

Figure S1. Percent survival by species within different competition treatments (with and without ivy) and across years ( $\pm$ SE). See Table S1 for species codes.

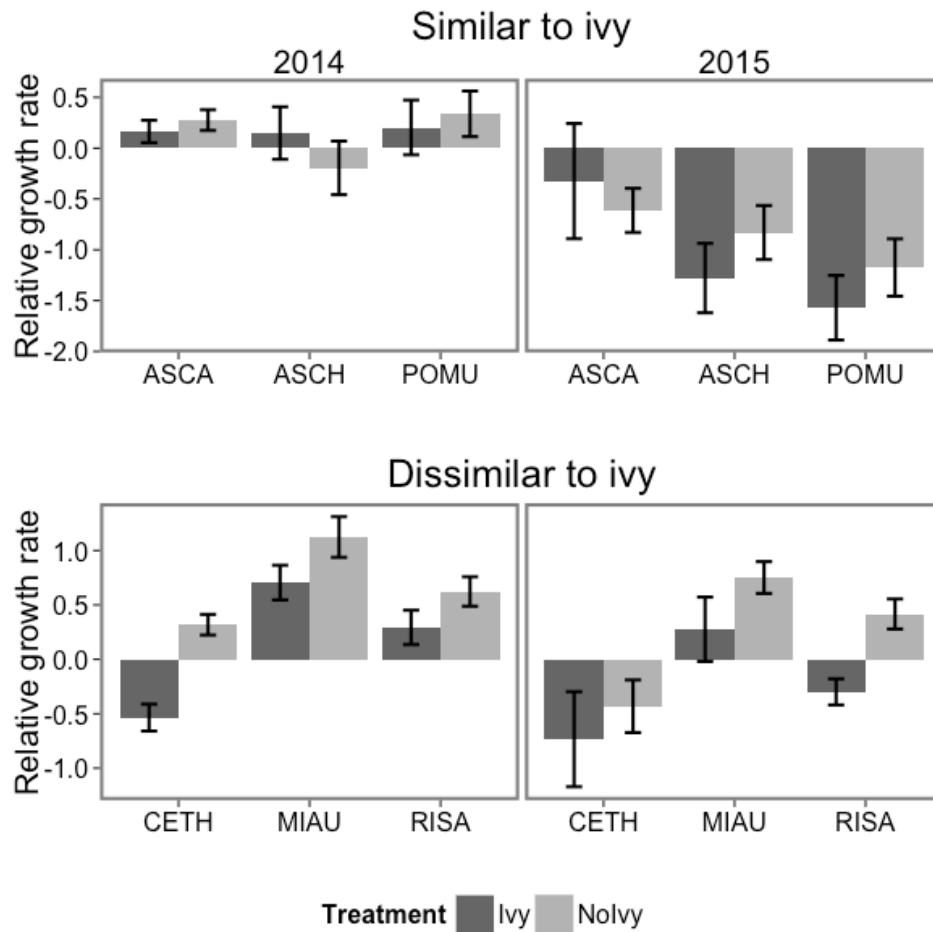


Figure S2. Relative growth rate for species with dissimilar and similar functional traits to those of ivy within different competition treatments (dark indicates with, and light indicates without ivy) and across years ( $\pm$  SE).

Table S1. Species code, Latin and common names, family, functional group, propagation method, approximate age at time of trait-measurement, local provenance and method of acquisition for the 37 native species and two exotic (bolded) species in the trait-screening. Data codes and acronyms are described below.

Code	Latin name	Common name	Family	Functional group	Propagation method	Age	Provenance	Source
aggr	<i>Agoseris grandiflora</i>	California dandelion	<i>Asteraceae</i>	forb	seed	6 months	RFS	Nursery
anma	<i>Anaphalis margaritacea</i>	Pearly everlasting	<i>Asteraceae</i>	forb	seed	1 year	Brisbane, CA	SBM
aqfo	<i>Aquilegia formosa</i>	Western columbine	<i>Ranunculaceae</i>	forb	seed	9 months	SC	OTN
arca	<i>Aristolochia californica</i>	California pipevine	<i>Aristolochiaceae</i>	vine	seed	1.5 years	Lafayette, CA	NHN
ardo	<i>Artemisia douglasiana</i>	Mugwort	<i>Asteraceae</i>	forb	seed	8 months	SC	Nursery
asca	<i>Asarum caudatum</i>	Wild ginger	<i>Aristolochiaceae</i>	forb	seed	1 year	Wildcat Canyon, Richmond, CA	NHN
asch	<i>Aster chilensis</i> ( <i>Symphotrichum chilense</i> )	Pacific aster	<i>Asteraceae</i>	forb	seed	Adult, 2 years	Brisbane, CA	SBM
asra	<i>Aster radulinus</i> ( <i>Eurybia radulina</i> )	Rough-leaved aster	<i>Asteraceae</i>	forb	field division	Adult	SC	Nursery
brca	<i>Bromus carinatus</i> var. <i>carinatus</i>	California brome	<i>Poaceae</i>	grass	seed	1 year	Brisbane, CA	SBM
canu	<i>Calamagrostis nutkaensis</i>	Pacific reedgrass	<i>Poaceae</i>	grass	seed	Adult, 2-3 years	Brisbane, CA	SBM

