**Supplementary Materials: Information on studies from which reproductive isolating barriers were estimated (references for table are listed below; see attached file for table)**

Angert, A. L., and D. W. Schemske. 2005. The evolution of species’ distributions: reciprocal transplants across the elevation ranges of *Mimulus cardinalis* and *M*. *lewisii*. Evolution 59:1671-1684.

Antonovics, J., and R. B. Primack. 1982. Experimental ecological genetics in *Plantago*: VI. The demography of seedling transplants of *P. lanceolata*. Journal of Ecology 70:55-75.

Apple, J. L., T. Grace, A. Joern, P. St. Amand, and S. M. Wisely. 2010. Comparative genome scan detects host-related divergent selection in the grasshopper *Hesperotettix viridis*. Molecular Ecology 19:4012-4028.

Baack, E. J., and M. L. Stanton. 2005. Ecological factors influencing tetraploid speciation in snow buttercups (*Ranunculus adoneus*): niche differentiation and tetraploid establishment. Evolution 59:1936-1944.

Barrera-Moreno, O. A., J. Ciros- Pérez, E. Ortega-Mayagoitia, J. A. Alcántara-Rodríguez, and E. Piedra-Ibarra. 2015. From local adaptation to ecological speciation in copepod populations from neighboring lakes. PLoS One 10: e0125524.

Bennington, C. C., and J. B. McGraw. 1995. Natural selection and ecotypic differentiation in *Impatiens pallida*. Ecological Monographs 65:303-324.

Bierbaum, T. J., and G. L. Bush. 1990. Genetic differentiation in the viability of sibling species of *Rhagoletis* fruit flies on host plants, and the influence of reduced hybrid viability on reproductive isolation. Entomologia Experimentalis et Applicata 55:105-118.

Blanchette, C. A., B. G. Miner, and S. D. Gaines. 2002. Geographic variability in form, size, and survival of *Egregia menziesii* around Point Conception, California. Marine Ecology Progress Series 239:69-82.

Bongaerts, P., C. Riginos, K. B. Hay, M. J. H. van Oppen, O. Hoegh-Guldberg, and S. Dove. Adaptive divergence in a scleractinian coral: physiological adaptation of *Seriatopora hystrix* to shallow and deep reef habitats**.** 2011. BMC Evolutionary Biology 11:303.

Bradshaw, W. E., P. A. Zani, and C. M. Holzapfel. 2004. Adaptation to temperate climates. Evolution 58:1748-1762.

Byars, S. G., W. Papst, and A. A. Hoffman. 2007. Local adaptation and cogradient selection in the alpine plant, *Poa hiemata*, along a narrow altitudinal gradient. Evolution 61:2925-2941.

Callahan, H. S., and M. Pigliucci. 2002. Shade-induced plasticity and its ecological significance in wild populations of *Arabidopsis thaliana*. Ecology 83:1965-1980.

Campbell, D. R., and N. M. Waser. 2001. Genotype-by-environment interaction and the fitness of plant hybrids in the wild. Evolution 55:669-676.

Carlsson-Granér, U., J. J. Burdon, and P. H. Thrall. 1999. Host resistance and pathogen virulence across a plant hybrid zone. Oecologia 121:339-347.

Chapin III, F. S., and M. C. Chapin. 1981. Differentiation of growth processes in *Carex aquatilis* along latitudinal and local gradients. Ecology 62:1000-1009.

Chen, G. F., and D. W. Schemske. 2015. Ecological differentiation and local adaptation in two sister species of Neotropical *Costus* (Costaceae). Ecology 96:440-449.

Cheplick, G. P. 1988. Influence of environment and population origin on survivorship and reproduction in reciprocal transplants of amphicarpic peanutgrass (*Amphicarpum purshii*). American Journal of Botany 75:1048-1056.

Clancy, N. 1997. Environmental and population-specific contributions to growth rate variation in the marine amphipod *Jassa marmorata* Holmes. Journal of Experimental Marine Biology and Ecology 209:185-200.

