SUPPLEMENTARY DATA

TABLE S1. ANCOVA results for the fixed effect model of presence of self-sterility, proportional sample size (number of species in which breeding system has been assessed/total number of species in a family) and their interaction on the species richness of 164 and 66 families designated as self-sterile and self-compatible, respectively.

Source	d.f.	Sum of squares	Mean square	*F* Ratio	Prob > *F*
SS presence	1	42629154	42629154	6.02	0.0149
Proportional sample size	1	24801652	24801652	3.50	0.0627
SS presence × Proportional sample size	1	10610112	10610112	1.50	0.2224

FIG. 1. Mean and standard error of Kendall–Moran estimator of DR ($\hat{r}_{KM}$) using the estimates of (a) Wikström *et al*. (2001), (b) Davies *et al*. (2004) and (c) exponential and (d) lognormal Bell *et al*. (2010) calibrations for the divergence age of the families bearing homomorphic SI: 16 with stigmatic SI, 14 with stylar SI, 16 with ovarian SI and 5 with post-fertilization SI; 17 with heteromorphy and 5 with heteromorphy + SI, 22 with polymorphic basis to SI, 74 families bearing SS unclassified species and for 66 families bearing SC. Means with different letters were found to be significantly different (Tukey HSD test, $P < 0.05$).

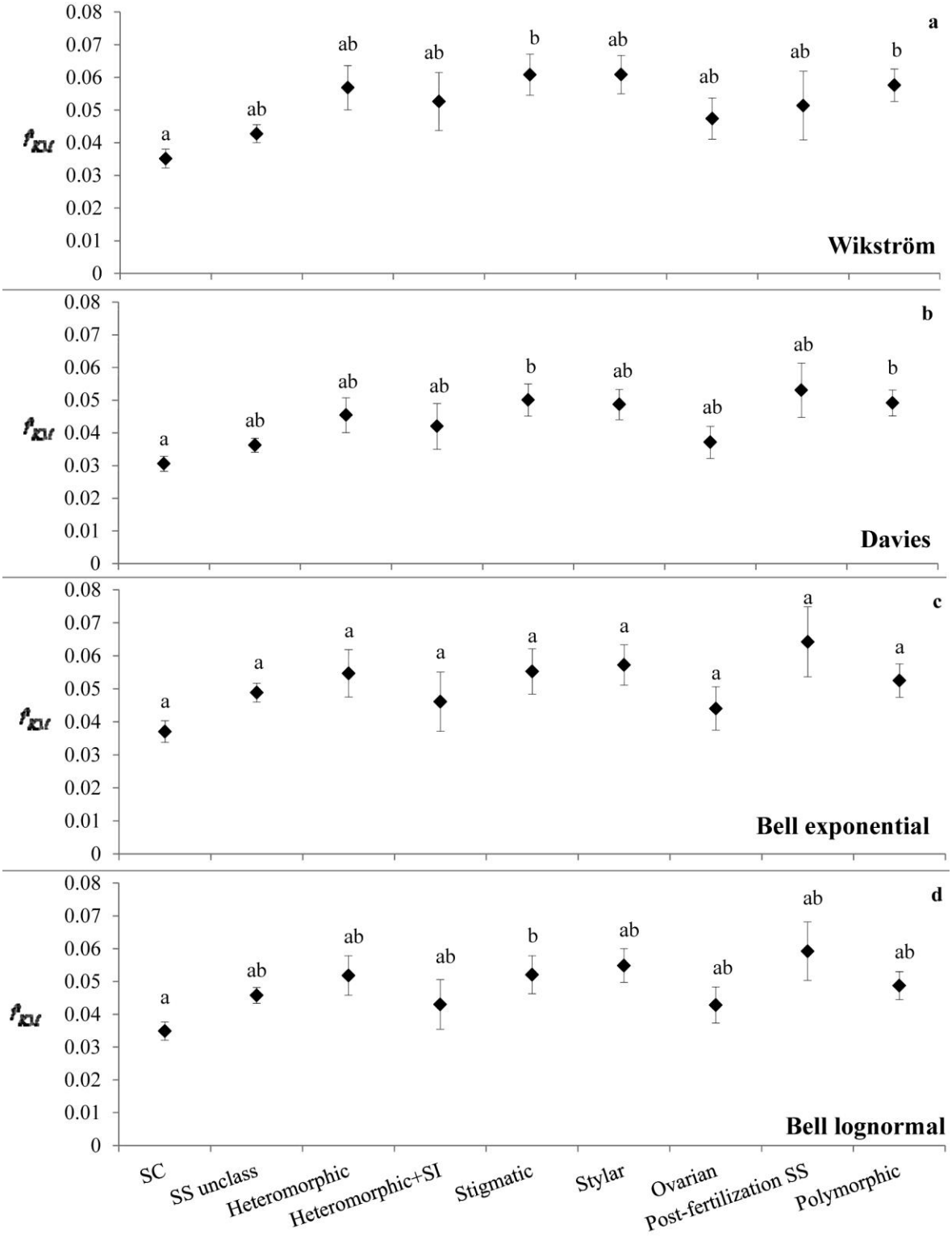
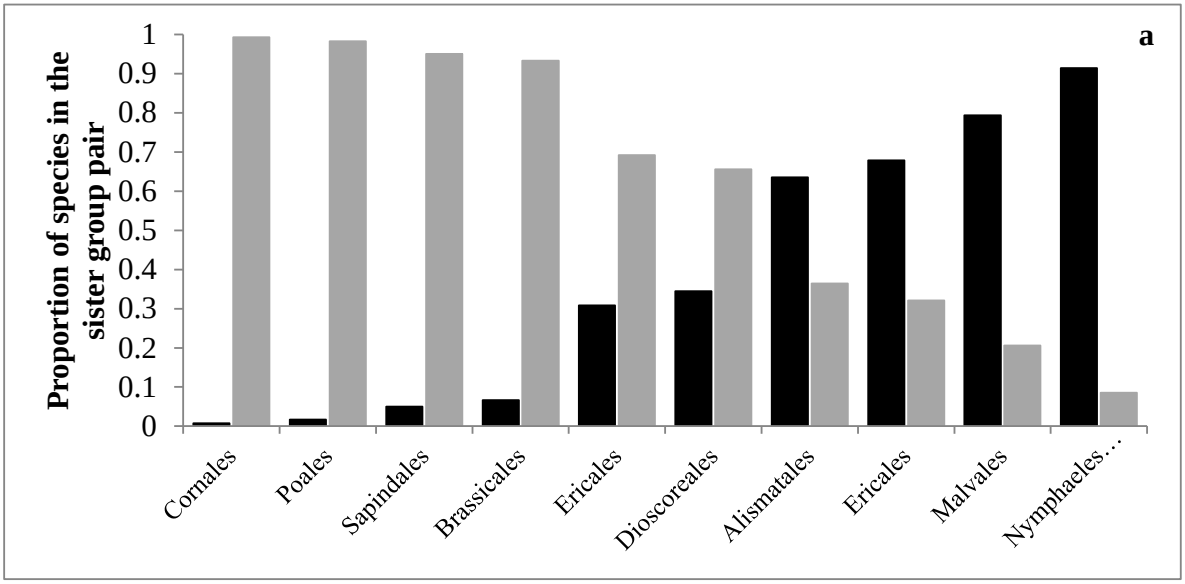


FIG. S2. Proportion of the total number of species in the sister-group pair bearing SC (black bars) versus (a) the total number of species in the sister clade with homomorphic SI clades (grey bars); or (b) the expected proportion of taxa with SS in the clade with homomorphic SI (grey bars) for each one of the ten sister-group comparisons inferred from the Soltis *et al.* (2011) topology (those for other comparisons performed are presented elsewhere in these Supplementary Data).



