SUPPORTING INFORMATION

TABLE S1: List of aquatic invasive species reviewed in this study classified by their trophic position.

Primary Producers	Omnivores
Alternanthera philoxeroides	*Cyprinus carpio*
Arundo donax	*Dikerogammarus pulex*
Cabomba caroliniana	*Gambusia affinis*
Caulerpa taxifolia	*Gambusia holbrooki*
Eichhornia crassipes	*Hypostomus plecostomus*
Gonyostomum semen	*Orconectes rusticus*
Hydrocotyle ranunculoides	*Oreochromis niloticus*
Ludwigia grandiflora	*Pacifastacus leniusculus*
Lythrum salicaria	*Pomacea canaliculata*
Myriophyllum aquaticus	*Procambarus clarkii*
Myriophyllum spicatum	**Filter-collectors**
Phalaris arundinacea	*Batillaria australis*
Phragmites australis	*Bellamya chinensis*
Sargassum muticum	*Corbicula fluminea*
Solidago gigantean	*Crassostrea gigas*
Spartina alterniflora	*Dreissena polymorpha*
Spartina anglica	*Dreissena r. bugensis*
Trapa natans	*Ficopomatus enigmaticus*
Typha angustifolia	*Limnoperla fortunei*
Typha glauca	*Nuttallia obscurata*
Urochloa mutica	*Potamopyrgus antipodarum*
Urochloa subquadripara	*Tapes philippinarum*
Vallisneria spiralis	
Vinca major	

Predators	
Abramis brama	
Agosia chrysogater	
Alosa pseudoharengus	
Bythotrephes longimanus	
Cercopagis pengoi	
Cichla kelberi	
Cichla ocellaris	
Clarias gariepinus	
Gymnocephalus cernuus	
Lepomis macrochirus	
Micropterus salmoides	
Misgurnus angullicaudatus	
Neogobius melanostomus	
Notonecta undulata	
Oncorhynchus mykiss	
Osmerus mordax	
Perca fluvialitis	
Salmo trutta	
Salvelinus fontinalis	

TABLE S2: List of references reviewed in this study.

1. Able, K.W. & Hagan, S.M. (2000). Effects of common reed (*Phragmites australis*) invasion on marsh surface macrofauna: response of fishes and decapod crustaceans. *Estuaries*, 23(5), 633-646.

2. Angeler, D.G. & Johnson, R.K. (2013). Algal invasions, blooms and biodiversity in lakes: accounting for habitat-specific responses. *Harmful Algae*, 23, 60–69.

3. Angeloni, N.L., Jankowski, K.J., Tuchman, N.C. & Kelly, J.J. (2006). Effects of an invasive cattail species (*Typha* x *glauca*) on sediment nitrogen and microbial community composition in a freshwater wetland. *FEMS Microbiol. Lett.*, 263, 86–92.

4. Angradi, T.R., Hagan, S.M., Able, K.W. (2001). Vegetation type and the intertidal macroinvertebrate fauna of a brackish marsh: *Phragmites* vs . *Spartina* vegetation type and the intertidal macroinvertebrate fauna. *Wetlands*, 21(1), 75–92.

5. Arthur, R. I., Lorenzen, K., Homekingkeo, P., Sidavong, K., Sengvilaikham, B., & Garaway, C. J. (2010). Assessing impacts of introduced aquaculture species on native fish communities: Nile tilapia and major carps in SE Asian freshwaters. *Aquaculture*, 299(1), 81-88.

6. Atalah, J., Kelly-Quinn, M., Irvine, K. & Crowe, T. (2010). Impacts of invasion by *Dreissena polymorpha* (Pallas, 1771) on the performance of macroinvertebrate assessment tools for eutrophication pressure in lakes. *Hydrobiologia*, 654, 237–251.

7. Back, C.L., Holomuzki, J.R., Klarer, D.M. & Whyte, R.S. (2012). Herbiciding invasive reed: indirect effects on habitat conditions and snail–algal assemblages one year post-application. *Wetl. Ecol. Manag.*, 20, 419–431.

8. Bajer, P.G., Sullivan, G. & Sorensen, P.W. (2009). Effects of a rapidly increasing population of common carp on vegetative cover and waterfowl in a recently restored Midwestern shallow lake. *Hydrobiologia*, 632, 235–245.

9. Baranowska, K. (2013). Long-term seasonal effects of dreissenid mussels on phytoplankton in Lake Simcoe, Ontario, Canada. *Inl. Waters*, 3, 285–296.