Clay, K., D. Dement, and M. Rejmanek. 1985. Experimental evidence for host races in mistletoe (*Phoradendron tomentosum*). American Journal of Botany 72:1225-1231.

Colin, S. P. 2002. Determination and characterization of resistance by populations of the copepod *Acartia hudsonica* to the toxic dinoflagellate *Alexandrium* sp. University of Connecticut, PhD Dissertation.

Craig, T. P., and J. K. Itami. 2010. Divergence of *Eurosta solidaginis* in response to host plant variation and natural enemies. Evolution 65:802-817.

Craig, T. P., J. D. Horner, and J. K. Itami. 1997. Hybridization studies on the host races of *Eurosta solidaginis*: implications for sympatric speciation. Evolution 51:1552-1560.

Dickey, A. M., and R. F. Medina. 2011. Immigrant inviability in yellow pecan aphid. Ecological Entomology 36:526-531.

Donohue, K., D. Messiqua, E. H. Pyle, M. S. Heschel, and J. Schmitt. 2000. Evidence of adaptive divergence in plasticity: density- and site-dependent selection on shade avoidance responses in *Impatiens capensis*. Evolution 55:1956-1968.

Donohue, K., E. H. Pyle, D. Messiqua, M. S. Heschel, and J. Schmitt. 2001. Adaptive divergence in plasticity in natural populations of *Impatiens capensis* and its consequences for performance in novel habitats. Evolution 55:692-702.

Downey, M. H., and C. C. Nice. 2011. Experimental evidence of host race formation in *Mitoura* butterflies (Lepidoptera: Lycaenidae). Oikos 120:1165-1174.

Emms, S. K., and M. L. Arnold. 1997. The effect of habitat on parental and hybrid fitness: transplant experiments with Louisiana irises. Evolution 51:1112-1119.

Etterson, J. R. 2004. Evolutionary potential of *Chamaecrista fasciculata* in relation to climate change. I. Clinal patterns of selection along an environmental gradient in the Great Plains. Evolution 58:1446-1458.

Fawcett, M. H. 1984. Local and latitudinal variation in predation on an herbivorous marine snail. Ecology 65:1214-1230.

Forister, M. L. 2004. Oviposition preference and larval performance within a diverging lineage of lycaenid butterflies. Ecological Entomology 29:264-272.

Fritsche, F., and O. Kaltz. 2000. Is the *Prunella* (Lamiaceae) hybrid zone structured by an environmental gradient? Evidence from a reciprocal transplant experiment. American Journal of Botany 87:995-1003.

Fujiyama, N., H. Ueno, S. Kahono, S. Hartini, K. W. Matsubayashi, N. Kobayashi, and H. Katakura. 2013. Distribution and differentiation of *Henosepilachna diekei* (Coleoptera: Coccinellidae) on two host-plant species across Java Indonesia. Annals of the Entomological Society of America 106:741-752.

Funk, D. J. 1998. Isolating a role for natural selection in speciation: host adaptation and sexual isolation in *Neochlamisus bebbianae* leaf beetles. Evolution 52:1744-1759.

Galloway, L. F., and C. B. Fenster. 2000. Population differentiation in an annual legume: local adaptation. Evolution 54:1173-1181.

Geber, M. A., and V. M. Eckhart. 2005. Experimental studies of adaptation in *Clarkia xantiana*. II. Fitness variation across a subspecies border. Evolution 59:521-531.

Glynn, C., and D. A. Herms. 2004. Local adaptation in pine needle scale (*Chionaspis pinifoliae*): natal and novel host quality as tests for specialization within and among red and scots pine. Environmental Entomology 33:748-755.

Gordon, D. R., and K. J. Rice. 1998. Patterns of differentiation in wiregrass (*Astrida beyrichiana*): Implications for restoration efforts. Restoration Ecology 6:166-174.

Gosden, T. P., J. T. Walker, and E. I. Svensson. 2015. Asymmetric isolating barriers between different microclimatic environments caused by low immigrant survival. Proceedings of the Royal Society of London B 282:20142459.