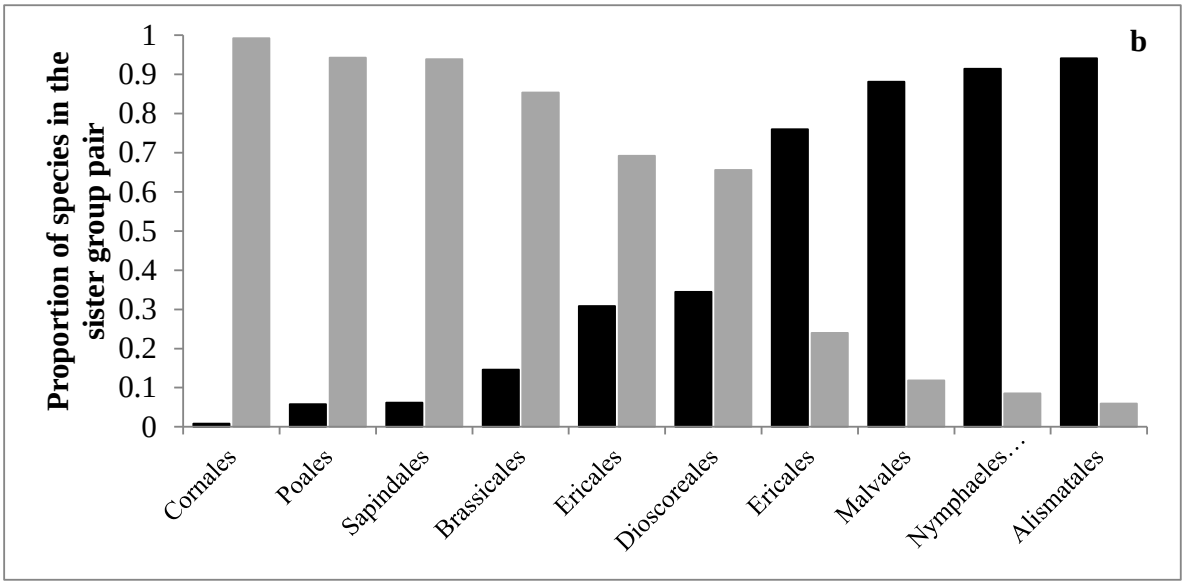
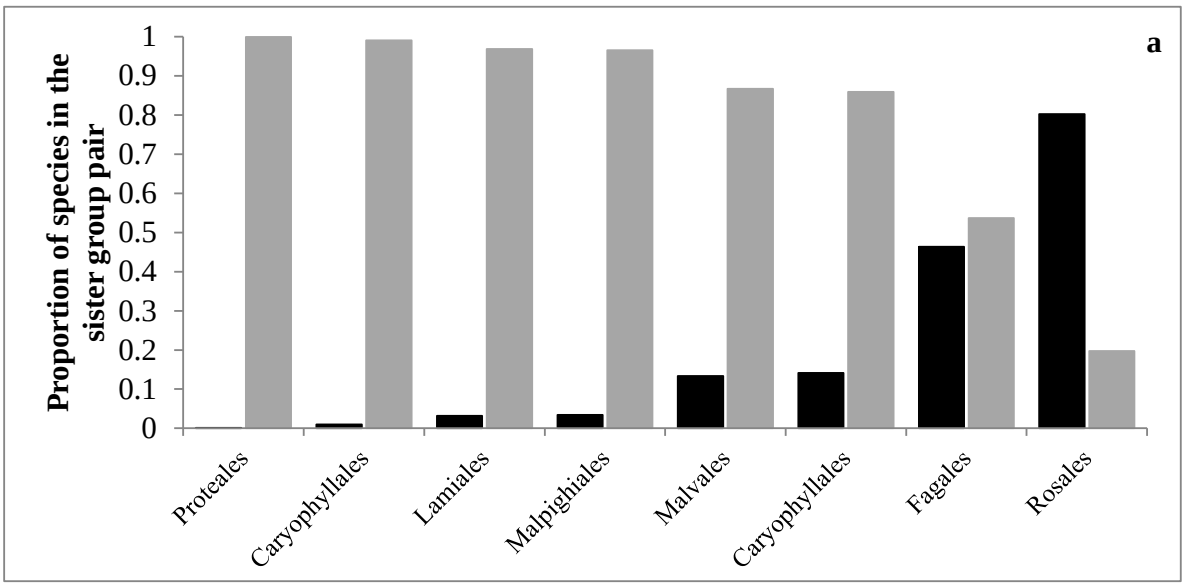


FIG. S3. Proportion of the total number of species in the sister-group pair bearing SC (black bars) versus (a) the total number of species in the sister clade with polymorphic SI clades (grey bars); or (b) the expected proportion of taxa with SS in the clade with polymorphic SI (grey bars) for each one of the eight sister-group comparisons inferred from the Soltis *et al.* (2011) topology (those for other comparisons performed are presented elsewhere in these Supplementary Data).



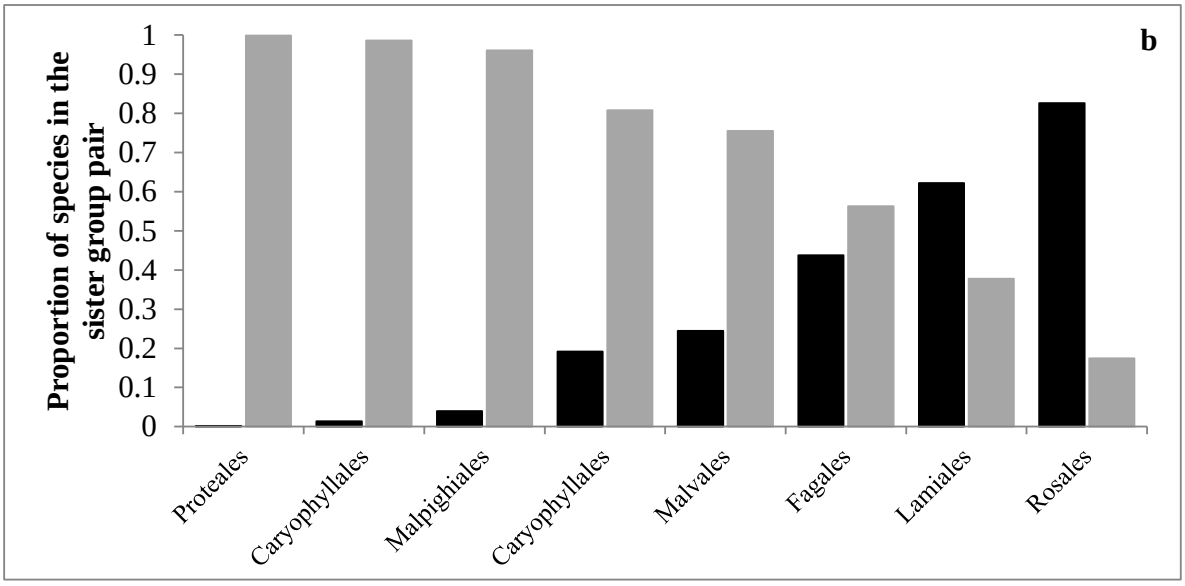
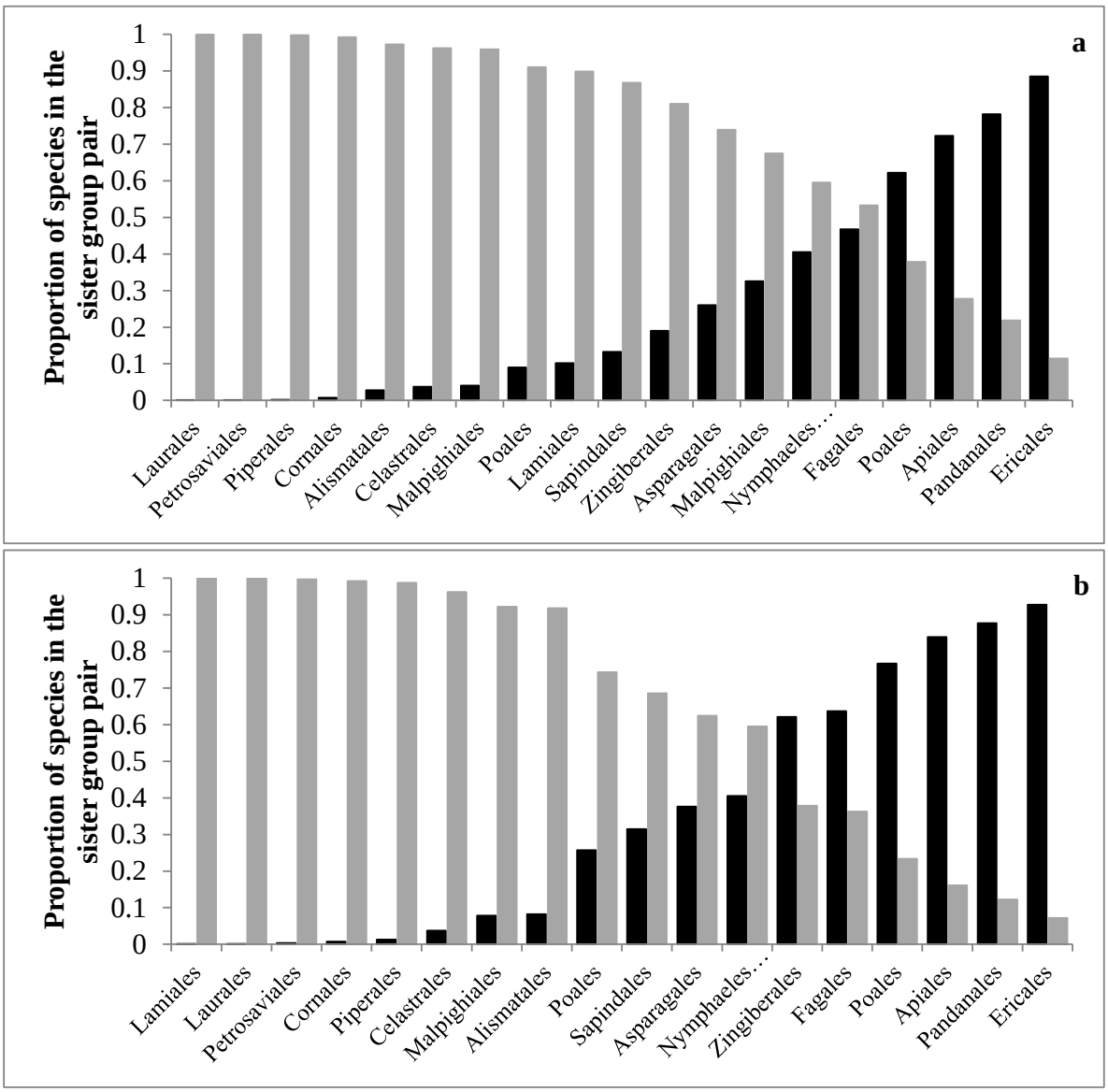


FIG. S4. Proportion of the total number of species in the sister-group pair bearing SC (black bars) versus (a) the total number of species in the sister clade with unclassified SS clades (grey bars); or (b) the expected proportion of taxa with SS in the clade with unclassified SS (grey bars) for each one of the 18 sister-group comparisons inferred from the Soltis *et al.* (2011) topology (those for other comparisons performed are presented elsewhere in these Supplementary Data).



