Table S1 Distribution frequency and diversity index of 8 descriptive traits in 192 leaves

Traits	Distribution frequency of different descriptive traits (%)						Shannon–Wiener diversity index (*I*)
	1	2	3	4	5	6	
Leaflet arrangement	38.54	7.29	50.52	3.65			1.48
Leaflet shape	44.79	40.1	15.1				1.46
Leaf base shape	47.92	50	1.56	0.52			1.14
Leaf apex shape	4.17	25	27.08	43.75			1.73
Leaf posture	3.65	42.19	44.27	9.9			1.55
Leaf margin	32.29	52.6	15.1				1.43
Young leaf color	0.52					99.48	0.05
Mature leaf color	1.56	83.33	15.1				0.72

Table S2 Statistics of 9 quantitative traits in 192 leaves

Traits	Mean	SD	CV/%	Min	Max	Mdn	Shannon–Wiener diversity index (*I*)
Leaf length /cm	11.11	1.42	13.51	7.97	15.2	11.02	3.01
Leaf width /cm	3.47	0.5	14.49	2.41	5.36	3.43	2.96
Leaf shape index	3.25	0.38	10.12	2.54	4.44	3.2	2.92
Leaf area /cm^2	27.17	6.75	26.48	15.55	55.38	26.51	2.9
Leaf circumference /cm	29.62	5.69	17.43	19.1	51.95	28.52	2.84
Petiole length /cm	0.65	0.11	23.43	0.39	1.28	0.63	2.74
Petiole width /cm	0.26	0.06	31.78	0.15	0.76	0.25	2.42
Petiole length/width ratio	2.68	0.38	21.64	1.78	3.77	2.66	2.91
Petiole area/cm2	0.14	0.09	52.59	0.05	1.08	0.12	2.09

Mdn: median

Table S3 List of ISSR effective primers

Primer number	Primer sequence (5'→3')	Tm value (℃)	Annealing temperature (℃)
UBC840	GAGAGAGAGAGAGAGAYT	47	48
UBC848	CACACACACACACACARG	52.7	50
UBC857	ACACACACACACACACYG	54.3	50
UBC820	GTGTGTGTGTGTGTGTC	50.9	50
UBC859	TGTGTGTGTGTGTGTGRC	54.5	50
UBC815	CTCTCTCTCTCTCTCTG	46.7	46
UBC844	CTCTCTCTCTCTCTCTRC	48.6	45

Table S4 Number of bands amplified by ISSR-PCR

Primer number	Amplified master band	Polymorphic band	Percentage polymorphism（%）	*Na*	*Ne*	*He*	*I*
UBC840	8	7	87.5	1.875	1.324	0.216	0.346
UBC848	9	6	66.67	1.667	1.361	0.219	0.332
UBC857	7	3	42.86	1.429	1.229	0.143	0.219
UBC820	4	3	75	1.75	1.327	0.192	0.303
UBC859	8	8	100	2	1.484	0.286	0.439
UBC815	6	3	50	1.5	1.307	0.179	0.268
UBC844	7	4	57.14	1.571	1.323	0.178	0.264
Average	7	5	68.45	1.6846	1.3364	0.2019	0.3101

Table S5 Two groups identified by eight descriptive leaf traits, nine quantitative leaf traits, and ISSR genotyping data from seven primers

taxa	group
20230218PB001	Group1
20230218PB002	Group1
20230218PB003	Group1
20230218PB004	Group1
20230218PB005	Group1
20230218PB006	Group1
20230218PB007	Group1
20230218PB008	Group1
20230218PB009	Group1
20230218PB010	Group1
20230218PB011	Group1
20230218PB012	Group1
20230218PB013	Group1
20230218PB014	Group1
20230218PB015	Group1
20230218PB016	Group1
20230218PB017	Group1
20230218PB018	Group1
20230218PB019	Group1
20230218PB020	Group1
20230218PB021	Group1
20230218PB022	Group1
20230218PB023	Group1
20230218XP001	Group2
20230218XP002	Group2
20230218XP003	Group2
20230218XP004	Group2
20230218XP005	Group2
20230218XP006	Group2
20230218XP007	Group2
20230218XP008	Group1
20230218XP009	Group1
20230218XP010	Group1
20230218XP011	Group2
20230218XP012	Group1
20230218XP013	Group2
20230218XP014	Group2
20230218XP015	Group1
20230218XP016	Group1
20230218XP017	Group1

