

Appendix from R. D. Briscoe Runquist et al., “Context Dependence of Local Adaptation to Abiotic and Biotic Environments: A Quantitative and Qualitative Synthesis” (Am. Nat., vol. 195, no. 3, p. 000)

Table A1: Articles included in the meta-analysis and the metasynthesis

Citation	DOI	Focal species	Local-foreign contrast	Biotic influence contrast	Fitness contrasts in abiotic/biotic environments	Metasynthesis
Abdala-Roberts and Marquis 2007	https://doi.org/10.1007/s00442-007-0831-y	<i>Chamaecrista fasciculata</i>	Y	Y	Y	Y
Alexander et al. 2015	https://doi.org/10.1038/nature14952	<i>Anhyllis vulneria</i> ssp. <i>alpestris</i> <i>Plantago atrata</i> <i>Pulsatilla vernalis</i> <i>Scabiosa lucida</i>			Y	Y
Antunes et al. 2011	https://doi.org/10.1111/j.1469-8137.2010.03480.x	<i>Poa pratensis</i>	Y		Y	Y
Ariza and Tielbörger 2011	https://doi.org/10.1111/j.1365-2435.2011.01848.x	<i>Cynodon dactylon</i> <i>Biscutella didyma</i>		Y	Y	Y
Ayres et al. 2009	https://doi.org/10.1111/j.1365-2745.2009.01539.x	<i>Hymenocarpus circinnatus</i> <i>Populus tremuloides</i> <i>Pinus contorta</i>				Y
Bankier 2016	https://spiral.imperial.ac.uk/handle/10044/1/44556	<i>Picea engelmannii</i>				Y
Barton 1993	https://doi.org/10.2307/2937151	<i>Pseudomonas fluorescens</i> <i>Pinus leiophylla</i> <i>Pinus discolor</i>				Y
Bischoff et al. 2006	https://doi.org/10.1111/j.1365-2745.2006.01174.x	<i>Pinus engelmannii</i> <i>Holcus lanatus</i> <i>Lotus corniculatus</i>	Y	Y	Y	Y
Bohrer et al. 2003	https://doi.org/10.1016/S0140-1963(03)00047-8	<i>Plantago lanceolata</i>				Y
Braco 2009	www.jstor.org/stable/41495824	<i>Vangueria infausta</i>	Y	Y	Y	Y
Bray et al. 2018	https://doi.org/10.1098/rstb.2018.0020	<i>Quercus ilex</i> ssp. <i>ballota</i> Salt-sensitive and salt-tolerant invertebrate communities from freshwater and brackish river systems				Y
Bryner and Rigling 2011	www.jstor.org/stable/10.1086/657620	<i>Cryphonectria parasitica</i>				Y
Buser et al. 2012	https://doi.org/10.1007/s10452-012-9397-9	<i>Daphnia magna</i>			Y	Y
Castro et al. 2013	https://doi.org/10.1111/1365-2745.12125	<i>Medicago truncatula</i>				Y
Colautti and Barrett 2013	https://doi.org/10.1126/science.1242121	<i>Lythrum salicaria</i>				Y
Compagnoni and Adler 2014	https://doi.org/10.1890/ES14-00047.1	<i>Bromus tectorum</i>	Y*	Y	Y	Y
Crémieux et al. 2008	https://doi.org/10.1111/j.1469-8137.2008.02545.x	<i>Holcus lanatus</i>				Y
Cunningham et al. 2009	https://doi.org/10.1111/j.1365-2656.2008.01468.x	<i>Plantago lanceolata</i> <i>Plethodon glutinosus</i>	Y		Y	Y