APPENDIX S1

Studies in which microscopic and genetic analysis has been conducted to elucidate the inhibition site and the genetic control of the pre-zygotic self-incompatibility system by family according angiosperm phylogeny group classification.

ANITA			
Family	Species	SI inhibition	Reference
Trimeniaceae	*Trimenia moorei*	Stigmatic	[1]
Magnoliids			
Family	Species	SI inhibition	Reference
Annonaceae	*Uvaria elmerii*	Ovarian	[2]
Saururaceae	*Saururus cernuus*	Stigmatic	[3]
Winteraceae	*Pseudowintera axillaris*	Ovarian	[4]
Monocots + Commelinids			
Family	Species	SI inhibition	Reference
Alismataceae	*Baldellia ranunculoides* subsp. *repens*	Stigmatic	[5]
Amaryllidaceae	*Narcisus triandrus*	Ovarian	[6]
Amaryllidaceae	*Narcisus tazzeta*	Ovarian	[7]
Bromeliaceae	*Ananas comosus*, *Gasteria* spp. (*G. verrucosa* X *G. picta*)	Stylar, gametophytic control, one locus	[8]
Butomaceae	*Butomus umbellatus*	Stylar	[9]
Commelinaceae	*Tradescantia paludosa*	Stigmatic, gametophytic control, one locus	[10]
Commelinaceae	*Dichorisandra sp.*, *Siderasis fuscata*	Stylar	[11]
Hemerocallidaceae	*Hemerocallis cetrina, H. flava, H. fulva, H. thunbergii*	Ovarian	[12]
Hyacinthaceae	*Albuca angolensis, A. bainesii, A. fibrotunicata, A. scabromarginata, A. sudanica*	Ovarian	[13]
Iridaceae	*Crocus thomasi*, *C. vernus* subsp. *vernus*	Ovarian	[14-17]
Liliaceae	*Lilium martagon*	Stigmatic, gametophytic control, four loci	[18]
Liliaceae	*Lilium longifolium*	Stylar	[19]

Liliaceae	*Lilium candidum, L. pardalinum, L. szovitsianum,*	Ovarian	[20]
Melanthiaceae	*Trillium grandiflorum* *Trillium erectum*	Stigmatic	[21]
Orchidaceae	*Octomeria crassifolia, O. grandiflora, O. praestans* *Pleurothallis*	Stigmatic	[22] [23]
Orchidaceae	*Pleurothallis johannensis, P. teres, P. ochreata,, P. fabiobarrosii*	Stylar	[23]
Orchidaceae	*Dendrobium* spp. *Pleurothallis adamantinensis, P. fabiobarrosii*	Ovarian	[24] [25]
Poaceae	*Secale cereale* *Phalaris coerulescens* *Lolium multiflorum* *Festuca pratensis*	Stigmatic, gametophytic control, two loci	[26] [27] [28] [29] [30]
Poaceae	*Lolium perenne*	Stigmatic, gametophytic control, three loci	[31]
Strelitziaceae	*Phenakospermum guayanensis*	Stylar	[32]
Velloziaceae	*Vellozia squamata*	Ovarian	[33]
Eudicots + Core eudicots			
Family	Species	SI inhibition	Reference
Amaranthaceae	*Beta vulgaris*	Stylar, gametophytic control, four loci	[34, 35]
Balanophoraceae	*Balanophora kuroiwai, B. tobiracola*	Stylar	[36]
Cactaceae	*Schlumbergera* x *buckleyi*	Stylar, gametophytic control, one locus	[37]
Caryophyllacea	*Cerastium arvense* ssp. *stricturn* *Stellaria holostea*	Stigmatic, sporophytic-gametophytic control, four loci	[38-41]
Droseraceae	*Drosera eneabba, D. manniana, D. gigantea, D. menziesii* ssp. *menziessi, D. radicans, D. stolonifera* ssp. *rupicola, D. rosulata, D. orbiculata*	Stigmatic	[42]
Droseraceae	*Drosera macrantha* ssp. *macrantha D. tubbaestylis D. bulbosa* ssp. *major, D.* sp. cf. *bulbosa* 'Wongan Hills', *D. erythrorrhiza.*	Stylar	[42]
Droseraceae	*Drosera menziesii* ssp. *basifolia, D. auriculata*	Ovarian	[42]
Nyctaginaceae	*Bougainvillea grava*	Stigmatic, sporophytic control, one locus	[43]

Papaveraceae	*Papaver rhoeas*	Stigmatic, gametophytic control, one locus	[44]
Proteaceae	*Macadamia integrifolia*	Stylar	[45]
Proteaceae	*Roupala montana* *Telopea speciocissima*	Ovarian	[46] [47]
Ranunculaceae	*Caltha palustris* *Ranunculus acris, R. Bulbosus, R. polyanthemus.* *R. repens*	Stigmatic, gametophytic control, four loci	[48] [35, 49] [50-52]
Family	*Species*	SI inhibition	Reference
Asterids 1 + Asterids 2			
Apocynaceae	*Apocynum cannabium*	Ovarian	[53]
Argophyllaceae	*Corokia cotonoaster*	Ovarian	[54]
Asteraceae	*Crepis foetida* subsp. *rhoeadifolia* *Parthenium argentatum* *Aster furcatus* *Ageratum houstonianum*	Stigmatic, sporophytic control, one locus	[55] [56] [57] [58]
Asteraceae	*Senecio squalidus*	Stigmatic, sporophytic-gametophytic control	[59, 60]
Boraginaceae	*Anchusa officinalis, Borago officinalis*	Ovarian	[7]
Campanulaceae	*Campanula rapunculoides*	Stylar, gametophytic control, one locus	[61]
Convolvulaceae	*Ipomea setifera* *Ipomea leucantha* *Ipomea trifida* *Convolvulus arvensis*	Stigmatic, sporophytic control one locus	[62] [63] [64] [65]
Cornaceae	*Cornus sericeae*	Stylar, gametophytic control, one locus	[66]
Hydrangeaceae	*Cornus florida*	Stylar	[67]
Lamiaceae	*Tectona grandis*	Ovarian	[68]
Myrsinaceae	*Anagallis monelli*	Stylar, gametophytic control, one locus	[69]
Oleaceae	*Olea europea*	Stigmatic, Stylar, gametophytic control	[70]
Polemoniaceae	*Linanthus parviflorus* *Leptosiphon jepsonii*	Stigmatic, sporophytic control one locus	[71] [72]
Polemoniaceae	*Phlox drumondii*	Stylar, gametophytic control, one locus	[73]
Polemoniaceae	*Ipomopsis aggregata*	Ovarian	[74]

	Ipomopsis tenuifolia		[75]
Plantaginaceae	*Antirhinum molle*	Stylar, gametophytic control, one locus	[76]
Primulaceae	*Primula veris*	Herostyly + stigmatic	[77]
Primulaceae	*Primula* spp.	Herostyly + stigmatic + stylar	[78]
Rubiaceae	*Coussarea sp., Hamelia patens, H. xerocarpa, Psychotria chiapensis, P. officinalis, P. suerrensis, Rudnea cornifolia, Warsewiczia coccinea*	Herostyly + stigmatic + stylar	[79]
Rubiaceae	*Palicourea marcgravii, Psychotria conjugens, P. hiygrophiloides, P. Nuda, P. sessilis, Rudgea karteniis, R. lanceolata*	Herostyly + stigmatic	[80]
Rubiaceae	*Palicourea longipedunculata, P. rigida, Posoquiera latifolia, Psychotria hastisepala, Rudgea cornifolia*	Herostyly + stylar	[80]
Sapotaceae	*Madhuca indica*	Stylar	[81]
Solanaceae	*Nicotiana alata, N. forgetiana* *Petunia violaceae, P. axilaris* *Lycopersicon peruvianum* var. *dentatum, L. esculentum, L. chilensis* *Solanum chacoense* *S. kurtzianum, S. simplicifolium, S. michoacanum* *S. comeersonii*	Stylar, gametophytic control, one locus	[82] [83] [84, 85] [86] [87] [88]
Solanaceae	*Solanum ehrenbergii S. pinnatisectum* *S. phureja, S. stenotomum* *Physallis ixocarpa*	Stylar, gametophytic control, two loci	[89] [90] [91]
Solanaceae	*Lycium cestroides*	Ovarian	[92]
Styracaceae	*Styrax ferrugineus*	Ovarian	[93]
Theaceae	*Thea sinensis*	Stylar, gametophytic control, one locus	[94]
Verbenaceae	*Lantana camara*	Stylar	[95]
Rosids			
Brassicaceae	*Iberis amara* *Cardamine pratensis, Capsella grandiflora, Brassica oleracea, Raphanus sativus, Brassica campestris* *Leavenworthia crassa* *Eruca sativa*	Stigmatic, sporophytic control, one locus	[96] [97] [98] [99]
Brassicaceae	*Brassica campestris* *Raphanus sativus*	Stigmatic, sporophytic-gametophytic control	[100] [101]
Betulaceae	*Betula verrucosa, B. pubescens*	Stylar, gametophytic control one locus	[102]
Betulaceae	*Corylus avellana*	Stigmatic, sporophytic control, one locus	[103]
Bixaceae	*Cochlospermum vitifolium*	Ovarian	[7]
Burseraceae	*Boswellia serrata*	Stigmatic	[104]

