Article title: **Invasive alien plants benefit more from clonal integration in heterogeneous environments than natives**

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Fig. S1 Leaf mass (**a, d** and **g**), clonal organ mass (**b, e** and **h**), and root mass (**c, f** and **i**) of the recipient ramets (**a-c**), the donor ramets (**d-f**) and the whole clone (**g-i**) of the invasive alien and native clonal species when the clone was grown in heterogeneous light, nutrient and water conditions

Fig. S2 Differences in the relative benefit of clonal integration, measured as the log-response ratio of biomass of intact clones to biomass of severed clones per species, between alien invasive and native species in the experimental heterogeneous light **(a)**, nutrient **(b)** and water **(c)** conditions

Table S1 Clonal plant species used in the experiment

Table S2 Results of generalized linear mixed models testing effects of origin and integration on leaf mass, clonal organ mass and root mass of the recipient ramets (A), the donor ramets (B) and the whole clone (C) when the clone was grown in heterogeneous light, nutrient and water conditions

Fig. S1 Leaf mass (**a, d** and **g**), clonal organ mass (**b, e** and **h**), and root mass (**c, f** and **i**) of the recipient ramets (**a-c**), the donor ramets (**d-f**) and the whole clone (**g-i**) of the invasive alien and native clonal species when the clone was grown in heterogeneous light, nutrient and water conditions. Means ± SEs are given.
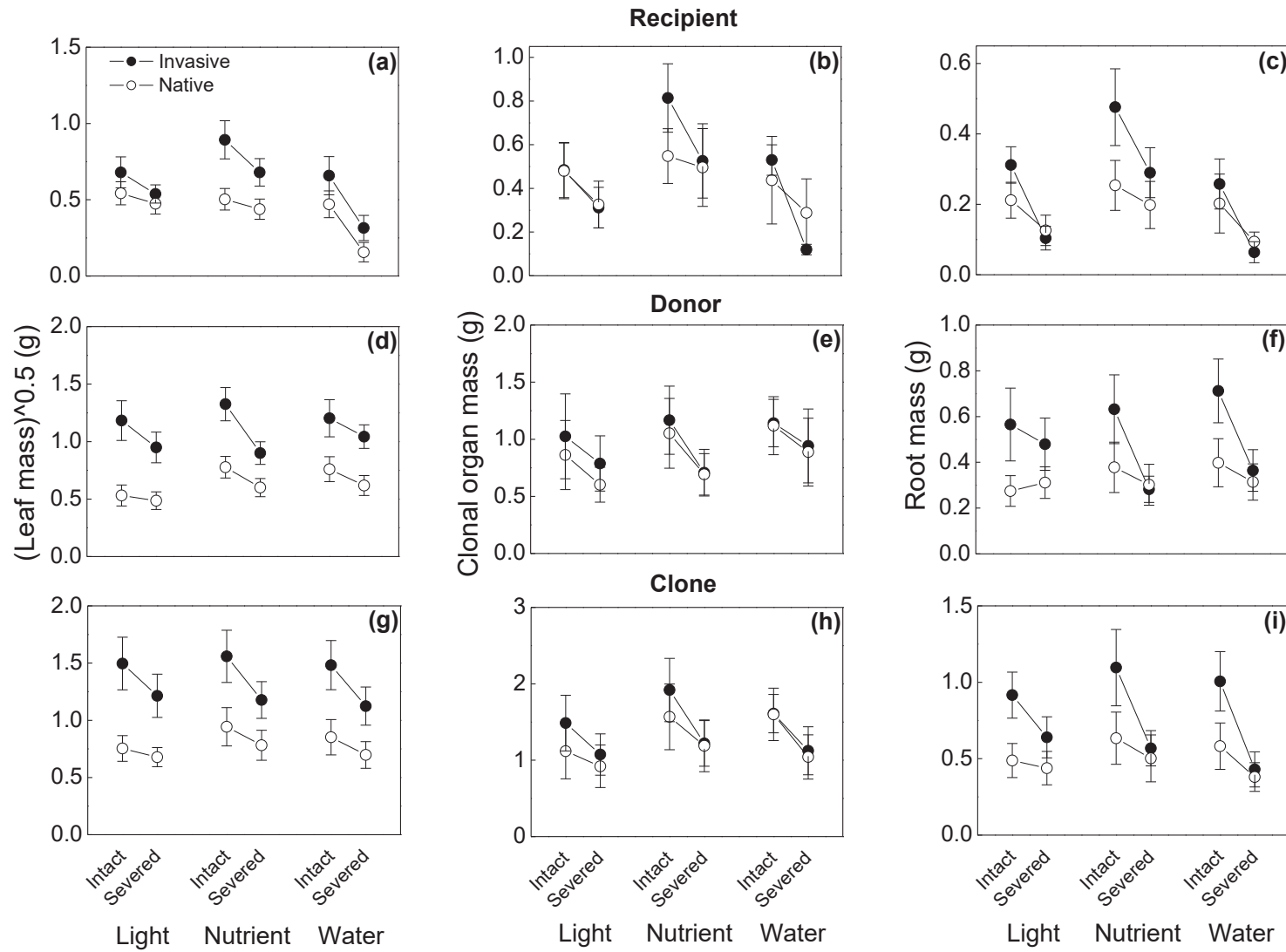
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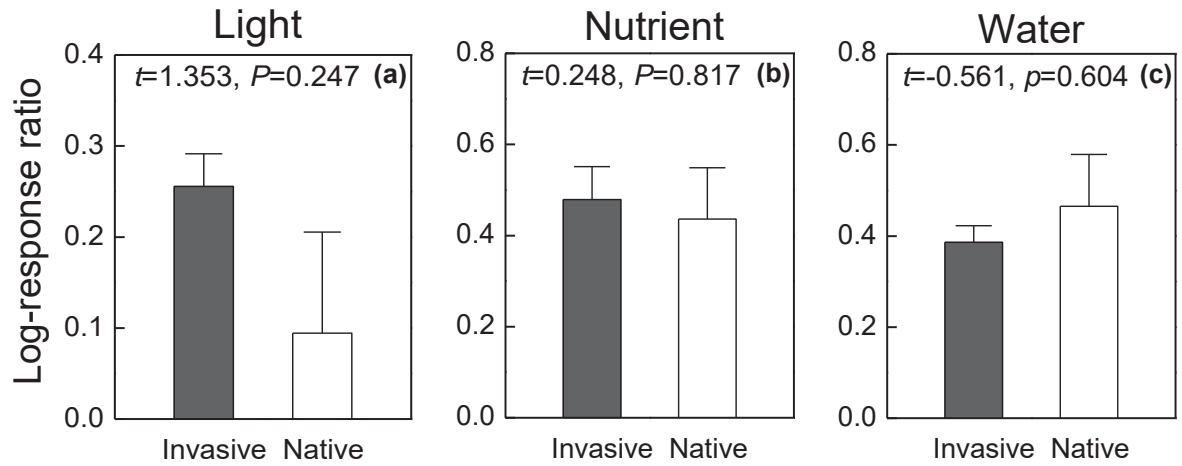
Table S1 Clonal plant species used in the experiment.