cade	<i>Carex densa</i>	Dense sedge	<i>Cyperaceae</i>	grass	seed	Adult, 1.5 years	Brisbane, CA	SBM
ceth	<i>Ceanothus thyrsiflorus</i>	Bluebossom	<i>Rhamnaceae</i>	shrub	seed	2 years	Brisbane, CA	SBM
cldo	<i>Clinopodium douglasii</i> ( <i>Satureja douglasii</i> )	Yerba buena	<i>Lamiaceae</i>	groundcover	field divisions	6 months	SC	Nursery
cose	<i>Cornus sericea</i>	Creek dogwood	<i>Cornaceae</i>	shrub	cutting	5 months	Oakland Hills, CA	OTN
daca	<i>Danthonia californica</i>	California oatgrass	<i>Poaceae</i>	grass	seed	1 year	RFS	Nursery
erst	<i>Eriophyllum staechadifolium</i>	Lizard tail	<i>Asteraceae</i>	shrub	seed	2 years	Brisbane, CA	SBM
esca	<i>Eschscholzia californica</i>	California poppy	<i>Papaveraceae</i>	forb	seed	6 months	RFS	Nursery
feca	<i>Festuca californica</i>	California fescue	<i>Poaceae</i>	grass	seed	1.5 year	Brisbane, CA	SBM
frve	<i>Fragaria vesca</i>	Woodland strawberry	<i>Rosaceae</i>	groundcover	field division	1.5 years	Brisbane, CA	SBM
heca	<b><i>Hedera canariensis</i></b>	Algerian/Canary ivy	<i>Araliaceae</i>	vine	field division	6 months	SC	Nursery
hehe	<b><i>Hedera helix</i></b>	English ivy	<i>Araliaceae</i>	vine	field division	6 months	SC	Nursery
hepu	<i>Helenium puberulum</i>	Sneezeweed	<i>Asteraceae</i>	forb	seed	1 year	Brisbane, CA	SBM
hema	<i>Heracleum maximum</i>	Cow parsnip	<i>Apiaceae</i>	forb	seed	1 year	SC	Nursery
hodi	<i>Holodiscus discolor</i>	Oceanspray	<i>Rosaceae</i>	shrub	seed	2 years	Claremont Canyon, CA	NHN
jupa	<i>Juncus patens</i>	Common rush	<i>Juncaceae</i>	forb	seed	8 months	SC	OTN

juph	<i>Juncus phaeocephalus</i>	Brown-headed rush	<i>Juncaceae</i>	forb	divisions	5 months	Brisbane, CA	OTN
loin	<i>Lonicera involucrata</i>	Twinberry	<i>Caprifoliaceae</i>	shrub	cuttings	1 year	Brisbane, CA	SBM
miau	<i>Mimulus aurantiacus</i>	Sticky monkeyflower	<i>Phrymaceae</i>	shrub	seed	1 year	Brisbane, CA	SBM
mica	<i>Mimulus cardinalis</i>	Cardinal monkeyflower	<i>Phrymaceae</i>	forb	seed	6 months	Huckleberry Regional Park, Oakland, CA	Nursery
oxor	<i>Oxalis oregana</i>	Redwood sorrel	<i>Oxalidaceae</i>	groundcover	seed	Adult, unknown age	SC	Nursery
phyca	<i>Physocarpus capitatus</i>	Ninebark	<i>Rosaceae</i>	shrub	cutting	6 months	SC	Nursery
pomu	<i>Polystichum munitum</i>	Sword fern	<i>Dryopteridaceae</i>	fern	field division	8 months	SC	Nursery
risa	<i>Ribes sanguineum var. glutinosum</i>	Blood currant	<i>Grossulariaceae</i>	shrub	cutting	6 months	SC	Nursery
roca	<i>Rosa californica</i>	California wild rose	<i>Rosaceae</i>	shrub	seed	6 months	Brisbane, CA	SBM
scca	<i>Scrophularia californica</i>	California bee plant	<i>Scrophulariaceae</i>	forb	seed	5 months	SC	Nursery
staj	<i>Stachys ajugoides</i>	Hedge nettle	<i>Lamiaceae</i>	forb	seed; field divisions from SBM	4 months	Oakland Hills, CA	OTN
napu	<i>Stipa pulchra (Nassella pulchra)</i>	Purple needle grass	<i>Poaceae</i>	grass	seed	10 months	RFS	Nursery
syal	<i>Symphoricarpos albus</i>	Common snowberry	<i>Caprifoliaceae</i>	shrub	seed	1 year	SC	NHN

tegr	<i>Tellima grandiflora</i>	Fringe cups	<i>Saxifragaceae</i>	forb	seed	10 months	Brisbane, CA	SBM
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*Notes:*

Provenance codes give the location from which the genetic stock of the plant was collected originally:

RFS: Richmond Field Station, a UC Berkeley property, or surrounding areas within the same watershed.