Capparaceae	*Capparis pittierii* *Capparis jacobinae*	Ovarian	[79] [105]
Cistaceae	*Cistus carthaginensis* *C. ladanifer*	Stylar	[106] [107]
Chrysobalanaceae	*Hirtella glandulosa*	Ovarian	[108]
Clusiaceae	*Kielmeyera coriaceae, K. speciosa*	Ovarian	[109]
Dipterocarpaceae	*Dipterocarpus tempehes*	Stigmatic, ovarian	[110]
Erythroxylaceae	*Erythroxylum suberosum , E. tortuosum*	Heterostyly + Stylar	[109]
Euphorbiaceae	*Mabea fistulifera*	Stigmatic	[111]
Fabaceae	*Trifolium repens*	Stylar, gametophytic control one locus	[112, 113]
Fabaceae	*Lotus tenuis*	Stylar, gametophytic control three or four loci	[114]
Fabaceae	*Lotus corniculatus*	Ovarian, gametophytic control one locus	[115, 116]
Fabaceae	*Tylosema esculentum*	Stylar , heterostily	[117]
Fabaceae	*Inga brenesii*	Stylar	[118]
Fabaceae	*Acacia retinoides*	Ovarian	[119]
Fagaceae	*Castanea molissima*	Ovarian	[120]
Malpighiaceae	*Mascagnia anisopetala, Stigmaphyllon lalandianum, S. paralias*	Ovarian	[121]
Malvaceae	*Cola nitida*	Stigmatic, sporophytic control, one locus	[122]
Malvaceae	*Abutilon hybridum*	Stigmatic, gametophytic control, one locus	[123]
Malvaceae	*Luehea grandiflora*	Stylar	[124]
Malvaceae	*Theobroma cacao*	Ovarian, gametophytic-sporophytic control, one locus	[125]
Onagraceae	*Oenothera rhombipetala*	Stigmatic, gametophytic control, one locus	[126]
Onagraceae	*Oenothera organensis*	Stigmatic, Stylar gametophytic control, one locus	[127]
Onagraceae	*Ludwigia sericea, L. nervosa*	Stylar	[128]
Onagraceae	*Epilobium obcordatum*	Ovarian	[129]
Paeoniaceae	*Paeonia jishanensiis*	Ovarian	[130]
Passifloraceae	*Passiflora edulis* f. *flavicarpa*	Stigmatic, Stylar gametophytic-sporophytic control	[131, 132]
Rhamnaceae	*Discaria toumatou*	Stigmatic	[133]
Rhamnaceae	*Frangula alnus*	Stylar	[134]
Rosaceae	*Malus domestica*	Stylar, gametophytic control,	[135]

	Prunus spp. *Pyrus* spp. *Rubus articus*	one locus	[136, 137] [138] [139] [140]
Rutaceae	*Citrus grandis*	Stylar, gametophytic control one locus	[141, 142]
Saxifragaceae	*Heuchera micrantha* var. *diversifolia*	Ovarian	[143]
Turneraceae	*Turnera spp., Piriqueta spp.*	Heterostyly + stigmatic+ stylar	[144]
Vochysiaceae	*Vochysia elliptica, V. pumila,V. pyramidalis, V. rufa,V. thyrsoidea, V. tucanorum*	Stylar	[145]
Vochysiaceae	*Qualea grandiflora Q. multiflora*	Stylar	[146]

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APPENDIX S2

Families of Angiosperms presenting stigmatic SI inhibition, phylogenetic information (order, phylogenetic group to which they belong), number of species (retrieved from APG II website; Stevens, 2010), age of divergence from Wikström *et al.*, (2001; 'Wik'), Davies *et al.*, (2004; 'Dav') and exponential and log-normal Bell *et al.*, (2010; 'EBe' and 'LBe', respectively) calibrations. Estimated DR Kendall–Moran estimator: ln(*n*) /*t*); *n* = number of species, *t* = divergence time. Information regarding the number of species in which breeding system (sample size) has been assessed and genetic control basis are presented in the last two columns.

				Divergence age				**Diversification rate**					
Family	**Order**	**Phylogenetic group**	**No. of species**	Wik	Dav	EBe	LBe	Wik	Dav	EBe	LBe	**Sample size**	**Genetic control**
Alismataceae	Alismatales	Monocots	81	65	97.5			0.029	0.020			19	unclass.
Asteraceae	Asterales	Asterids	23600	44	42.3	44	40	0.099	0.100	0.099	0.109	624	SSI, SSI-GSI
Brassicaceae	Brassicales	Rosids	3710	22	50.5	31	33	0.162	0.070	0.115	0.108	284	SSI
Burseraceae	Sapindales	Rosids	550	47	42.9	50	64	0.058	0.060	0.055	0.043	1	unclass.
Caryophyllaceae	Caryophyllales	Core eudicots	2200	38	40.5	55	59	0.088	0.080	0.061	0.057	99	SSI-GSI
Commelinaceae	Commelinales	Commelinids	652	62	66.0	61	66	0.045	0.040	0.046	0.043	86	GSI1
Convolvulaceae	Solanales	Asterids	1601	65	61.9	59	62	0.049	0.050	0.054	0.052	91	SSI
Euphorbiaceae	Malpighiales	Rosids	5970	39	57.4	83	85	0.097	0.070	0.045	0.044	53	unclass.
Melanthiaceae	Liliales	Monocots	170	86	89.5	83	96	0.026	0.020	0.027	0.023	19	unclass.
Papaveraceae	Ranunculales	Eudicots	760	126	123.9	100	108	0.023	0.020	0.029	0.027	26	GSI1
Poaceae	Poales	Commelinids	10035	34	41.0	58	65	0.118	0.100	0.069	0.062	303	GSI2
Ranunculaceae	Ranunculales	Eudicots	2525	87	87.3	67	72	0.039	0.040	0.051	0.047	95	GSI2
Saururaceae	Piperales	Magnoliids	6	90	80.5	67	78	0.009	0.010	0.012	0.010	1	unclass.
Trimeniaceae	Austrobaileyales	ANITA	6	93	135.4			0.008	0.010			1	unclass.

GSI1 = gametohytic control, one locus; GSI2 = gametophytic, more than 1 locus; SSI = sporophytic control; SSI-GSI = sporophytic and gametophytic control; unclass. = unclassified.

Families of Angiosperms presenting stylar SI inhibition, phylogenetic information (order, phylogenetic group to which they belong), number of species (retrieved from APG II website; Stevens, 2010), age of divergence from Wikström *et al.*, (2001; 'Wik'), Davies *et al.*, (2004; 'Dav') and exponential and log-normal Bell *et al.*, (2010; 'EBe' and 'LBe', respectively) calibrations. Estimated DR Kendall–Moran estimator: ln(*n*) /*t*); *n* = number of species, *t* = divergence time. Information regarding the number of species in which breeding system (sample size) has been assessed and genetic control basis are presented in the last two columns.

				Divergence age				**Diversification rate**					
Family	**Order**	**Phylogenetic group**	**No. of species**	Wik	Dav	EBe	LBe	Wik	Dav	EBe	LBe	**Sample size**	**Genetic control**
Amaranthaceae	Caryophyllales	Core eudicots	2275	26	39.5	55	59	0.129	0.090	0.061	0.057	28	GSI2
Bromeliaceae	Poales	Commelinids	1400	69	74.4	85	93	0.046	0.040	0.037	0.034	21	GSI1
Butomaceae	Alismatales	Monocots	1	65	70.2			0.000	0.000			2	unclass.
Cactaceae	Caryophyllales	Core eudicots	1500	18	28.1	21	22	0.176	0.110	0.151	0.144	109	GSI1
Campanulaceae	Asterales	Asterids	2300	75	64.8	74	79	0.045	0.050	0.045	0.043	51	GSI1
Cistaceae	Malvales	Rosids	175	36	67.5	35	38	0.062	0.030	0.064	0.059	13	unclass.
Cornaceae	Cornales	Asterids	85	91	96.3	87	87	0.021	0.020	0.022	0.022	3	GSI1
Hydrangeaceae	Cornales	Asterids	190	62	78.4	49	50	0.037	0.030	0.047	0.046	14	unclass.
Myrsinaceae	Ericales	Asterids	1435	31	36.7	57	61	0.102	0.090	0.055	0.052	21	GSI1
Plantaginaceae	Lamiales	Asterids	1700	57	57.1	61	64	0.057	0.060	0.053	0.050	121	GSI1
Rosaceae	Rosales	Rosids	2830	76	73.0	82	85	0.045	0.050	0.042	0.041	131	GSI1
Rutaceae	Sapindales	Rosids	1815	45	53.4	53	54	0.072	0.060	0.061	0.060	5	GSI1
Sapotaceae	Ericales	Asterids	1100	59	93.1	74	77	0.052	0.030	0.041	0.039	1	unclass.
Strelitziaceae	Zingiberales	Commelinids	7	29	65.8	40	42	0.029	0.010	0.021	0.020	3	unclass.
Theaceae	Ericales	Asterids	327.5	59	82.2	74	77	0.043	0.030	0.034	0.033	4	GSI1
Verbenaceae	Lamiales	Asterids	1175	53	39.7	25	25	0.058	0.080	0.123	0.123	13	unclass.