Species	Family	Origin	Native range	Clonal organ	Typical habitat
Wedelia trilobata (L.) Hitchc	Asteraceae	Invasive alien	North and South America	Stolon	Moist grasslands, edges of canals, roadsides
Wedelia chinensis (Osbeck.) Merrill	Asteraceae	Native	Asia	Stolon	Moist grasslands, edges of canals, crop fields, roadsides
Alternanthera philoxeroides (Mart.) Griseb	Amaranthaceae	Invasive alien	South America	Stolon	Wetlands, canals, nearby fields
Alternanthera sessilis (Linn.) DC	Amaranthaceae	Native	Asia, Africa	Stolon	Wetlands, other moist habitats
Hydrocotyle vulgaris L.	Araliaceae	Invasive alien	North America, Europe	Stolon	Wetlands, other moist habitats
Hydrocotyle sibthorpioides	Araliaceae	Native	Asia	Stolon	Wetlands, other moist habitats
Paspalum notatum Flugge	Poaceae	Invasive alien	North and South America	Rhizome	Roadsides and grasslands
Paspalum orbiculare Forst.	Poaceae	Native	Asia, Oceania	Rhizome	Roadsides, other moist habitats
Paspalum virgatum L.	Poaceae	Invasive alien	South America	Rhizome	Moist grasslands
Paspalum distichum L.	Poaceae	Native[1]	Tropics and subtropics of Asia, America	Rhizome	Roadsides, nearby fields, grasslands

Origin and habitat information are based on the Flora of China (www.efloras.org), Scientific Database of China Plant Species (DCP) (http://www.plants.csdb.cn/eflora) and other references He (2012) and Wan *et al*. (2012). [1] The native status of this species in China is not fully resolved, with some references to support this, and exclusion of the species and the species pair which it is part of does not change the results qualitatively (results not shown).

References

He JQ. 2012. *Exotic plants in China*. Shanghai, China: Shanghai Scientific & Technical Publishes.

Wan FH, Liu QR, Xie M. 2012. *Biological invasions: color illustrations of invasive alien plants in China.* Beijing, China: Science Press.

