1.33	2.45	1.92	0.90	0.46	0.29						0.29							0.14	
<i>Paspalum distichum</i>	50.60	2.54	3.08	2.16	2.16	1.38	0.43	0.72	0.65	0.21		0.57	0.29	0.50	0.25	0.17	0.18		0.19		
<i>Wedelia chinensis</i>	42.36	1.66	2.63	2.16	1.80	0.92	0.72	0.51	0.65			0.14						0.19		0.14	
<i>Plantago asiatica</i>	41.93	11.99	12.35	11.31	11.28	12.13	12.89	16.49	13.55	8.38	7.98	8.51	8.28	9.93	8.14	7.69	6.13	5.80	6.01	6.59	3.53
<i>Oxalis corniculata</i>	41.84	39.29	36.91	39.89	35.70	14.44	15.90	19.15	16.58	7.12	7.17	4.40	8.57	5.46	6.90	5.42	3.15	5.43	4.32	4.34	2.36
<i>Torenia concolor</i>	41.54	5.12	5.75	7.31	8.44	19.81	18.34	22.73	19.73	11.52	10.65	15.74	11.62	7.45	4.19	7.34	13.30	1.87	0.56	1.54	
<i>Panicum repens</i>	41.06	13.94	24.43	11.99	21.33	2.76		0.92	1.08			0.14	0.15			0.17				0.14	0.13
<i>Miscanthus transmorrisonensis</i>	40.62	0.08		0.05	0.03				0.11			0.14		0.50	3.21	0.70	0.53	4.12	2.44	5.33	3.27
<i>Pterocypselia indica</i>	39.32	6.99	5.44	5.88	5.12	3.07	3.01	2.87	3.90	1.05	2.05	0.71	2.62	0.50				0.75		0.28	0.92
<i>Brachiaria subquadrifera</i>	38.89	3.83	6.33	3.33	5.12	0.46	0.29	0.31	0.54												
<i>Dactyloctenium aegyptium</i>	38.89	20.77	23.05	20.33	19.91																
<i>Reynoutria japonica</i>	38.89	0.17	0.09	0.05	0.13	0.15		0.41	0.11		0.20		0.44	4.72	7.40	5.94	6.13	17.23	25.17	24.53	23.68
<i>Oplismenus compositus</i>	38.80	17.56	22.64	23.24	21.81	34.55	28.22	37.79	36.42	21.99	22.72	22.27	21.07	8.94	6.16	8.21	9.28	2.81	3.76	0.84	1.83
<i>Artemisia indica</i>	37.89	6.28	5.88	5.77	4.45	1.69	2.15	1.95	1.19	0.84	0.61	0.57	0.44	1.49	3.45	4.54	4.03	7.68	7.51	4.20	5.10
<i>Alternanthera sessilis</i>	37.87	19.06	24.38	20.85	18.98	4.61	2.87	2.97	4.55	0.84	0.41	0.43	0.15	1.49			0.18				
<i>Macleaya cordata</i>	37.83			0.08	0.26	0.15		0.20	0.22	0.63	1.64	0.43	0.44	1.24	0.49	0.17	0.35	0.19		1.12	0.26
<i>Cyperus rotundus</i>	37.75	22.27	23.45	43.47	21.36	2.15	4.58	2.97	1.73	0.42	1.02	0.57	1.02	0.25	0.49	0.35	0.18			0.28	0.39