GSI1 = gametohytic control, one locus; GSI2 = gametophytic, more than 1 locus; SSI = sporophytic control; SSI-GSI = sporophytic and gametophytic control; unclass. = unclassified.

Families of Angiosperms presenting ovarian SI inhibition, phylogenetic information (order, phylogenetic group to which they belong), number of species (retrieved from APG II website; Stevens, 2010), age of divergence from Wikström *et al.*, (2001; 'Wik'), Davies *et al.*, (2004; 'Dav') and exponential and log-normal Bell *et al.*, (2010; 'EBe' and 'LBe', respectively) calibrations. Estimated DR Kendall–Moran estimator: ln(*n*) /*t*); *n* = number of species, *t* = divergence time. Information regarding the number of species in which breeding system (sample size) has been assessed and genetic control basis are presented in the last two columns.

				Divergence age				**Diversification rate**					
Family	**Order**	**Phylogenetic group**	**No. of species**	Wik	Dav	EBe	LBe	Wik	Dav	EBe	LBe	**Sample size**	**Genetic control**
Annonaceae	Magnoliales	Magnoliids	2220	31	78.9	50	55	0.108	0.040	0.067	0.061	29	unclass.
Apocynaceae	Gentianales	Asterids	4555	53	67.1	50	53	0.069	0.050	0.073	0.069	28	SSI-GSI
Argophyllaceae	Asterales	Asterids	17	62	55.0	49	53	0.020	0.020	0.025	0.023	1	unclass.
Bixaceae	Malvales	Rosids	21	58	73.9	68	71	0.023	0.020	0.019	0.019	1	unclass.
Capparaceae	Brassicales	Rosids	480	28	50.5	41	43	0.096	0.050	0.065	0.062	8	unclass.
Chrysobalanaceae	Malpighiales	Rosids	460	50	63.0	59	60	0.053	0.040	0.045	0.044	5	unclass.
Clusiaceae	Malpighiales	Rosids	1050	54	58.9	61	45	0.056	0.050	0.050	0.067	6	unclass.
Hemerocallidaceae	Asparagales	Monocots	85	93	52.6			0.021	0.040			10	unclass.
Hyacinthaceae	Asparagales	Monocots	770	45	46.7	40	45	0.064	0.060	0.072	0.064	17	unclass.
Malpighiaceae	Malpighiales	Rosids	1250	68	73.5	83	85	0.046	0.040	0.037	0.036	28	unclass.
Paeoniaceae	Saxifragales	Rosids	33	88	101.6	87	89	0.017	0.010	0.017	0.017	7	unclass.
Styracaceae	Ericales	Asterids	160	55	60.8	51	54	0.040	0.040	0.043	0.041	3	unclass.
Velloziaceae	Pandanales	Monocots	240	74	92.6	72	82	0.032	0.030	0.033	0.029	4	unclass.
Winteraceae	Canellales	Magnoliids	75	99	106.8	77	80	0.019	0.020	0.024	0.023	15	unclass.

GSI1 = gametohytic control, one locus; GSI2 = gametophytic, more than 1 locus; SSI = sporophytic control; SSI-GSI = sporophytic and gametophytic control; unclass. = unclassified.

Families of Angiosperms presenting various SI inhibition sites (polymorphic), phylogenetic information (order, phylogenetic group to which they belong), number of species (retrieved from APG II website; Stevens, 2010), age of divergence from Wikström *et al.*, (2001; 'Wik'), Davies *et al.*, (2004; 'Dav') and exponential and log-normal Bell *et al.*, (2010; 'EBe' and 'LBe', respectively) calibrations. Estimated DR Kendall–Moran estimator: ln(*n*) /*t*); *n* = number of species, *t* = divergence time. Information regarding the number of species in which breeding system (sample size) has been assessed and genetic control basis are presented in the last two columns.

				Divergence age				**Diversification rate**			
Family	**Order**	**Phylogenetic group**	**No. of species**	Wik	Dav	EBe	LBe	Wik	Dav	EBe	LBe
Amaryllidaceae	Asparagales	Monocots	800	55	39.0	46	50	0.053	0.070	0.063	0.058
Betulaceae	Fagales	Rosids	110	36	33.2	27	29	0.057	0.060	0.076	0.070
Boraginaceae	Boraginales	Asterids	2740	77	85.5	72	83	0.045	0.040	0.048	0.041
Dipterocarpaceae	Malvales	Rosids	680	28	67.5	42	46	0.101	0.040	0.067	0.062
Droseraceae	Caryophyllales	Core eudicots	115	62	66.5	65	70	0.033	0.030	0.032	0.029
Fabaceae	Fabales	Rosids	19400	72	63.8	71	73	0.060	0.070	0.060	0.059
Fagaceae	Fagales	Rosids	670	61	63.8	52	55	0.046	0.040	0.054	0.051
Iridaceae	Asparagales	Monocots	1870	30	78.1	72	81	0.109	0.040	0.045	0.040
Lamiaceae	Lamiales	Asterids	7173	42	39.7	48	50	0.092	0.100	0.080	0.077
Liliaceae	Liliales	Monocots	635	64	63.3	63	92	0.044	0.040	0.044	0.030
Lythraceae	Myrtales	Rosids	620	63	64.9	63	67	0.044	0.040	0.044	0.042
Malvaceae	Malvales	Rosids	4225	57	65.8	66	67	0.064	0.060	0.055	0.054
Nyctaginaceae	Caryophyllales	Core eudicots	395	26	30.6	36	38	0.100	0.080	0.072	0.068
Onagraceae	Myrtales	Rosids	650	63	64.9	63	67	0.045	0.040	0.045	0.042
Orchidaceae	Asparagales	Monocots	20250	69	96.5	92	103	0.062	0.040	0.047	0.042

Passifloraceae	Malpighiales	Rosids	670	35	76.4	39	43	0.081	0.040	0.072	0.066
Polemoniaceae	Ericales	Asterids	350	72	75.7	61	64	0.035	0.030	0.042	0.040
Proteaceae	Proteales	Eudicots	1600	108	126.1	98	99	0.030	0.030	0.033	0.032
Rhamnaceae	Rosales	Rosids	925	64	64.0	69	71	0.046	0.050	0.043	0.042
Saxifragaceae	Saxifragales	Rosids	630	76	70.9	77	76	0.037	0.040	0.036	0.037
Solanaceae	Solanales	Asterids	2460	65	61.9	59	62	0.052	0.050	0.057	0.055
Vochysiaceae	Myrtales	Rosids	210	73	78.0	62	69	0.032	0.030	0.037	0.034

Families of Angiosperms presenting various SI inhibition sites (polymorphic), and information on the SI inhibition sites, number of species in which breeding system has been assessed (Sample size) and genetic control basis.

Family	Sample size	SI inhibition site	Genetic control
Amaryllidaceae	26	Ovarian, Heterostyly + Ovarian	unclass.
Betulaceae	9	Stigmatic , Stylar	SSI
Boraginaceae	70	Ovarian, Heterostyly + Ovarian	unclass.
Dipterocarpaceae	7	Stigmatic, post-fertilization SS	unclass.
Droseraceae	25	Stigmatic , Stylar, Ovarian	unclass.
Fabaceae	370	Stylar, Ovarian, Post-fertilization SS, Heterostyly	GSI1, GSI2
Fagaceae	10	Stylar, Ovarian	GSI1
Iridaceae	145	Ovarian, Heterostyly + Ovarian	unclass.
Lamiaceae	54	Ovarian, Heterostyly	unclass.
Liliaceae	64	Stigmatic, Ovarian, Post-fertilization SS	GSI2
Lythraceae	14	Stigmatic , Stylar, Heterostyly + Stigmatic, Heterostyly + Stylar	unclass.
Malvaceae	133	Stigmatic, Stylar, Ovarian, Post-fertilization SS, Heterostyly + Ovarian	GSI1,SSI-GSI
Nyctaginaceae	13	Stigmatic, Heterostyly	unclass.
Onagraceae	104	Stigmatic, Stylar, Ovarian, Post-fertilization SS	unclass.
Orchidaceae	162	Stigmatic, Stylar, Ovarian, Post-fertilization SS	unclass.
Passifloraceae	15	Stigmatic, Stylar	SSI-GSI
Polemoniaceae	99	Stigmatic, Ovarian	GSI1,SSI

Proteaceae	26	Stylar, Ovarian	unclass.
Rhamnaceae	14	Stigmatic, Stylar	unclass.
Saxifragaceae	27	Ovarian, Heterostyly	unclass.
Solanaceae	227	Stylar, Ovarian	GSI1, GSI2
Vochysiaceae	12	Stylar, Ovarian	unclass.