Hays, C. G. 2007. Adaptive phenotypic differentiation across the intertidal gradient in the alga *Silvetia compressa*. Ecology 88:149-157.

Herbert, P .D. N., and C. J. Emery. 1990. The adaptive significance of cuticular pigmentation in *Daphnia*. Functional Ecology 4:703-710.

Hufbauer, R. A. 2002. Evidence for nonadaptive evolution in parasitoid virulence following a biological control introduction. Ecological Applications 12:66-78.

Janson, K. 1983. Selection and migration in two distinct phenotypes of *Littorina saxatilis* in Sweden. Oecologia 59:58-61.

Johansson, F., and V. Nilsson-Oertman. 2013. Predation and the relative importance of larval colour polymorphisms and polyphenism in a damselfly. Evolutionary Ecology 27:579-591.

Jordan, N. 1992. Path analysis of local adaptation in two ecotypes of the annual plant *Diodia teres* Walt. (Rubiaceae). American Naturalist 140:149-165.

Kik, C., J. Van Andel, and W. Joenjes. 1990. Life-history variation in ecologically contrasting populations of *Agrostis stolonifera*. Journal of Ecology 78:962-973.

Kindell, C. E., A. A. Winn, and T. E. Miller. 1996. The effects of surrounding vegetation and transplant age on the detection of local adaptation in the perennial grass *Astrida stricta*. Journal of Ecology 84:745-754.

Knight, T. M., and T. E. Miller. 2004. Local adaptation within a population of *Hydrocotyle bonariensis*. Evolutionary Ecology Research 6:103-114.

Lowry, D. B., R. C. Rockwood, and J. H. Willis. 2008. Ecological reproductive isolation of coast and inland races of *Mimulus guttatus*. Evolution 62:2196-2214.

Mallet, J., and N. H. Barton. 1989. Strong natural selection in a warning-color hybrid zone. Evolution 43:421-431.

Martin, S. L., and B. C. Husband. 2013. Adaptation of diploid and tetraploid *Chamerion angustifolium* to elevation but not local environment. Evolution 67:1780-1791.

Matsubayashi, K.W., I. Oshima, and P. Nosil. 2010. Ecological speciation in phytophagous insects. Entomologia Experimentalis et Applicata 134:1-27.

Matsubayashi, K.W., S. Kahono, and H. Katakura. 2011. Divergent host plant specialization as the critical driving force in speciation between populations of a phytophagous ladybird beetle. Journal of Evolutionary Biology 24:1421-1432.

Matute, D. R., C. J. Novak, and J. A. Coyne. 2009. Temperature-based extrinsic reproductive isolation in two species of *Drosophila*. Evolution 63:595-612.

McGraw, J. B., and J. Antonovics. 1983. Experimental ecology of *Dryas octopetala* ecotypes: I. Ecotypic differentiation and life-cycle stages of selection. Journal of Ecology 71:879-897.

McIntyre, P. J., and S. Y. Strauss. 2014. Phenotypic and transgenerational plasticity promote local adaptation to sun and shade environments. Evolutionary Ecology 28:229-246.

Morrison, K. R., and E. A. Stacy. 2014. Intraspecific divergence and evolution of a life-history trade-off along a successional gradient in Hawaii’s *Metrosideros polymorpha*. Journal of Evolutionary Biology 27:1192-1204.

Nagy, E. S., and K. J. Rice. 1997. Local adaptation in two subspecies of an annual plant: implications for migration and gene flow. Evolution 51:1079-1089.

Negovetic, S., and J. Jokela. 2001. Life-history variation, phenotypic plasticity, and subpopulation structure in a freshwater snail. Ecology 82:2805-2815.

Nokkala, C., and S. Nokkala. 1998. Species and habitat races in the chrysomelid *Galerucella nymphaeae* species complex in northern Europe. Entomologia Experimentalis et Applicata 89:1-13.

Nosil, P. 2004. Reproductive isolation caused by visual predation on migrants between diverging environments. Proceedings of the Royal Society of London B 271:1521-1528.