Table S2 Results of generalized linear mixed models for effects of origin and integration on leaf mass, clonal organ mass and root mass of the recipient ramets (A), the donor ramets (B) and the whole clone (C) when the clone was grown in heterogeneous light, nutrient and water conditions

Variable	Effect	DF	Light experiment χ^2	P	Nutrient experiment χ^2	P	Water experiment χ^2	P
Leaf mass[1]	(A) Recipient							
	Fixed factor							
	Origin (O)	1	2.253	0.141	**4.628**	**0.031**	*3.388*	*0.066*
	Integration (I)	1	**4.189**	**0.045**	**7.536**	**0.003**	**36.543**	**<0.001**
	O × I	1	1.287	0.276	**4.036**	**0.046**	0.978	0.345
	Random factor	N	SD		SD		SD	
	Taxonomic pair	5	0.155		<0.001		0.169	
	Species identity	10	0.176		0.212		0.120	
	(B) Donor							
	Fixed factor							
	Origin (O)	1	**8.240**	**0.004**	**5.330**	**0.021**	**6.117**	**0.013**
	Integration (I)	1	**4.583**	**0.032**	**20.515**	**<0.001**	**3.891**	**0.049**
	O × I	1	*3.492*	*0.057*	**3.788**	**0.049**	0.285	0.594
	Random factor	N	SD		SD		SD	
	Taxonomic pair	5	0.024		<0.001		0.048	
	Species identity	10	0.200		0.179		0.219	
	(C) Clone							
	Fixed factor							
	Origin (O)	1	**6.120**	**0.013**	**5.735**	**0.017**	**4.917**	**0.027**
	Integration (I)	1	**7.585**	**0.005**	**32.351**	**<0.001**	**34.964**	**<0.001**
	O × I	1	**5.191**	**0.022**	*3.129*	*0.075*	*3.012*	*0.089*
	Random factor	N	SD		SD		SD	
	Taxonomic pair	5	0.173		<0.001		0.125	
	Species identity	10	0.262		0.263		0.245	
Clonal organ mass	(A) Recipient							
	Fixed factor							
	Origin (O)	1	0.409	0.522	0.284	0.594	0.200	0.655
	Integration (I)	1	**4.243**	**0.039**	**5.602**	**0.018**	**17.059**	**<0.001**
	O × I	1	1.963	0.161	**6.073**	**0.014**	**3.996**	**0.046**
	Random factor	N	SD		SD		SD	
	Taxonomic pair	5	0.094		<0.001		0.121	
	Species identity	10	0.139		0.278		0.104	
	(B) Donor							
	Fixed factor							

	Origin (O)	1	1.886	0.176	0.031	0.861	0.034	0.853
	Integration (I)	1	**9.930**	**0.002**	**11.991**	**<0.001**	**10.301**	**0.001**
	O × I	1	1.085	0.298	0.435	0.510	0.203	0.652
	Random factor	N	SD		SD		SD	
	Taxonomic pair	5	0.328		0.218		0.387	
	Species identity	10	0.389		0.360		0.386	
	(C) Clone							
	Fixed factor							
	Origin (O)	1	0.402	0.526	0.184	0.668	0.011	0.914
	Integration (I)	1	**4.569**	**0.033**	**26.593**	**<0.001**	**37.194**	**<0.001**
	O × I	1	**10.719**	**0.001**	**7.158**	**0.008**	0.050	0.823
	Random factor	N	SD		SD		SD	
	Taxonomic pair	5	0.392		<0.001		0.330	
	Species identity	10	0.488		0.724		0.503	
Root mass	**(A) Recipient**							
	Fixed factor							
	Origin (O)	1	*3.421*	*0.066*	**4.172**	**0.041**	2.154	0.142
	Integration (I)	1	**18.939**	**<0.001**	0.202	0.653	**17.533**	**<0.001**
	O × I	1	**3.821**	**0.048**	**4.352**	**0.037**	*3.212*	*0.075*
	Random factor	N	SD		SD		SD	
	Taxonomic pair	5	0.082		0.125		0.081	
	Species identity	10	<0.001		0.057		<0.001	
	(B) Donor							
	Fixed factor							
	Origin (O)	1	**5.090**	**0.024**	2.202	0.138	*2.686*	*0.099*
	Integration (I)	1	**4.028**	**0.044**	**11.771**	**<0.001**	**5.533**	**0.019**
	O × I	1	**4.897**	**0.029**	**4.331**	**0.037**	**22.457**	**<0.001**
	Random factor	N	SD		SD		SD	
	Taxonomic pair	5	0.159		0.169		0.138	
	Species identity	10	0.097		0.085		0.136	
	(C) Clone							
	Fixed factor							
	Origin (O)	1	**5.246**	**0.022**	*3.005*	*0.083*	*3.630*	*0.057*
	Integration (I)	1	**5.576**	**0.019**	**7.111**	**0.008**	**24.387**	**<0.001**
	O × I	1	**3.968**	**0.044**	**5.817**	**0.016**	**13.697**	**<0.001**
	Random factor	N	SD		SD		SD	
	Taxonomic pair	5	0.248		0.282		0.219	
	Species identity	10	0.121		0.162		0.133	

[1] Data were square-root transformed. Values are in bold when $P<0.05$ and in italic when $0.05<P<0.1$.