GSI1 = gametohytic control, one locus; GSI2 = gametophytic, more than 1 locus; SSI = sporophytic control; SSI-GSI = sporophytic and gametophytic control; unclass. = unclassified.

Families of Angiosperms presenting post-fertilization SS, phylogenetic information (order, phylogenetic group to which they belong), number of species (retrieved from APG II website; Stevens, 2010), age of divergence from Wikström *et al.*, (2001; 'Wik'), Davies *et al.*, (2004; 'Dav') and exponential and log-normal Bell *et al.*, (2010; 'EBe' and 'LBe', respectively) calibrations. Estimated DR Kendall–Moran estimator: ln(*n*) /*t*); *n* = number of species, *t* = divergence time. Information regarding the number of species in which breeding system (sample size) has been assessed and genetic control basis are presented in the last two columns.

				Divergence age				**Diversification rate**					
Family	**Order**	**Phylogenetic group**	**No. of species**	Wik	Dav	EBe	LBe	Wik	Dav	EBe	LBe	**Sample size**	**Genetic control**
Anacardiaceae	Sapindales	Rosids	985	47	42.9	50	64	0.064	0.070	0.060	0.047	6	unclass.
Asphodelaceae	Asparagales	Monocots	785	52	52.5	47	52	0.056	0.060	0.062	0.056	26	unclass.
Bignoniaceae	Lamiales	Asterids	800	52	45.3	25	25	0.056	0.060	0.116	0.116	41	unclass.
Grossulariaceae	Saxifragales	Rosids	150	81	70.9	89	89	0.027	0.030	0.024	0.024	15	unclass.
Myrtaceae	Myrtales	Rosids	4620	67	80.9	62	69	0.055	0.050	0.059	0.053	72	unclass.

GSI1 = gametohytic control, one locus; GSI2 = gametophytic, more than 1 locus; SSI = sporophytic control; SSI-GSI = sporophytic and gametophytic control; unclass. = unclassified.

Families of Angiosperms presenting heterostyly, phylogenetic information (order, phylogenetic group to which they belong), number of species (retrieved from APG II website; Stevens, 2010), age of divergence from Wikström *et al.*, (2001; 'Wik'), Davies *et al.*, (2004; 'Dav') and exponential and log-normal Bell *et al.*, (2010; 'EBe' and 'LBe', respectively) calibrations. Estimated DR Kendall–Moran estimator: ln(*n*) /*t*); *n* = number of species, *t* = divergence time. Information regarding the number of species in which breeding system (sample size) has been assessed and genetic control basis are presented in the last two columns.

				Divergence age				**Diversification rate**				
Family	**Order**	**Phylogenetic group**	**No. of species**	Wik	Dav	EBe	LBe	Wik	Dav	EBe	LBe	**Sample size**
Acanthaceae	Lamiales	Asterids	3500	50	42.6	48	51	0.071	0.080	0.074	0.069	43
Connaraceae	Oxalidales	Rosids	180	71	63.2			0.032	0.040			1
Ericaceae	Ericales	Asterids	3995	56	76.8	40	44	0.064	0.050	0.090	0.082	61
Gentianaceae	Gentianales	Asterids	1655	52	61.5	50	53	0.062	0.050	0.064	0.061	43
Hypericaceae	Malpighiales	Rosids	560	36	44.1	43	42	0.076	0.060	0.064	0.065	6
Menyanthaceae	Asterales	Asterids	40	65	57.3	58	63	0.025	0.030	0.028	0.025	14
Olacaceae	Santalales	Core eudicots	103	88	114.5	91	99	0.023	0.020	0.022	0.020	2
Oxalidaceae	Oxalidales	Rosids	770	71	63.2	59	64	0.041	0.050	0.049	0.045	7
Plumbaginaceae	Caryophyllales	Core eudicots	836	42	59.3	58	60	0.070	0.050	0.050	0.049	169
Polygonaceae	Caryophyllales	Core eudicots	1100	30	59.3	58	60	0.101	0.050	0.052	0.051	29
Santalaceae	Santalales	Core eudicots	990	65	114.5	82	89	0.046	0.030	0.037	0.034	2
Zingiberaceae	Zingiberales	Commelinids	1188	43	66.5	43	45	0.072	0.050	0.072	0.068	15

Families of Angiosperms presenting heterostyly and SI inhibition, phylogenetic information (order, phylogenetic group to which they belong), number of species (retrieved from APG II website; Stevens, 2010), age of divergence from Wikström *et al.*, (2001; 'Wik'), Davies *et al.*, (2004; 'Dav') and exponential and log-normal Bell *et al.*, (2010; 'EBe' and 'LBe', respectively) calibrations. Estimated DR Kendall–Moran estimator: ln(*n*) /*t*); *n* = number of species, *t* = divergence time. Information regarding the number of species in which breeding system (sample size) has been assessed and SI inhibition site are presented in the last two columns.

				Divergence age				**Diversification rate**					
Family	**Order**	**Phylogenetic group**	**No. of species**	Wik	Dav	EBe	LBe	Wik	Dav	EBe	LBe	**Sample size**	**SI inhibition site**
Erythroxylaceae	Malpighiales	Rosids	240	54	76.4	60	63	0.044	0.030	0.040	0.038	9	Stylar
Linaceae	Malpighiales	Rosids	300	71	76.7	71	73	0.035	0.030	0.035	0.034	16	Stigmatic
Oleaceae	Lamiales	Asterids	615	63	58.9	69	74	0.044	0.050	0.040	0.038	9	Stylar
Pontederiaceae	Commelinales	Commelinids	33	62	66.0	61	66	0.024	0.020	0.025	0.023	25	Ovarian
Primulaceae	Ericales	Asterids	900	31	36.7	40	44	0.095	0.080	0.074	0.067	35	Stigmatic, Stylar
Rubiaceae	Gentianales	Asterids	10000	63	76.5	65	69	0.063	0.050	0.062	0.058	79	Stigmatic, Stylar
Turneraceae	Malpighiales	Rosids	110	33	75.4	43	47	0.062	0.030	0.047	0.043	50	Stigmatic, Stylar

Families of Angiosperms presenting species with self-sterility, phylogenetic information (order, phylogenetic group to which they belong), number of species (retrieved from APG II website; Stevens, 2010), age of divergence from Wikström *et al.,* (2001; 'Wik'), Davies *et al.,* (2004; 'Dav') and exponential and log-normal Bell *et al.,* (2010; 'EBe' and 'LBe', respectively) calibrations. Estimated DR Kendall–Moran estimator: ln(*n*) /*t*); *n* = number of species, *t* = divergence time. Information regarding the number of species in which breeding system (sample size) has been assessed is presented in the last column.

				Divergence age				**Diversification rate**				
Family	**Order**	**Phylogenetic group**	**No. of species**	Wik	Dav	EBe	LBe	Wik	Dav	EBe	LBe	**Sample size**
Adoxaceae	Dipsacales	Asterids	200	78	86.3	57	60	0.030	0.030	0.040	0.038	6
Agavaceae	Asparagales	Monocots	637	51	46.1	33	40	0.055	0.060	0.085	0.070	39
Aizoaceae	Caryophyllales	Core eudicots	2020	20	30.6	19	21	0.165	0.110	0.174	0.157	5
Alliaceae	Asparagales	Monocots	795	45	51.4	46	50	0.064	0.060	0.063	0.058	8
Alstroemeriaceae	Liliales	Monocots	165	56	63.4	59	62	0.040	0.030	0.038	0.036	3
Araceae	Alismatales	Monocots	4025	111	122.3	107	122	0.032	0.030	0.034	0.030	22
Araliaceae	Apiales	Asterids	1450	43	69.4	35	38	0.074	0.050	0.090	0.083	4
Arecaceae	Arecales	Commelinids	2000	64	101.0	96	103	0.052	0.030	0.034	0.032	10
Aristolochiaceae	Piperales	Magnoliids	480	111	120.2	104	119	0.024	0.020	0.026	0.023	17
Austrobaileyaceae	Austrobaileyales	ANITA	2	133	140.8	114	122	0.002	0.000	0.003	0.002	2
Berberidaceae	Ranunculales	Eudicots	701	87	87.3	67	72	0.033	0.030	0.042	0.040	12
Blandfordiaceae	Asparagales	Monocots	4	75	74.8	66	72	0.008	0.010	0.009	0.008	3
Byblidaceae	Lamiales	Asterids	6	49	52.1	61	64	0.016	0.010	0.013	0.012	2
Calyceraceae	Asterales	Asterids	60	40	42.3	37	47	0.044	0.040	0.048	0.038	2
Caprifoliaceae	Dipsacales	Asterids	220	34	86.3	24	22	0.069	0.030	0.098	0.106	2
Celastraceae	Celastrales	Rosids	1300	58	42.0	71	76	0.054	0.070	0.044	0.041	1