Ortegón-Campos, I., L. Abdala-Roberts, V. Parra-Tabla, J. C. Cervera, D. Marrufo-Zapata, and C. M. Herrera. 2012. Influence of multiple factors on plant local adaptation: soil type and folivore effects in *Ruellia nudiflora* (Acanthaceae). Evolutionary Ecology 26:545-558.

Pappers, S. M., G. van der Velde, N. J. Ouborg, and J. M. van Groenendael. 2002. Genetically based polymorphisms in morphology and life history associated with putative host races of the water lily leaf beetle, *Galerucella nymphaeae*. Evolution 58:1610-1621.

Pardo, L. M., and L. E. Johnson. 2005. Explaining variation in life-history traits: growth rate, size, and fecundity, in a marine snail across an environmental gradient lacking predators. Marine Ecology Progress Series 296:229-239.

Qualls, C. P. 1997. The effects of reproductive mode and climate on reproductive success in the Australian lizard, *Lerista bougainvillii*. Journal of Herpetology 31:60-65.

Raabová, J., M. Fischer, and Z. Munzbergová. 2008. Niche differentiation between diploid and hexaploid *Aster amellus*. Oecologia 158:463-472.

Rangel-Landa, S., A. Casas, and P. Dávila. 2015. Facilitation of *Agave potatorum*: An ecological approach for assisted population recovery. Forest Ecology and Management 347:57-74.

Räsänen, K., and A. P. Hendry. 2014. Asymmetric reproductive barriers and mosaic reproductive isolation: insights from Misty lake-stream stickleback. Ecology and Evolution 4:1166-1175.

Rendón, B., and J. Núñez-Farfán. 2001. Population differentiation and phenotypic plasticity of wild and agrestal populations of the annual *Anoda cristata* (Malvaceae) growing in two contrasting habitats. Plant Ecology 156:205-213.

Riechert, S. E., and R. F. Hall. 2000. Local population success in heterogeneous habitats: reciprocal transplant experiments completed on a desert spider. Journal of Evolutionary Biology 13:541-550.

Rolán-Alvarez, E., K. Johannesson, and J. Erlandsson. 1997. The maintenance of a cline in the marine snail *Littorina saxtilis*: the role of home site advantage and hybrid fitness. Evolution 51: 1838-1847.

Saarinen, M., and J. Taskinen. 2005. Local adaptation in a crustacean parasite-molluscan host interaction: a field experiment. Evolutionary Ecology Research 7:1-9.

Sandoval, C. P., and Nosil, P. 2005. Counteracting selective regimes and host preference evolution in ecotypes of two species of walking-sticks. Evolution 59:2405-2413.

Schmidt, K. P., and D. A. Levin. 1985. The comparative demography of reciprocally sown populations of *Phlox drummondii* Hook. I. Survivorships, fecundities, and finite rates of increase. Evolution 39:396-404.

Sherman, C. D. H., and D. J. Ayre. 2008. Fine-scale adaptation in a clonal sea anemone. Evolution 62:1373-1380.

Skelly, D. K. 1995. A behavioral trade-off and its consequences for the distribution of *Pseudacris* treefrog larvae. Ecology 76:150-164.

Smith, J. W., and C. W. Benkman. 2007. A coevolutionary arms race causes ecological speciation in crossbills. American Naturalist 169: 455-465.

Smith, N. F., and G. M. Ruiz. 2004. Phenotypic plasticity in the life history of the mangrove snail *Cerithidea scalariformis*. Marine Ecology Progress Series 284:195-209.

Stelkens, R. B., M. Pompini, and C. Wedekind. 2012. Testing for local adaptation in brown trout using reciprocal transplant experiments. BMC Evolutionary Biology 12:247.

Stelzer, R. J., N. E. Raine, K. D. Schmitt, and L. Chittka. 2010. Effects of aposematic coloration on predation risk in bumblebees? A comparison between differently coloured populations, with consideration of the ultraviolet. Journal of Zoology 282:75-83.

Streisfeld, M. A., and J. R. Kohn. 2006. Environment and pollinator-mediated selection on parapatric floral races of *Mimulus aurantiacus*. Journal of Evolutionary Biology 20:122-132.