10. Barbiero, R. P., & Rockwell, D. C. (2008). Changes in the crustacean communities of the central basin of Lake Erie during the first full year of the *Bythotrephes longimanus* invasion. *J. Great Lakes Res*, 34(1), 109-121.

11. Bauer, C. R., Bobeldyk, A. M., & Lamberti, G. A. (2007). Predicting habitat use and trophic interactions of Eurasian ruffe, round gobies, and zebra mussels in nearshore areas of the Great Lakes. Biological invasions, 9(6), 667-678.

12. Bassett, I.E., Paynter, Q. & Beggs, J.R. (2012). Invertebrate community composition differs between invasive herb alligator weed and native sedges. *Acta Oecologica*, 41, 65–73.

13. Baxter, C. V., Fausch, K.D., Murakami, M. & Chapman, P.L. (2004). Fish invasion restructures stream and forest food webs by interrupting reciprocal prey subsidies. *Ecology*, 85, 2656–2663.

14. Bazterrica, M.C., Botto, F. & Iribarne, O. (2011). Effects of an invasive reef-building polychaete on the biomass and composition of estuarine macroalgal assemblages. *Biol. Invasions*, 14, 765–777.

15. Beekey, M.A., Mccabe, D.J. & Marsden, J.E. (2004). Zebra mussel colonisation of soft sediments facilitates invertebrate communities. *Freshw. Biol.*, 49, 535–545.

16. Beisner, B.E., Ives, A.R. & Carpenter, S.R. (2003). The effects of an exotic fish invasion on the prey communities of two lakes. *J. Anim. Ecol.*, 72, 331–342.

17. Bially, A. & Macisaac, H.J. (2000). Fouling mussels (*Dreissena* spp.) colonize soft sediments in Lake Erie and facilitate benthic invertebrates. *Freshw. Biol.*, 43, 85–97.

18. Bishop, M.J. & Kelaher, B.P. (2012). Replacement of native seagrass with invasive algal detritus: impacts to estuarine sediment communities. *Biol. Invasions*, 15, 45–59.

19. Bobeldyk, A.M. & Lamberti, G.A. (2008). A decade after invasion: evaluating the continuing effects of rusty crayfish on a Michigan River. *J. Great Lakes Res.* 34(2), 265-275.

20. Bogacka-kapusta, E. & Kapusta, A. (2013). Spatial and diurnal distribution of cladocera in beds of invasive *Vallisneria spiralis* and open water in Heated Lake, 65, 225–231.

21. Bourdeau, P.E., Pangle, K.L. & Peacor, S.D. (2011). The invasive predator *Bythotrephes* induces changes in the vertical distribution of native copepods in Lake Michigan. *Biol. Invasions*, 13, 2533–2545.

22. Bowen, K.L. & Johannsson, O.E. (2011). Changes in zooplankton biomass in the Bay of Quinte with the arrival of the mussels, *Dreissena polymorpha* and *D. rostiformis bugensis*, and the predatory cladoceran, *Cercopagis pengoi:* 1975 to 2008. *Aquat. Ecosyst. Health Manag.*, 14, 44–55.

23. Bruschetti, M., Bazterrica, C., Fanjul, E., Luppi, T. & Iribarne, O. (2011). Effect of biodeposition of an invasive polychaete on organic matter content and productivity of the sediment in a coastal lagoon. *J. Sea Res.*, 66, 20–28.

24. Bruschetti, M., Luppi, T., Fanjul, E., Rosenthal, A. & Iribarne, O. (2008). Grazing effect of the invasive reef-forming polychaete *Ficopomatus enigmaticus* (Fauvel) on phytoplankton biomass in a SW Atlantic coastal lagoon. *J. Exp. Mar. Bio. Ecol.*, 354, 212–219.

25. Bunnell, J.F. & Zampella, R.A. (2008). Native fish and anuran assemblages differ between impoundments with and without non-native centrarchids and bullfrogs. *Journal Information,* 2008(4).

26. Buria, L., Albariño, R., Villanueva, V.D., Modenutti, B. & Balseiro, E. (2007). Impact of exotic rainbow trout on the benthic macroinvertebrate community from Andean-Patagonian headwater streams. *Fundam. Appl. Limnol. / Arch. für Hydrobiol.*, 168, 145–154.

27. Caiola, N. & Sostoa, a. (2005). Possible reasons for the decline of two native toothcarps in the Iberian Peninsula: evidence of competition with the introduced Eastern mosquitofish. *J. Appl. Ichthyol.*, 21, 358–363.