<i>Digitaria setigera</i>	37.74	16.61	17.38	15.57	16.59	10.60	12.75	12.70	11.81	3.56	7.37	4.40	5.38	2.98	1.97	2.45	2.80	0.37	0.94	0.28	1.05
<i>Dianella ensifolia</i>	37.62	9.24	10.03	8.50	7.96	12.29	11.89	11.57	14.09	6.70	7.17	6.24	4.36	0.50	2.96	0.52	1.05	0.37	0.38	0.14	0.26
<i>Murdannia keisak</i>	37.52	2.87	2.81	2.21	2.26	4.15	2.87	3.89	3.69	0.63	1.64	1.56	1.74			0.35	0.18				
<i>Centella asiatica</i>	37.50	14.78	19.39	15.83	17.98	11.21	10.60	12.60	9.21	3.77	1.84	2.55	3.34	0.99	1.23	0.70	1.23	0.19	0.19	0.42	
<i>Commelina diffusa</i>	37.46	11.28	14.18	11.39	12.69	0.92	2.44	2.25	2.28	1.26	0.41	0.85	0.73		0.25	0.17	0.18			0.14	
<i>Scirpus tematanus</i>	37.42	2.50	2.72	1.92	1.84	3.53	2.72	2.25	3.14	1.05	2.66	2.27	1.74	3.48	3.45	1.40	2.45	1.69	0.75	1.26	0.26
<i>Mazus pumilus</i>	37.34	8.07	11.55	9.75	10.92	2.61	2.44	3.48	3.79	2.30	1.64	1.13	1.16	2.24	0.99	1.57	1.23	0.94	1.13	0.84	0.13
<i>Indigofera spicata</i>	37.33	2.87	2.32	2.34	1.58	1.84	2.72	1.02	1.19	0.84	1.02	0.85	0.15			0.17	0.18				0.13
<i>Hydrocotyle sibthorpioides</i>	37.25	4.33	4.37	4.03	4.09	1.69	1.58	2.76	2.60	1.47	1.43	1.70	1.16	1.99	1.73	1.22	1.23	0.94	0.94	0.84	1.18
<i>Chloris barbata</i>	37.46	45.20	53.85	51.95	43.01	0.92	2.87	1.95	1.84	0.21		0.28	0.15			0.17				0.14	
<i>Zoysia matrella</i>	20.68	0.42	0.85	0.16	0.39	0.61			0.33										0.19		
<i>Bidens pilosa</i> var. <i>minor</i>	18.67	5.33	8.34	4.63	6.28	6.91	6.88	7.58	7.59	5.23	5.53	4.82	4.07	4.72	5.92	4.89	2.63	1.50	1.50	1.26	0.65
<i>Conyza japonica</i>	17.71	0.33	0.04	0.18	0.19	0.46	1.43	0.51	0.11	0.84	0.41	0.43	0.87	1.49	2.47	2.27	1.58	1.12	0.19	0.56	0.26
Suitability index levels		Extremely Suitable				Highly Suitable				Very Suitable				Suitable				Potentially Suitable			
		100-51.96				51.96-27.47				27.47-10.60				10.60-3.04				3.04-0.84			
																		Ever Recorded			
																		0.84-0.00			