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De Block et al. 2013	https://doi.org/10.1111/gcb.12089	<i>Daphnia magna</i>	Y		Y
Donohue et al. 2001	https://doi.org/10.1111/j.0014-3820.2001.tb00805.x	<i>Impatiens capensis</i>	Y	Y	Y
Donohue et al. 2000	https://doi.org/10.1111/j.0014-3820.2000.tb01240.x	<i>Impatiens capensis</i>	Y		Y
Doubková et al. 2012	https://doi.org/10.1016/j.soilbio.2011.09.011	<i>Knautia arvensis</i>	Y	Y	Y
Echaubard et al. 2014	https://doi.org/10.1111/eva.12169	<i>Lithobates pipiens</i>			Y
		<i>Lithobates sylvaticus</i>			
Egea-Serrano et al. 2014	https://doi.org/10.1098/rspb.2013.3266	<i>Rana arvalis</i>	Y	Y	Y
Ehlers et al. 2012	https://doi.org/10.1002/ece3.270	<i>Medicago truncatula</i>			Y
Ehlers and Thompson 2004	https://doi.org/10.1007/s00442-004-1663-7	<i>Bromus erectus</i>			Y
Eränen and Kozlov 2009	https://doi.org/10.1007/s11258-008-9441-y	<i>Betula pubescens</i> ssp. <i>czerepanovii</i>			Y
Espeland and Rice 2007	https://doi.org/10.1890/06-1217.1	<i>Plantago erecta</i>			Y
Fey and Cottingham 2011	https://doi.org/10.1111/j.1365-2427.2011.02646.x	<i>Daphnia lumholzi</i>		Y	Y
Fine et al. 2004	https://doi.org/10.1126/science.1098982	<i>Oxandra xytopoides</i>			Y
		<i>Oxandra euneura</i>			
		<i>Tetragastris panamensis</i>			
		<i>Protium subserratum</i>			
		<i>Protium nodulosum</i>			
		<i>Protium paniculatum</i>			
		<i>Protium opacum</i>			
		<i>Protium calanense</i>			
		<i>Protium trifoliolaum</i>			
		<i>Protium krukoffii</i>			
		<i>Protium heptaphyllum</i> ssp. <i>ulei</i>			
		<i>Protium hebetatum</i>			
		<i>Pachira insignis</i>			
		<i>Pachira brevipes</i>			
		<i>Mabea pulcherrima</i>		Y	
		<i>Mabea subsessilis</i>			
		<i>Swartzia arborescens</i>			
		<i>Swartzia cardiosperma</i>			
		<i>Parkia multijuga</i>			
		<i>Parkia igneiflora</i>			
Germain et al. 2016	https://doi.org/10.1098/rspb.2016.0047	<i>Bromus carinatus</i>		Y	Y
		<i>Chenopodium berlandieri</i>			
		<i>Eschscholzia caespitosa</i>			
		<i>Lasthenia glabrata</i>			
		<i>Lupinus bicolor</i>			
		<i>Monolepis nuttalliana</i>			

Table A1 (Continued)