28. Caraco, N. F., Cole, J. J., Raymond, P. A., Strayer, D. L., Pace, M. L., Findlay, S. E., & Fischer, D. T. (1997). Zebra mussel invasion in a large, turbid river: phytoplankton response to increased grazing. *Ecology*, 78(2), 588-602.

29. Caraco, N.F. & Cole, J.J. (2002). Contrasting impacts of a native and alien macrophyte on dissolved oxygen in a large river. *Ecol. Appl.*, 12, 1496–1509.

30. Cardona, L. (2006). Trophic cascades uncoupled in a coastal marsh ecosystem. *Biol. Invasions*, 8, 835–842.

31. Carlsson, N.O.L., Brönmark, C. & Hansson, L.A. (2004). Invading herbivory: the golden apple snail alters ecosystem functioning in Asian wetlands. *Ecology*, 85, 1575–1580.

32. Chan, K. & Bendell, L.I. (2013). Potential effects of an invasive bivalve, *Nuttallia obscurata*, on select sediment attributes within the intertidal region of coastal British Columbia. *J. Exp. Mar. Bio. Ecol.*, 444, 66–72.

33. Chen, Z., Guo, L., Jin, B., Wu, J., & Zheng, G. (2009). Effect of the exotic plant *Spartina alterniflora* on macrobenthos communities in salt marshes of the Yangtze River Estuary, China. *Estuar. Coast. Shelf Sci.*, 82(2), 265-272.

34. Chen, HuiLi, Bo, L., JianBo, H., JiaKuan, C., & JiHua, W. (2007). Effects of *Spartina alterniflora* invasion on benthic nematode communities in the Yangtze Estuary. *Mar. Ecol. Prog. Ser*, 336, 99-110.

35. Cheruvelil, S.K., Soranno, P.A., Madsen, J.D. & Roberson, M.J. (2002). Plant architecture and epiphytic macroinvertebrate communities: the role of an exotic dissected macrophyte. *J. North Am. Benthol. Soc.*, 21, 261–277.

36. Coetzee, J. a., Jones, R.W. & Hill, M.P. (2014). Water hyacinth, *Eichhornia crassipes* (Pontederiaceae), reduces benthic macroinvertebrate diversity in a protected subtropical lake in South Africa. *Biodivers. Conserv.*, 23, 1319–1330.

37. Crawford, L., Yeomans, W.E. & Adams, C.E. (2006). The impact of introduced signal crayfish *Pacifastacus leniusculus* on stream invertebrate communities. *Aquat. Conserv. Freshw. Ecosyst.*, 16, 611–621.

38. Cushman, J.H. & Gaffney, K. a. (2010). Community-level consequences of invasion: impacts of exotic clonal plants on riparian vegetation. *Biol. Invasions*, 12, 2765–2776.

39. Cutajar, J., Shimeta, J. & Nugegoda, D. (2012). Impacts of the invasive grass *Spartina anglica* on benthic macrofaunal assemblages in a temperate Australian saltmarsh. *Mar. Ecol. Prog. Ser.*, 464, 107–120.

40. Douglas, M.M. & O'Connor, R. a. (2003). Effects of the exotic macrophyte, para grass (*Urochloa mutica*), on benthic and epiphytic macroinvertebrates of a tropical floodplain. *Freshw. Biol.*, 48, 962–971.

41. Driver, P.D., Driver, P.D., Closs, G.P., Closs, G.P., Koen, T. & Koen, T. (2005). The effects of size and density of carp (*Cyprinus carpio* L.) on water quality in an experimental pond. *Arch. Hydrobiol.*, 163, 117–131.

42. Dzialowski, A.R. (2013). Invasive zebra mussels alter zooplankton responses to nutrient enrichment. *Freshw. Sci.*, 32, 462–470.

43. Effler, S.W., Matthews, D.A., Brooks-matthews, C.M., Perkins, M., Siegfried, C.A. & Hassett, J.M. (2004). Water quality impacts and indicators of metabolic activity of the zebra mussel invasion of the Seneca River. *J. Am. Water Resour. Assoc.*, 737–754.

44. Eyre, B.D., Maher, D., Oakes, J.M., Erler, D. V & Glasby, T.M. (2011). Differences in benthic metabolism, nutrient fluxes, and denitrification in *Caulerpa taxifolia* communities compared to

uninvaded bare sediment and seagrass (*Zostera capricorni*) habitats. *Limnol. Oceanogr.*, 56, 1737–1750.

45. Farnsworth, E.J. & Meyerson, L.A. (1999). Species composition and inter-annual dynamics of a freshwater tidal plant community following removal of the invasive grass, *Phragmites australis*. *Biol. Invasions*, 1, 115–127.