Tobler, M. 2009. Does a predatory insect contribute to divergence between cave- and surface-adapted fish populations? Biology Letters 5:506-509.

Tobler, M., R. Riesch, C. M. Tobler, T. Schulz-Mirbach, and M. Plath. 2009. Natural and sexual selection against immigrants maintain differentiation among micro-allopatric populations. Journal of Evolutionary Biology 22:2298-2304.

Traxler, M. A., and A. Joern. 1999. Performance tradeoffs for two hosts within and between populations of the oligophagous grasshopper *Hesperotettix viridis* (Acrididae). Oikos 87:239-250.

Turlure, C., V. Radchuck, M. Baguette, M. Meijrink, A. van den Burg, M. WallisDeVries, and G. J. van Duinen. 2013. Plant quality and local adaptation undermine relocation

in a bog specialist butterfly Ecology and Evolution 3:244-254.

Vamosi, S. M. 2002. Predation sharpens the adaptive peaks: survival trade-offs in sympatric sticklebacks. Annales Zoological Fennici Journal 39:237-248.

Van Tienderen, P. H., and J. van der Toorn. 1991. Genetic differentiation between populations of *Plantago lanceolata*. I. Local adaptation in three contrasting habitats. Journal of Ecology 79:27-42.

Verhoeven, K. J. F., T. K. Vanhala, A. Biere, E. Nevo, and J. M. M. van Damme. 2004. The genetic basis of adaptive population differentiation: a quantitative trait locus analysis of fitness traits in two wild barley populations from contrasting habitats. Evolution 58: 270-283.

Via, S., A. C. Bouch, and S. Skillman. 2000. Reproductive isolation between divergent races of pea aphids on two hosts. II. Selection against migrants and hybrids in the parental environments. Evolution 54:1626-1637.

Wang, H., E. D. McArthur, S. C. Sanderson, J. H. Graham, and D. C. Freeman. 1997. Narrow hybrid zone between two subspecies of big sagebrush (*Artemisia tridentata*: Asteraceae). IV. Reciprocal transplant experiments. Evolution 51:95-102.

Warwick, S. I., and D. Briggs. 1980. The genecology of lawn weeds. V. The adaptive significance of different growth habit in lawn and roadside populations of *Plantago major* L. New Phytologist 85:289-300.

Waser, N. M., and M. V. Price. 1985. Reciprocal transplant experiments with *Delphinium nelsonii* (Ranunculaceae): evidence for local adaptation. American Journal of Botany 72:1726-1732.

Westley, P. A. H., E. J. Ward, and I. A. Felming. 2013. Fine-scale local adaptation in an invasive freshwater fish has evolved in contemporary time. Proceedings of the Royal Society of London B 280: 20122327.

Williams, D. G., R. N. Mack, and R. A. Black. 1995. Ecophysiology of introduced *Pennisetum setaceum* on Hawaii: the role of phenotypic plasticity. Ecology 76:1569-1580.

Wrange, A. L., C. André, T. Lundh, U. Lind, A. Blomberg, P. J. Jonsson, and J. N. Havenhand. 2014. Importance of plasticity and local adaptation for coping with changing salinity in coastal areas: a test case with barnacles in the Baltic Sea. BMC Evolutionary Biology 14:156.

Young, N. D. 1996. An analysis of the causes of genetic isolation in two Pacific Coast iris hybrid zones. Canadian Journal of Botany 74:2006-2013.

Zhao, W., J. Meng, B. Wang, L. Zhang, Y. Xu, Q. Y. Zeng, Y. Li, J. F. Mao, and X. R. Wang. 2014. Weak crossability barrier but strong juvenile selection supports ecological speciation of the hybrid pine *Pinus densata* on the Tibetan Plateau. Evolution 68:3120-3133.

Zovi, D., M. Stastny A. Battisti, and S. Larsson. 2008. Ecological costs on local adaptation of an insect herbivore imposed by host plants and enemies. Ecology 89:1388-1398.