Citation	DOI	Focal species	Local-foreign contrast	Biotic influence contrast	Fitness contrasts in abiotic/biotic environments	Metasynthesis
Germain et al. 2018	https://doi.org/10.1098/rsbl.2018.0460	<i>Phacelia campanularia</i> <i>Salvia columbariae</i> <i>Uropappus lindleyi</i> <i>Vulpia microstachys</i> <i>Bromus carinatus</i> <i>Chenopodium berlandieri</i> <i>Eschscholzia caespitosa</i> <i>Lasthenia glabrata</i> <i>Lupinus bicolor</i> <i>Monolepis nuttalliana</i> <i>Phacelia campanularia</i> <i>Salvia columbariae</i> <i>Uropappus lindleyi</i> <i>Vulpia microstachys</i> <i>Bufo bufo</i>				Y
Gómez-Mestre and Tejedo 2002	https://doi.org/10.1890/0012-9658(2002)083[2102:GVIACA]2.CO;2					Y
Gorter et al. 2016	https://doi.org/10.1098/rsbl.2015.0879	<i>Pseudomonas fluorescens</i>				Y
Grassein et al. 2014	https://doi.org/10.1111/gcb.12445	<i>Bromus erectus</i> <i>Dactylis glomerata</i> <i>Sesleria caerulea</i> <i>Carex sempevirens</i> <i>Festuca paniculata</i>				Y
Heath et al. 2010	https://doi.org/10.1111/j.1420-9101.2010.02092.x	<i>Medicago truncatula</i>			Y	Y
Hufford and Mazer 2012	https://doi.org/10.1111/j.1526-100X.2011.00843.x	<i>Nassella pulchra</i>	Y		Y	Y
Hufford et al. 2008	https://doi.org/10.1111/j.1526-100X.2007.00262.x	<i>Elymus glaucus</i> <i>Bromus carinatus</i>	Y		Y	Y
Hughes et al. 2017	https://doi.org/10.1002/ece3.2614	<i>Crassostrea virginica</i>	Y	Y	Y	Y
Johnson et al. 2010	https://doi.org/10.1073/pnas.0906710107	<i>Andropogon gerardii</i>				Y
Jurjavec et al. 2002	https://doi.org/10.1007/s00442-001-0845-9	<i>Vulpia microstachys</i>				Y
Kardol et al. 2014	https://doi.org/10.1098/rsos.140141	<i>Bistorta vivipara</i>	Y		Y	Y
Kindell et al. 1996	http://www.jstor.org/stable/2261336	<i>Aristida stricta</i>				Y
King et al. 2011	https://doi.org/10.1111/j.1600-0706.2011.19241.x	<i>Potamopyrgus antipodarum</i>				Y
Knight and Miller 2004	http://www.evolutionary-ecology.com/abstracts/v06/1613.html	<i>Hydrocotyle bonariensis</i>				Y

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Koutecká and Lepš 2013	https://doi.org/10.1139/cjb-2012-0214	<i>Myosotis caespitosa</i>	Y
Laine 2008	https://doi.org/10.1111/j.1461-0248.2007.01146.x	<i>Myosotis palustris</i>	Y
Landis et al. 2012	https://doi.org/10.1371/journal.pone.0030658	<i>Plantago lanceolata</i>	Y
Lankau 2013	https://doi.org/10.1890/12-0675.1	<i>Syngnathus typhle</i>	Y
Lehndal and Ågren 2015	https://doi.org/10.1371/journal.pone.0135939	<i>Pilea pumila</i>	Y
Liancourt et al. 2013	https://doi.org/10.1890/12-0780.1	<i>Lythrum salicaria</i>	Y
Liancourt and Tielbörger 2009	https://doi.org/10.1111/j.1365-2435.2008.01497.x	<i>Festuca lenensis</i>	Y
Lopez Pascua et al. 2012	https://doi.org/10.1111/j.1420-9101.2011.02416.x	<i>Bromus fasciculatus</i>	Y
McCoy et al. 2002	https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.417.9289&rep=rep1&type=pdf	<i>Brachypodium distachyon</i>	Y
Menke et al. 2007	https://doi.org/10.1890/07-0122.1	<i>Pseudomonas fluorescens</i>	Y
Mitchell et al. 2005	https://doi.org/10.1111/j.0014-3820.2005.tb00895.x	<i>Isodes uriae</i>	Y
Molina-Montenegro et al. 2013	https://doi.org/10.1111/j.1600-0587.2012.07758.x	<i>Linepithema humile</i>	Y
Muhammed et al. 2013	https://doi.org/10.1016/j.foreco.2013.02.023	<i>Daphnia magna</i>	Y
O'Brien et al. 2018	https://doi.org/10.1101/395624	<i>Taraxacum officinale</i>	Y
Ortegón-Campos et al. 2012	https://doi.org/10.1007/s10682-011-9507-5	<i>Quercus robur</i>	Y
Padfield et al. 2019	https://doi.org/10.1101/554717	<i>Quercus suber</i>	Y
Pahl et al. 2013	https://doi.org/10.1093/aob/mct246	<i>Quercus ilex</i>	Y
Pánková et al. 2014	https://doi.org/10.1007/s12224-013-9183-z	<i>Drosophila birchii</i>	Y
Parain et al. 2016	https://doi.org/10.1002/eccc.2236	<i>Drosophila burnanda</i>	Y
Pellissier et al. 2014	https://doi.org/10.1111/ecog.00833	<i>Ruellia nudiflora</i>	Y
Pickles et al. 2015	https://doi.org/10.1111/nph.13360	<i>Pseudomonas fluorescens</i>	Y
Poisot et al. 2011	https://doi.org/10.1098/rsbl.2010.0774	<i>Impatiens glandulifera</i>	Y
Rice and Knapp 2008	https://doi.org/10.1111/j.1526-100X.2007.00257.x	<i>Aster amellus</i>	Y
Rodl and Ward 2002	https://doi.org/10.1046/j.0269-8463.2001.00592.x	Inquiline bacteria community from pitcher plant, <i>Sarracenia purpurea</i>	Y*
Rolán-Alvarez et al. 1997	http://www.jstor.org/stable/2411006	<i>Plantago lanceolata</i>	Y
Sambatti and Rice 2006	https://doi.org/10.1111/j.0014-3820.2006.tb01149.x	<i>Pseudotsuga menziesii</i> var. <i>glauca</i>	Y
Scharf et al. 2011	https://doi.org/10.1111/j.1095-8312.2011.01638.x	<i>Pseudomonas fluorescens</i>	Y
		<i>Elymus glaucus</i>	Y
		<i>Nassella pulchra</i>	Y
		<i>Plicosepalus acaciae</i>	Y
		<i>Littorina saxatilis</i>	Y
		<i>Helianthus exilis</i>	Y
		<i>Leptothorax acervorum</i>	Y
		<i>Leptothorax muscorum</i>	Y