46. Fickbohm, S.S. & Zhu, W.-X. (2006). Exotic purple loosestrife invasion of native cattail freshwater wetlands: effects on organic matter distribution and soil nitrogen cycling. *Appl. Soil Ecol.*, 32, 123–131.

47. Figueredo, C.C. & Giani, A. (2005). Ecological interactions between *Nile tilapia* (*Oreochromis niloticus*, L.) and the phytoplanktonic community of the Furnas Reservoir (Brazil). *Freshw. Biol.*, 50, 1391–1403.

48. Findlay, S., Groffman, P. & Dye, S. (2003). Effects of *Phragmites australis* removal on marsh nutrient cycling. *Wetl. Ecol. Manag.*, 11, 157–166.

49. Fischer, J.R., Krogman, R.M. & Quist, M.C. (2013). Influences of native and non-native benthivorous fishes on aquatic ecosystem degradation. *Hydrobiologia*, 711, 187–199.

50. Foster, S.E. & Sprules, W.G. (2009). Effects of the *Bythotrephes invasion* on native predatory invertebrates. *Limnol. Oceanogr.*

51. Botts PS, Patterson BA, Schloesser DW (1996) Zebra mussel effects on benthic invertebrates: physical or biotic? Journal of the North American Benthological Society: 179-184.

52. Green, D. S., & Crowe, T. P. (2013). Physical and biological effects of 22 introduced oysters on biodiversity in an intertidal boulder-field. *Mar. Ecol.*, 23, 119-132.

53. Green, D.S., Rocha, C. & Crowe, T.P. (2013). Effects of non-indigenous oysters on ecosystem processes vary with abundance and context. *Ecosystems*, 16, 881–893.

54. Greenfield, B.K., Siemering, G.S., Andrews, J.C., Rajan, M., Andrews Jr., S.P. & Spencer, D.F. (2007). Mechanical shredding of water hyacinth (*Eichhornia crassipes*): effects on water quality in the Sacramento-San Joaquin River Delta , California. *Estuaries and Coasts*, 30, 627–640.

55. McShane, R. R., & Cowley, D. E. (2007). Ecological Effects of an Invasive Fish in an Arid-Land Stream. PhD report. New Mexico State University.

56. Hager, H. a & Vinebrooke, R.D. (2004). Positive relationships between invasive purple loosestrife (*Lythrum salicaria*) and plant species diversity and abundance in Minnesota wetlands. *Can. J. Bot.*, 82, 763–773.

57. Hansen, G.J. a., Hein, C.L., Roth, B.M., Vander Zanden, M.J., Gaeta, J.W., Latzka, A.W., *et al.* (2013). Food web consequences of long-term invasive crayfish control. *Can. J. Fish. Aquat. Sci.*, 70, 1109–1122.

58. Hayden, B., Holopainen, T., Amundsen, P.-A., Eloranta, A.P., Knudsen, R., Praebel, K., *et al.* (2013). Interactions between invading benthivorous fish and native whitefish in subarctic lakes. *Freshw. Biol.*, 58, 1234–1250.

59. Haynes, J.M., Tisch, N.A., Mayer, C.M., Rhyne, R.S., Ayer, C.H.M.M. & Hyne, R.A.S.R. (2005). Benthic macroinvertebrate communities in southwestern Lake Ontario following invasion of *Dreissena* and *Echinogammarus*: 1983 to 2000. *J. North Am. Benthol. Soc.*, 24, 148–167.

60. Hedge, P. & Kriwoken, L.K. (2000). Evidence for effects of *Spartina anglica* invasion on benthic macrofauna in Little Swanport estuary , Tasmania. *Austral Ecol.*, 25, 150–159.

61. Herbst, D.B., Silldorff, E.L. & Cooper, S.D. (2009). The influence of introduced trout on the benthic communities of paired headwater streams in the Sierra Nevada of California. *Freshw. Biol.*, 54, 1324–1342.

62. Herrmann, P.B., Townsend, C.R. & Matthaei, C.D. (2012). Individual and combined effects of fish predation and bed disturbance on stream benthic communities: a streamside channel experiment. *Freshw. Biol.*, 57, 2487–2503.

63. Hogsden, K.L., Sager, E.P.S. & Hutchinson, T.C. (2007). The Impacts of the non-native macrophyte *Cabomba caroliniana* on littoral biota of Kasshabog Lake, Ontario. *J. Great Lakes Res.*, 33, 497–504.

64. Holomuzki, J.R. & Klarer, D.M. (2009). Invasive reed effects on benthic community structure in Lake Erie coastal marshes. *Wetl. Ecol. Manag.*, 18, 219–231.

