

Table S1. Information of 35 *Hedychium* germplasm accessions

Sample NO.	Germplasm Name	Simplified Name	Germplasm Type	Origin	Number of Individuals
1-1~1-6	<i>H. coronarium</i>	/	Species accession	China	6
2-1~2-6	<i>H. chrysoleucum</i>	/	Species accession	China	6
3-1~3-6	<i>H. flavescens</i>	/	Species accession	China	6
4-1~4-6	<i>H. coccineum</i>	/	Species accession	China	6
5-1~5-6	<i>H. forrestii</i>	/	Species accession	China	6
6-1	<i>H. villosum</i>	/	Species accession	China	1
7-1~7-2	<i>H. sp.</i> (thick-leaved)	<i>H. sp.</i>	Species accession	China	2
8-1	Unknown 1	/	Unidentified	USA	1
9-1	Unknown 2	/	Unidentified	USA	1
10-1	Unknown 3	/	Unidentified	USA	1
11-1	<i>H. gardnerianum</i>	/	Species accession	Thailand	1
12-1	Unknown 4	/	Unidentified	China	1
13-1~13-4	<i>H.</i> ‘Fireflies’	Fireflies	Cultivar	USA	4
14-1~14-11	<i>H. coccineum</i> ‘Orange Brush’	Orange Brush	Cultivar	USA	11
15-1~15-6	<i>H. stenopetalum</i> ‘White Stars’	White Stars	Cultivar	USA	6
16-1~16-6	<i>H.</i> ‘Pink V’	Pink V	Cultivar	USA	6
17-1~17-6	<i>H.</i> ‘Orange Crush’	Orange Crush	Cultivar	USA	6
18-1~18-6	<i>H. coronarium</i> ‘White Starburst’	White Starburst	Cultivar	USA	6
19-1~19-6	<i>H. coronarium</i> ‘Elizabeth’	Elizabeth	Cultivar	USA	6
20-1~20-6	<i>H.</i> ‘Tarissima’	Tarissima	Cultivar	USA	6
21-1~21-6	<i>H.</i> ‘Clown Suit’	Clown Suit	Cultivar	USA	6
22-1~22-5	<i>H.</i> ‘Double Eagle’	Double Eagle	Cultivar	USA	5
23-1~23-6	<i>H. gardnerianum</i> ‘Tara’	Tara	Cultivar	USA	6
24-1~24-6	<i>H. gardnerianum</i> ‘Kahili’	Kahili	Cultivar	USA	6
25-1~25-6	<i>H.</i> ‘Baihuang Yu’	Baihuang Yu	Cultivar	China (Guangdong)	6
26-1~26-5	<i>H.</i> ‘Han Yue’	Han Yue	Cultivar	China (Guangdong)	5
27-1~27-5	<i>H. gardnerianum</i> ‘Molten Gold’	Molten Gold	Cultivar	USA	5
28-1~28-6	<i>H. coronarium</i> × <i>H. coccineum</i> ‘Orange Brush’	Hybrid-Orange Brush	Artificial hybrid	China-USA	6
29-1~29-6	<i>H. coronarium</i> × <i>H. coronarium</i> ‘White Starburst’	Hybrid-White Starburst	Artificial hybrid	China-USA	6
30-1~30-6	<i>H. coronarium</i> × <i>H. gardnerianum</i> ‘Tara’	Hybrid-Tara	Artificial hybrid	China-USA	6
31-1~31-6	<i>H. gardnerianum</i> ‘Kahili’ × <i>H. coronarium</i>	Hybrid-Kahili	Artificial hybrid	China-USA	6
32-1~32-6	<i>H. coronarium</i> × <i>H. forrestii</i>	Hybrid- <i>H. forrestii</i>	Artificial hybrid	China	6

Sample NO.	Germplasm Name	Simplified Name	Germplasm Type	Origin	Number of Individuals
33-1~33-6	<i>H.</i> ‘Chengxin’	Chengxin	Cultivar	China (Guangdong)	6
34-1~34-2	<i>H.</i> ‘Jinfen’	Jinfen	Cultivar	China (Guangdong)	2
35-1~35-2	<i>H.</i> ‘Dianfen’	Dianfen	Cultivar	China (Guangdong)	2

Note: Unknown 1 – 3 are living collection accessions with uncertain identities due to missing or inconsistent labels during introduction and cultivation. Unknown 4 is a seed derived accession with an unknown maternal parent and uncertain taxonomic identity. Unknown 2 is morphologically similar to ‘Elizabeth’ in plant architecture and leaf morphology. *Hedychium* sp. thick leaved is a provisional unidentified accession distinguished by relatively thick leaves. Sample 30-6 was excluded from PCA, ADMIXTURE, and D-statistic analyses and was pruned from the final displayed NJ topology because of insufficient sequencing output.