SC: Strawberry Creek Watershed.

Source indicates whether the plant was propagated in the Strawberry Creek Native Plant Nursery (Nursery), or originally purchased from another nursery before being housed at the Strawberry Creek Nursery. Nursery codes:

SBM: San Bruno Mountain's Mission Blue Butterfly Native Plant Nursery in Brisbane, CA. OTN: Oaktown Native Plant Nursery, Berkeley, CA. NHN: California Native Plant Society's Native Here Nursery, East Bay, Berkeley, CA.

The "field division" propagation method indicates that both aboveground and belowground plant parts were taken from a field site and then relocated to a container within the nursery. "Cutting" implies that only aboveground shoot material was removed from an individual in the field. Cuttings were grown in a 3:1 perlite/vermiculite growing medium in the nursery, then transplanted to individual containers once new root growth emerged.

Table S2. Mean trait values for the 39 species in our dataset. Species codes defined in Table S1.

Species code	Specific leaf area (SLA) (cm <sup>2</sup> /g)	Specific root length (SRL) (m/g)	Proportion fine roots	Root to shoot ratio	Height (cm)	Maximum root diameter (mm)	Chlorophyll (μmol/m <sup>2</sup> )	Conductance (mmol/m <sup>2</sup> /sec)
aggr	371.89	78.55	0.71	0.42	12.55	4.88	352.77	356.80
anma	320.22	26.37	0.61	1.29	20.58	3.50	362.17	328.33
aqfo	420.49	52.92	0.81	2.32	10.93	4.63	161.59	263.75
arca	221.06	40.02	0.38	1.49	13.88	7.80	258.10	188.98
ardo	288.97	25.28	0.76	1.28	15.48	2.30	335.93	214.90
asca	195.69	13.92	0.73	0.95	16.38	3.25	344.77	94.95
asch	262.12	28.92	0.38	3.49	28.08	5.30	279.64	253.60
asra	322.30	52.21	0.69	2.03	10.78	3.20	196.22	148.86
brca	287.39	37.78	0.99	1.88	22.22	1.50	159.62	210.12
cade	162.06	21.56	1.00	1.64	31.18	1.50	237.17	152.40
canu	153.24	29.84	1.00	1.22	26.43	1.50	149.74	125.16
ceth	152.22	13.03	0.69	0.44	27.10	6.90	312.83	343.50
cldo	541.97	99.40	0.85	0.39	5.58	2.0	235.33	209.2
cose	170.02	8.97	1.00	2.13	16.74	1.50	158.97	141.82
daca	183.02	41.03	1.00	0.91	18.06	1.50	178.17	227.50
erst	221.08	19.24	0.74	0.50	32.88	12.0	339.39	380.00
esca	532.78	68.54	0.62	0.87	12.64	6.0	154.65	284.75
feca	48.78	12.27	1.00	1.18	33.48	1.50	352.12	166.10
frve	328.68	32.38	0.60	2.25	7.50	4.20	251.03	278.20
heca	153.98	26.59	0.09	0.95	13.25	5.00	480.02	90.72
hehe	137.36	41.71	0.27	2.95	9.40	3.20	748.16	74.30
hema	499.36	117.98	0.39	1.57	17.86	6.0	139.94	270.80
hepu	320.72	35.83	0.91	2.64	61.50	7.70	277.65	112.81
hodi	232.27	18.39	0.69	0.53	33.50	3.40	311.02	217.83
jupa	82.82	35.04	0.99	1.55	31.25	1.50	218.87	300.00

juph	183.72	15.31	0.43	0.92	28.33	3.13	673.27	312.00
loin	145.50	24.19	0.76	1.64	26.66	4.10	297.62	199.83
miau	210.64	24.30	0.57	0.42	28.14	9.50	443.21	337.80
mica	728.70	58.77	0.15	1.12	23.92	6.00	177.03	254.50
oxor	288.99	69.34	0.27	2.79	5.90	3.00	206.66	115.90
phyca	518.73	26.85	0.29	2.44	12.26	3.20	181.86	171.98
pomu	147.43	20.74	0.42	1.62	21.86	1.50	742.80	164.20
risa	281.85	39.13	0.50	0.43	34.20	2.25	192.64	243.00
roca	252.93	5.32	0.55	1.57	31.64	7.20	335.30	274.50
scca	398.50	37.04	0.53	1.04	23.30	6.0	242.19	178.40
staj	468.28	49.88	0.52	0.29	17.73	2.88	299.09	314.20
stpu	243.23	43.29	1.00	0.80	17.56	1.50	250.49	288.75
syal	228.90	12.56	0.63	0.67	26.04	2.70	248.06	210.80
tegr	185.02	26.37	1.00	0.26	14.68	1.60	307.72	177.80

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