* The empty cell indicates that there is no presence record in the TBN database. The suitability index levels were determined using Braun-Blanquet's percentage method, with cumulative percentages of 99%, 95%, 75%, 50%, and 25% corresponding to indices of 51.96, 27.47, 10.60, 3.04, and 0.84.

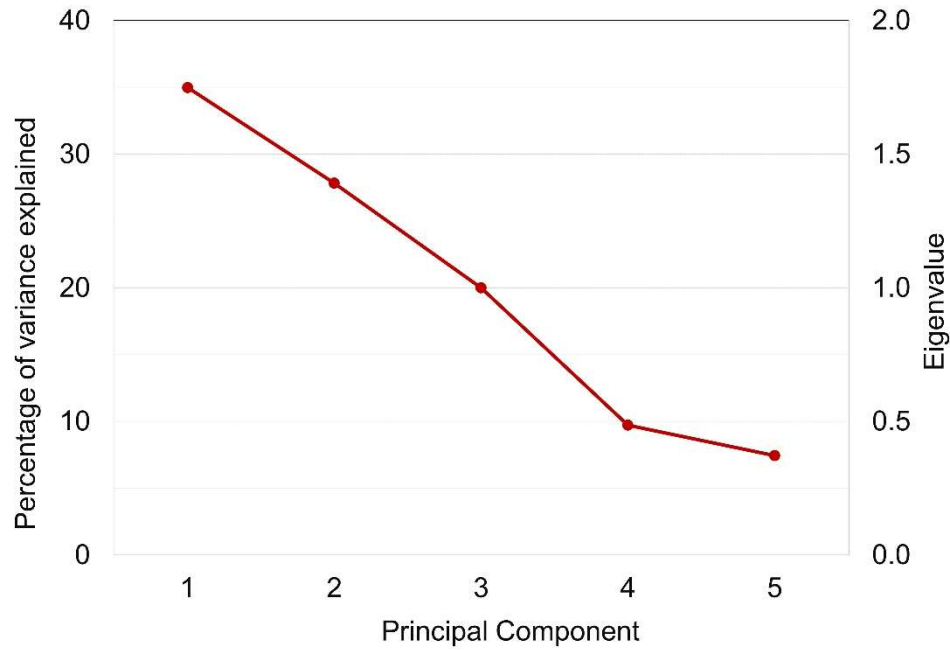


Fig. S1. Scree Plot of PLH topographic factors PCA. The scree plot indicates that the first three principal components (PC 1, PC 2, and PC 3) capture the majority of the variance, with a significant drop after PC 3. This means focusing on these components would be most effective for further analysis and interpretation of the topographic data.

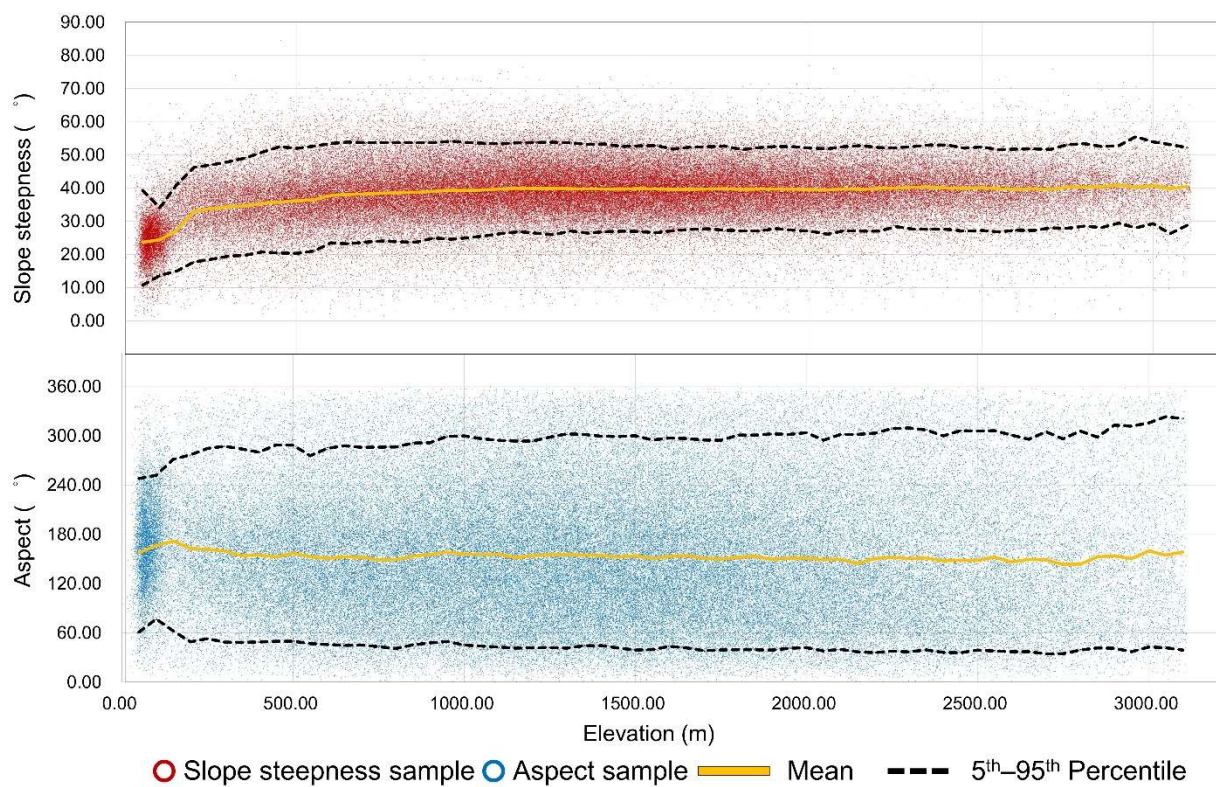


Fig. S2. Distribution of slope steepness and aspect across elevation groups in PLHs. The figure shows that slope steepness varies widely at lower elevations, making it more influential in these areas. However, as elevation exceeds 1,000 m, slope steepness stabilizes around 35°, reducing its impact. In contrast, aspect is highly concentrated at lower elevations but becomes more dispersed and widespread above 1,000 m, increasing its influence.