20230219PB001	Group1
20230219PB002	Group1
20230219PB003	Group1
20230219PB004	Group1
20230219PB005	Group1
20230219PB006	Group1
20230219PB007	Group1
20230219PB008	Group1
20230219PB009	Group1
20230219PB011	Group1
20230219PB012	Group1
20230219XP001	Group2
20230219XP002	Group1
20230219XP003	Group2
20230219XP004	Group2
20230219XP005	Group1
20230219XP006	Group2
20230219XP007	Group2
20230219XP008	Group2
20230219XP009	Group2
20230220PB001	Group1
20230220PB002	Group1
20230220PB003	Group1
20230220PB004	Group1
20230220PB005	Group1
20230220PB006	Group1
20230220PB007	Group1
20230220PB008	Group1
20230220PB009	Group1
20230220PB010	Group1
20230220PB011	Group1
20230220PB012	Group1
20230220PB013	Group1
20230220PB016	Group1
20230220PB017	Group1
20230220PB018	Group1
20230220YJ001	Group1
20230220YJ002	Group2
20230220YJ003	Group2
20230220YJ004	Group2
20230220YJ005	Group2
20230220YJ006	Group2
20230220YJ007	Group2
20230220YJ008	Group2

20230220YY001	Group1
20230220YY002	Group1
20230220YY003	Group1
20230220YY004	Group1
20230220YY005	Group1
20230220YY006	Group1
20230220YY007	Group1
20230221YY001	Group1
20230221YY002	Group1
20230221YY003	Group1
20230221YY004	Group1
20230221YY005	Group1
20230221YY006	Group1
20230221YY007	Group1
20230221YY031	Group1
20230221YY032	Group2
20230221YY033	Group2
20230221YY034	Group2
20230221YY035	Group1
20230221YY036	Group1
20230221YY037	Group1
20230221YY038	Group1
20230221YY039	Group2
20230221YY040	Group1
20230221YY041	Group2
20230221YY042	Group1
20230221YY043	Group2
20230222YY001	Group1
20230222YY002	Group1
20230222YY003	Group1
20230222YY004	Group1
20230222YY005	Group1
20230222YY007	Group1
20230222YY008	Group1
20230222YY009	Group1
20230222YY010	Group1
20230222YY011	Group1
20230222YY031	Group1
20230222YY032	Group1
20230222YY033	Group1
20230222YY034	Group2
20230222YY035	Group1
20230222YY036	Group1
20230222YY037	Group1

20230222YY038	Group1
20230222YY039	Group1
20230222YY041	Group1
20230222YY042	Group2
20230222YY043	Group2
20230222YY044	Group1
20230222YY045	Group1
20230222YY046	Group1
20230222YY047	Group1
20230222YY048	Group1
20230404JS001	Group1
20230404JS002	Group1
20230404JS003	Group1
20230404JS004	Group1
20230404JS005	Group1
20230404JS006	Group1
20230404SP001	Group2
20230404SP002	Group2
20230405JP001	Group1
20230405JP002	Group2
20230405JP003	Group2
20230405JP004	Group1
20230405JS001	Group1
20230405JS002	Group1
20230405JS003	Group1
20230405JS004	Group1
20230405JS005	Group2
20230405JS006	Group1
20230405JS007	Group1
20230406HK002	Group1
20230406HK003	Group1
20230406HK004	Group1
20230406JP001	Group1
20230406JP002	Group1
20230406JP003	Group2
20230407WS001	Group2
20230407WS002	Group2
20230407WS003	Group1
20230407WS004	Group2
20230407WS005	Group2
20230407WS006	Group1
20230407WS007	Group2
20230407WS008	Group2
20230407WS009	Group2

20230408WS001	Group2
20230408WS002	Group2
20230408WS003	Group2
20230408WS004	Group2
20230408WS005	Group2
20230408WS006	Group2
230505XP001	Group2
230505XP002	Group2
230506YY001	Group2
230506YY002	Group2
230506YY003	Group2
230506YY004	Group2
230507YY001	Group1
230507YY002	Group1
230507YY003	Group1
230507YY004	Group1
230508LC001	Group2
230509LC001	Group2
230509LC002	Group2
230509LC003	Group2

Table S6 Classification description and values of leaf descriptive trait

Rank	Descriptive traits							
	Leaflet arrangement	Leaflet shape	Leaf base shape	Leaf apex shape	Leaf posture	Leaf margin	Young leaf color	Mature leaf color
1	decussate	lanceolate	cuneate	acute	reflexed	entire	reddish brown	pale green
2	spiral	oblong	broad-cuneate	cuspidate	flat	slightly undulate	purplish red	green
3	opposite	elliptic	subcircular	acuminate	revolute	undulate	red	dark green
4	alternate	ovate	oblique	caudate	involute		reddish green	other
5		obovate					yellowish white	
6							light green	