Chloranthaceae	Chlorantales	ANITA	75	141	143.8	127	140	0.013	0.010	0.015	0.013	7
Colchicaceae	Liliales	Monocots	225	56	53.3	59	62	0.042	0.040	0.040	0.038	23
Combretaceae	Myrtales	Rosids	500	65	74.0	76	83	0.042	0.040	0.036	0.033	4
Crassulaceae	Saxifragales	Rosids	1370	77	81.7	77	80	0.041	0.040	0.041	0.039	17
Cunoniaceae	Oxalidales	Rosids	280	64	53.2	46	50	0.038	0.050	0.053	0.049	1
Cyclanthaceae	Pandanales	Monocots	225	67	67.2	47	52	0.035	0.040	0.050	0.045	4
Cyperaceae	Poales	Commelinids	4350	39	44.0	79	87	0.093	0.080	0.046	0.042	28
Diervillaceae	Dipsacales	Asterids	16	37	86.3			0.033	0.010			1
Dipsacaceae	Dipsacales	Asterids	290	34	85.3	10	11	0.072	0.030	0.246	0.224	6
Elaeocarpaceae	Oxalidales	Rosids	605	57	53.2	46	50	0.049	0.050	0.060	0.056	3
Escalloniaceae	Unplaced, near Apiales	Asterids	68	74	79.1	77	84	0.025	0.020	0.024	0.022	2
Eupomatiaceae	Magnoliales	Magnoliids	4	86	78.9	50	55	0.007	0.010	0.012	0.011	4
Frankeniaceae	Caryophyllales	Core eudicots	90	40	44.8	51	52	0.049	0.040	0.038	0.038	2
Geraniaceae	Geraniales	Rosids	805	79	103.9	87	93	0.037	0.030	0.033	0.031	35
Goodeniaceae	Asterales	Asterids	400	40	42.3	37	47	0.065	0.060	0.070	0.055	2
Hamamelidaceae	Saxifragales	Rosids	82	99	101.6	95	103	0.019	0.020	0.020	0.019	2
Heliconiaceae	Zingiberales	Commelinids	150	53	66.5	38	40	0.041	0.030	0.057	0.054	18
Hypoxidaceae	Asparagales	Monocots	155	69	74.8	74	81	0.032	0.030	0.030	0.027	3
Illiciaceae	Austrobaileyales	ANITA	92	93	135.4	89	89	0.021	0.010	0.022	0.022	2
Juncaginaceae	Alismatales	Monocots	15	90	60.7			0.013	0.020			2
Lardizabalaceae	Ranunculales	Eudicots	36	57	105.3	81	87	0.027	0.010	0.019	0.018	1

Lauraceae	Laurales	Magnoliids	2500	91	99.8	45	52	0.037	0.030	0.076	0.065	12
Laxmanniaceae	Asparagales	Monocots	178	75	46.9	45	49	0.030	0.050	0.050	0.046	3
Lecythidaceae	Ericales	Asterids	310	82	90.6	74	77	0.030	0.030	0.034	0.032	2
Lentibulariaceae	Lamiales	Asterids	320	52	52.1	51	54	0.048	0.050	0.049	0.046	5
Linnaeaceae	Dipsacales	Asterids	36	37	86.3	29	29	0.042	0.020	0.054	0.054	1
Loasaceae	Cornales	Asterids	265	82	78.4	49	50	0.030	0.030	0.049	0.048	1
Loganiaceae	Gentianales	Asterids	420	52	61.5	57	61	0.050	0.040	0.046	0.043	8
Loranthaceae	Santalales	Core eudicots	950	64	114.5			0.047	0.030			11
Magnoliaceae	Magnoliales	Magnoliids	227	93	94.3	50	56	0.025	0.020	0.047	0.042	22
Marantaceae	Zingiberales	Commelinids	550	44	66.5	40	42	0.062	0.040	0.069	0.065	7
Marcgraviaceae	Ericales	Asterids	130	40	65.4	43	46	0.053	0.030	0.049	0.046	5
Melastomataceae	Myrtales	Rosids	4570	73	66.5	73	75	0.050	0.060	0.050	0.049	126
Meliaceae	Sapindales	Rosids	621	36	49.4	50	50	0.078	0.060	0.056	0.056	3
Monimiaceae	Laurales	Magnoliids	200	91	99.8	45	52	0.025	0.020	0.051	0.044	7
Myricaceae	Fagales	Rosids	57	38	51.0	29	32	0.046	0.030	0.061	0.055	2
Nothofagaceae	Fagales	Rosids	35	62	71.6			0.025	0.020			6
Ochnaceae	Malpighiales	Rosids	495	35	76.7	45	45	0.077	0.040	0.060	0.060	2
Orobanchaceae	Lamiales	Asterids	2061	44	41.7	38	48	0.075	0.080	0.087	0.069	29
Paulowniaceae	Lamiales	Asterids	1	44	41.7	38	48	0.000	0.000	0.000	0.000	1
Pedaliaceae	Lamiales	Asterids	70	48	45.3	48	51	0.038	0.040	0.038	0.036	2
Piperaceae	Piperales	Magnoliids	2015	90	80.5	67	78	0.037	0.040	0.049	0.042	11

Polygalaceae	Fabales	Rosids	1045	67	72.3	79	83	0.045	0.040	0.038	0.036	6
Portulacaceae	Caryophyllales	Core eudicots	395	18	28.1	21	22	0.144	0.090	0.124	0.118	9
Resedaceae	Brassicales	Rosids	75	39	43.5	54	57	0.048	0.040	0.035	0.033	2
Rousseaceae	Asterales	Asterids	13	76	77.4	77	84	0.015	0.010	0.014	0.013	2
Ruscaceae	Asparagales	Monocots	475	52	43.8			0.051	0.060			7
Salicaceae	Malpighiales	Rosids	1010	57	58.0	71	73	0.053	0.050	0.042	0.041	7
Sapindaceae	Sapindales	Rosids	1580	56	58.8	64	51	0.057	0.050	0.050	0.063	13
Schisandraceae	Austrobaileyales	ANITA	92	93	135.4	89	89	0.021	0.010	0.022	0.022	1
Scrophulariaceae	Lamiales	Asterids	1700	57	57.1	56	55	0.057	0.060	0.058	0.059	56
Staphyleaceae	Crossosomatales	Rosids	45	56	42.7	34	37	0.030	0.040	0.049	0.045	1
Stylidiaceae	Asterales	Asterids	157	70	67.0	67	73	0.031	0.030	0.033	0.030	2
Tecophilaeaceae	Asparagales	Monocots	23	75	84.8	70	79	0.018	0.020	0.019	0.017	5
Valeraniaceae	Dipsacales	Asterids	315	53	86.3	36	37	0.047	0.030	0.069	0.068	4
Vitaceae	Vitales	Rosids	850	108	112.4	65	48	0.027	0.030	0.045	0.061	1
Vivianiaceae	Geraniales	Rosids	6	78	101.5	70	77	0.010	0.010	0.011	0.010	1
Xyridaceae	Poales	Commelinids	260	52	65.2	71	78	0.046	0.040	0.034	0.031	2

Families of Angiosperms presenting exclusively species bearing SC, phylogenetic information (order, phylogenetic group to which they belong), number of species (retrieved from APG II website; Stevens, 2010), age of divergence from Wikström *et al.,* (2001; 'Wik'), Davies *et al.,* (2004; 'Dav') and exponential and log-normal Bell *et al.,* (2010; 'EBe' and 'LBe', respectively) calibrations. Estimated DR Kendall–Moran estimator: ln(*n*) /*t*); *n* = number of species, *t* = divergence time. Information regarding the number of species in which breeding system (sample size) has been assessed is presented in the last column.