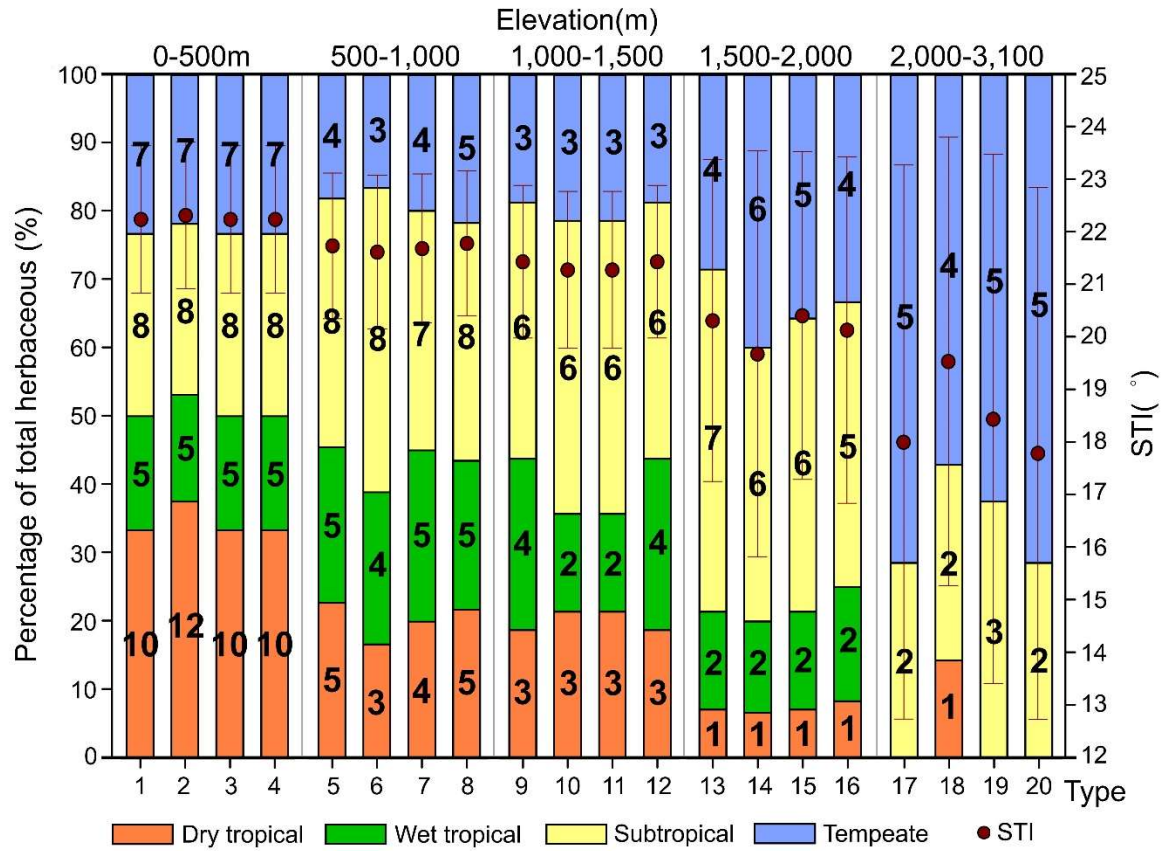


Fig. S3. Originating climate zone for NHS_{LR} in the 20 PLHs. The background colors ranging from red to blue represent the dryness-wetness gradient of aspect within each elevation. The numbers inside the bar chart represent the number of herbaceous.