Table A1 (Continued)

Citation	DOI	Focal species	Local-foreign contrast	Biotic influence contrast	Fitness contrasts in abiotic/biotic environments	Metasynthesis
Schoebel et al. 2010	https://doi.org/10.1111/j.1420-9101.2010.02097.x	<i>Daphnia galeata</i>				Y
Schoen et al. 1986	http://www.jstor.org/stable/4218023	<i>Impatiens capensis</i> <i>Impatiens pallida</i>				Y
Schwarzer and Joshi 2017	https://doi.org/10.1016/j.ppees.2017.03.001	<i>Sphagnum magellanicum</i>				Y
Sherrard and Maherali 2012	https://doi.org/10.1007/s10682-011-9518-2	<i>Bromus inermis</i>	Y	Y	Y	Y
Sikes et al. 2014	https://doi.org/10.1007/s00572-013-0531-x	<i>Calamovilafa longifolia</i>				Y
Skelly 1995	http://www.jstor.org/stable/1940638	<i>Deschampsia flexuosa</i> <i>Pseudacris triseriata</i> <i>Pseudacris crucifer</i>			Y	Y
Smith and Ruiz 2004	http://www.eckerd.edu/academics/marinescience/files/smith/NSmith_Ruiz_MEPS_2004.pdf	<i>Cerithidea scalariformis</i>				Y
Stanton-Geddes et al. 2012	https://doi.org/10.1890/11-1701.1	<i>Chamaecrista fasciculata</i>	Y	Y	Y	Y
Sullivan and Faeth 2008	https://doi.org/10.1007/s00248-007-9312-4	<i>Festuca arizonica</i>				Y
Taheri and Bever 2010	https://doi.org/10.1016/j.apsoil.2010.03.004	<i>Andropogon virginicus</i> <i>Plantago lanceolata</i>				Y
Thompson et al. 1991	https://doi.org/10.1111/j.1469-8137.1991.tb00952.x	<i>Spartina anglica</i>	Y	Y	Y	Y
Thrall et al. 2008	https://doi.org/10.1111/j.1365-2745.2008.01381.x	<i>Acacia brachybotrya</i> <i>Acacia hakeoides</i> <i>Acacia ligulate</i> <i>Acacia mearnsii</i> <i>Acacia pendula</i> <i>Acacia pycnantha</i> <i>Acacia rigens</i> <i>Acacia salicina</i> <i>Acacia stenophylla</i>				Y
Tomuolo et al. 2015	https://doi.org/10.1890/14-1445.1	<i>Biscutella didyma</i> <i>Urospermum picrooides</i> <i>Brachypodium distachyon</i> <i>Stipa capensis</i>				Y
Traxler and Joern 1999	http://www.jstor.org/stable/3546739	<i>Hesperotettix viridis</i>				Y
Vinebrooke 1996	http://www.jstor.org/stable/1467280	Periphyton (27 most abundant spp.): <i>Aphanocapsa</i> spp.				Y