				Divergence age				**Diversification rate**				
Family	**Order**	**Phylogenetic group**	**No. of species**	Wik	Dav	EBe	LBe	Wik	Dav	EBe	LBe	**Sample size**
Apiaceae	Apiales	Asterids	3780	42	56.9	35	38	0.085	0.060	0.102	0.094	41
Aquifoliaceae	Aquifoliales	Asterids	405	52	77.0	42	45	0.050	0.030	0.062	0.058	1
Asparagaceae	Asparagales	Monocots	230	45	43.8	45	49	0.052	0.050	0.052	0.048	2
Balanophoraceae	Santalales	Core eudicots	50	112	114.5			0.015	0.010			1
Balsaminaceae	Ericales	Asterids	1001	46	69.8	49	52	0.065	0.040	0.061	0.058	5
Begoniaceae	Cucurbitales	Rosids	1401	51	48.1	46	52	0.062	0.070	0.068	0.061	6
Burmanniaceae	Dioscoreales	Monocots	95	93	100.7	83	92	0.021	0.020	0.024	0.021	3
Buxaceae	Buxales	Eudicots	70	93	124.4	98	99	0.020	0.010	0.019	0.019	1
Cabombaceae	Nymphaeles	ANITA	6	60	154.3			0.013	0.010			1
Calycanthaceae	Laurales	Magnoliids	11	108	119.2	98	98	0.010	0.010	0.011	0.011	1
Cannaceae	Zingiberales	Commelinids	19	43	66.5	38	40	0.030	0.020	0.034	0.032	5
Caricaceae	Brassicales	Rosids	34	58	66.9	64	67	0.026	0.020	0.024	0.023	1
Caryocaraceae	Malpighiales	Rosids	21	60	68.4	76	78	0.022	0.020	0.017	0.017	1
Casuarinaceae	Fagales	Rosids	95	36	33.2	27	29	0.055	0.060	0.073	0.068	2
Ceratophyllaceae	Ceratophyllales	Ceratophyllales	1.5	140	143.8	136	156	0.001	0.000	0.001	0.001	1

Cleomaceae	Brassicales	Rosids	300	23	51.5	31	33	0.108	0.050	0.080	0.075	1
Coriariaceae	Cucurbitales	Rosids	5	52	60.8	43	49	0.013	0.010	0.016	0.014	10
Cucurbitaceae	Cucurbitales	Rosids	845	66	48.1	56	62	0.044	0.060	0.052	0.047	17
Curtisiaceae	Cornales	Asterids	2	90	96.3			0.003	0.000			1
Cyrillaceae	Ericales	Asterids	2	54	76.8	44	47	0.006	0.000	0.007	0.006	1
Datiscaceae	Cucurbitales	Rosids	2	57	53.9	52	58	0.005	0.010	0.006	0.005	1
Diapensiaceae	Ericales	Asterids	18	55	60.8	51	54	0.023	0.020	0.025	0.023	1
Dilleniaceae	Dilleniales	Eudicots	300	104	114.5	111	121	0.024	0.020	0.022	0.020	3
Drosophyllaceae	Caryophyllales	Core eudicots	1	39	64.3			0.000	0.000			1
Ebenaceae	Ericales	Asterids	490	75	88.4	74	77	0.036	0.030	0.036	0.035	1
Emblingiaceae	Brassicales	Rosids	1	38	43.5			0.000	0.000			1
Eriocaulaceae	Poales	Commelinids	420	48	65.2			0.055	0.040			2
Gesneriaceae	Lamiales	Asterids	3200	52	57.1	56	55	0.067	0.060	0.063	0.064	16
Haloragaceae	Saxifragales	Rosids	145	47	64.7	48	51	0.046	0.030	0.045	0.042	3
Hydrocharitaceae	Alismatales	Monocots	116	65	70.2	68	80	0.032	0.030	0.030	0.026	4
Juglandaceae	Fagales	Rosids	50	38	51.0	29	32	0.045	0.030	0.059	0.053	5
Juncaceae	Poales	Commelinids	430	39	44.0			0.068	0.060			12
Lactoridaceae	Piperales	Magnoliids	1	97	120.2			0.000	0.000			1
Limnanthaceae	Brassicales	Rosids	8	52	65.4	71	73	0.017	0.010	0.013	0.012	8
Malesherbiaceae	Malpighiales	Rosids	24	33	75.4	39	43	0.042	0.020	0.035	0.032	1

Mayacaceae	Poales	Commelinids	7	69	74.4			0.012	0.010		1
Molluginaceae	Caryophyllales	Core eudicots	87	34	28.1	51	54	0.057	0.070	0.038	0.036	1
Moraceae	Rosales	Rosids	1100	46	25.2	50	51	0.066	0.120	0.061	0.060	2
Moringaceae	Brassicales	Rosids	12	58	66.9	64	67	0.019	0.020	0.017	0.016	1
Nartheciaceae	Dioscoreales	Monocots	31	108	114.2			0.014	0.010			2
Nelumbocacae	Proteales	Eudicots	1.5	125	126.1	110	116	0.001	0.000	0.002	0.002	3
Nymphaeaceae	Nymphaeles	ANITA	58	111	154.3	38	42	0.016	0.010	0.046	0.042	10
Pandanaceae	Pandanales	Monocots	805	67	67.2	47	52	0.043	0.040	0.062	0.056	1
Parnassiaceae	Celastrales	Rosids	51	58	42.0	71	76	0.029	0.040	0.024	0.022	1
Petrosaviaceae	Petrosaviales	Monocots	4	100	120.4	109	124	0.006	0.000	0.006	0.005	1
Phrymaceae	Lamiales	Asterids	234	42	53.2			0.056	0.040			6
Phytolaccaceae	Caryophyllales	Core eudicots	65	20	30.6	25	26	0.091	0.060	0.073	0.070	2
Podostemaceae	Malpighiales	Rosids	270	36	44.1	43	42	0.068	0.060	0.057	0.058	1
Potamogetonaceae	Alismatales	Monocots	102	65	49.7			0.031	0.040			9
Rhizophoraceae	Malpighiales	Rosids	149	54	76.4	60	63	0.040	0.030	0.036	0.034	4
Roridulaceae	Ericales	Asterids	2	92	64.7	46	50	0.003	0.000	0.007	0.006	2
Ruppiaceae	Alismatales	Monocots	5.5	65	49.7			0.011	0.010			1
Sarraceniaceae	Ericales	Asterids	15	61	72.9	50	54	0.019	0.020	0.024	0.022	3
Simaroubaceae	Sapindales	Rosids	95	43	49.4	50	50	0.046	0.040	0.040	0.040	1
Spargianaceae	Poales	Commelinids	14	63	66.2	85	93	0.018	0.020	0.013	0.012	1
Symplocaceae	Ericales	Asterids	320	63	82.2	74	77	0.040	0.030	0.034	0.033	3

Thymelaeaceae	Malvales	Rosids	755	29	72.4	66	67	0.099	0.040	0.044	0.043	6
Tofieldiaceae	Alismatales	Monocots	27	75	122.3	103	118	0.019	0.010	0.014	0.012	1
Tropaeolaceae	Brassicales	Rosids	95	54	55.9	34	35	0.037	0.040	0.058	0.057	2
Typhaceae	Poales	Commelinids	10.5	63	83.6			0.016	0.010			4
Ulmaceae	Rosales	Rosids	35	57	52.4	64	66	0.027	0.030	0.024	0.023	12
Urticaceae	Rosales	Rosids	2625	29	25.2	54	56	0.118	0.140	0.063	0.061	2
Violaceae	Malpighiales	Rosids	800	56	58.7	68	71	0.052	0.050	0.043	0.041	8
Zosteraceae	Alismatales	Monocots	14	66	50.7	68	80	0.017	0.020	0.017	0.014	2
Zygophyllaceae	Zygophyllales	Rosids	285	64	94.2	65	70	0.038	0.030	0.038	0.035	3

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APPENDIX S3

Sister groups used for the test of species richness in families bearing self-compatibility (SC) versus families bearing (a) heteromorphic, (b) homomorphic self-incompatibility, or (c) (homomorphic) self-sterility (SS) using the molecular phylogenies of the angiosperms from Soltis *et al.* (2011); monocots from Chase *et al*. (2006), Graham *et al*. (2006) and Givnish *et al*. (2006); Poales from Givnish *et al*. (2010); and Brassicales from Hall *et al.* (2004).

	Families bearing	
Order	SC	Heteromorphic
(a)		
Zingiberales	Cannaceae + Costaceae	Zingiberaceae
Ericales	Cyrillaceae	Ericaceae
Malpighiales	Malesherbiaceae	Turneraceae
Malpighiales	Rhizophoraceae	Erythroxylaceae
Malpighiales	Podostemaceae	Hypericaceae
(b)		
Proteales	Nelumbonaceae	Proteaceae
Caryophyllales	Drosophyllaceae	Droseraceae
Caryophyllales	Phytolaccaceae	Nyctaginaceae
Lamiales	Phrymaceae	Lamiaceae
Malvales	Thymelaeaceae	Malvaceae + Dipterocarpaceae
Fagales	Casuarinaceae	Betulaceae
Rosales	Ulmaceae + Moraceae +Urticaceae	Rhamnaceae
Malpighiales	Malesherbiaceae	Passifloraceae
(c)		
Nymphaeles	Cabombaceae + Nymphaeaceae	Austrobaileyaceae + Schisandraceae
Piperales	Lactoridaceae	Aristolochiaceae
Laurales	Calycanthaceae	Monimiaceae + Lauraceae
Alismatales	Zosteraceae + Potamogetonaceae	Araceae + Juncaginaceae
Petrosaviales	Petrosaviaceae	Araceae
Pandanales	Pandanaceae	Cyclanthaceae
Asparagales	Asparagaceae	Laxmanniaceae + Ruscaceae
Zingiberales	Cannaceae + Costaceae	Marantaceae
Poales	Juncaceae	Cyperaceae
Poales	Eriocaulaceae + Mayacaceae	Xyridaceae
Cornales	Curtisiaceae	Loasaceae
Ericales	Balsaminaceae	Marcgraviaceae
Lamiales	Phrymaceae	Paulowniaceae + Orobanchaceae

Apiales	Apiaceae	Araliaceae
Sapindales	Simaroubaceae	Meliaceae
Fagales	Juglandaceae	Myricaceae
Celastrales	Parnassiaceae	Celastraceae
Malpighiales	Caryocaraceae	Ochnaceae