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<i>Calothrix</i> spp.							
<i>Homoeothrix Juliana</i>							
<i>Bulbochaete</i> spp.							
<i>Coleochaete scutata</i>							
<i>Oedogonium</i> spp.							
<i>Pediastrum</i> spp.							
<i>Mougeotia</i> spp.							
<i>Spirogyra</i> spp.							
<i>Zygogonium ericetorum</i>							
<i>Zygogonium tunetatum</i>							
<i>Actinotaenium curcubita</i>							
<i>Cosmarium</i> spp.							
<i>Cylindrocapsa brebissonii</i>							
<i>Euastrum</i> spp.							
<i>Spondylosium planum</i>							
<i>Achnanthyrium minutissimum</i>							
<i>Brachysira sericans</i>							
<i>Cymbella microcephala</i>							
<i>Eumotia</i> spp.							
<i>Fragilaria acidobiontica</i>							
<i>Frustulia rhomboids</i>							
<i>Gomphonema acuminatum</i>							
<i>Pinnularia</i> spp.							
<i>Surirella</i> spp.							
<i>Synedra</i> spp.							
<i>Tabellaria quadrisepta</i>							
<i>Hordeum spontaneum</i>							
<i>Carlina vulgaris</i>					Y		
<i>Calina bibersteinii</i>						Y	
<i>Centaurea scabiosa</i>							
<i>Centaurea stoebe</i>							
<i>Dianthus deltoides</i>							
<i>Dianthus carthuanorum</i>							
<i>Inula conyzae</i>							
<i>Inula hirta</i>							
<i>Koeleria pyramidata</i>							
<i>Koeleria macrantha</i>							
<i>Scabiosa columbaria</i>							
<i>Scabiosa ochroleuca</i>							
	https://doi.org/10.1007/s00442-002-0999-0					Y	Y
	https://doi.org/10.1371/journal.pone.0111023						
Volis et al. 2002							
Welk et al. 2014							

Table A1 (Continued)

Citation	DOI	Focal species	Local-foreign contrast	Biotic influence contrast	Fitness contrasts in abiotic/biotic environments	Metasynthesis
∞		<i>Silene nutans</i>				
Wendling and Wegner 2015	https://doi.org/10.1098/rspb.2014.2244	<i>Silene otites</i>			Y	Y
Yang et al. 2016	https://doi.org/10.1007/s00572-016-0701-8	<i>Crassostrea gigas</i>	Y*			
		<i>Fragaria nubicola</i>				Y
		<i>Trollius ranunculoides</i>				
		<i>Tibetia himalaica</i>				
		<i>Geranium sibiricum</i>				
		<i>Poa crymophila</i>				
		<i>Phlomis youngusbandii</i>				

Note: For the local-foreign contrasts, asterisks indicate that the study was conducted in the exotic range of the focal species.