65. Horvath, T. G., Martin, K. M., & Lamberti, G. A. (1999). Effect of zebra mussels, *Dreissena polymorpha*, on macroinvertebrates in a lake-outlet stream. *Am. Midl. Nat.*, *142*(2), 340-347.

66. Hunter, K.L., Fox, D. a, Brown, L.M. & Able, K.W. (2006). Responses of resident marsh fishes to stages of *Phragmites australis* invasion in three mid Atlantic estuaries. *Estuaries Coasts J. Estuar. Res. Fed.*, 29, 487–498.

67. Idrisi, N., Mills, E. L., Rudstam, L. G., & Stewart, D. J. (2001). Impact of zebra mussels (*Dreissena polymorpha*) on the pelagic lower trophic levels of Oneida Lake, New York. *. J. Fish. Aquat. Sci.*, *58*(7), 1430-1441.

68. Ilarri, M. I., Freitas, F., Costa-Dias, S., Antunes, C., Guilhermino, L., & Sousa, R. (2012). Associated macrozoobenthos with the invasive Asian clam *Corbicula fluminea*. *J. Sea Res.*, *72*, 113-120.

69. Jackson, D. a. (2002). Ecological effects of *Micropterus* introductions : the dark side of black bass. *Am. Fish. Soc. Symp.*, 31, 221–232.

70. Jayawardana, J., Westbrooke, M., Wilson, M. & Hurst, C.C.-M. papers C.N.-2. (2006). Macroinvertebrate communities in *Phragmites australis* (Cav.) Trin. ex Steud. reed beds and open bank habitats in central victorian streams in Australia. *Hydrobiologia*, 568, 169–185.

71. Johnson, P.T.J., Olden, J.D., Solomon, C.T. & Vander Zanden, M.J. (2009). Interactions among invaders: community and ecosystem effects of multiple invasive species in an experimental aquatic system. *Oecologia*, 159, 161–70.

72. Kadye, W.T. & Booth, A.J. (2012). Detecting impacts of invasive non-native sharptooth catfish, *Clarias gariepinus*, within invaded and non-invaded rivers. *Biodivers. Conserv.*, 21, 1997–2015.

73. Kadye, W.T., Chakona, A., Marufu, L.T. & Samukange, T. (2013). The impact of non-native rainbow trout within afro-montane streams in eastern Zimbabwe. *Hydrobiologia*, 720, 75–88.

74. Keller, R.P. & Lake, P.S. (2007). Potential impacts of a recent and rapidly spreading coloniser of Australian freshwaters: oriental weatherloach (*Misgurnus anguillicaudatus*). *Ecol. Freshw. Fish*, 16, 124–132.

75. Kelly, D.W., Bailey, R.J., MacNeil, C., Dick, J.T. a. & McDonald, R. a. (2006). Invasion by the amphipod *Gammarus pulex* alters community composition of native freshwater macroinvertebrates. *Divers. Distrib.*, 12, 525–534.

76. Strayer, D. L., Hattala, K. A., & Kahnle, A. W. (2004). Effects of an invasive bivalve (*Dreissena polymorpha*) on fish in the Hudson River estuary. Canadian Journal of Fisheries and Aquatic Sciences, 61(6), 924-941.

77. Kipp, R., Hébert, I., Lacharité, M. & Ricciardi, A. (2012). Impacts of predation by the Eurasian round goby (*Neogobius melanostomus*) on molluscs in the upper St. Lawrence River. *J. Great Lakes Res.*, 38, 78–89.

78. Trometer, E. S., & Busch, W. N. (1999). Changes in age-0 fish growth and abundance following the introduction of zebra mussels *Dreissena polymorpha* in the western basin of Lake Erie. North American Journal of Fisheries Management, 19(2), 604-609.

79. Klose, K. & Cooper, S.D. (2012). Contrasting effects of an invasive crayfish (*Procambarus clarkii*) on two temperate stream communities. *Freshw. Biol.*, 57, 526–540.

80. Klose, K. & Cooper, S.D. (2013). Complex impacts of an invasive omnivore and native consumers on stream communities in California and Hawaii. *Oecologia*, 171, 945–60.

81. Kloskowski, J. (2011). Impact of common carp *Cyprinus carpio* on aquatic communities: direct trophic effects versus habitat deterioration. *Fundam. Appl. Limnol. / Arch. für Hydrobiol.*, 178, 245–255.

82. Knapp, R.A., Matthews, K.R. & Sarnelle, O. (2001). Resistance and resilience of alpine lake fauna to fish introductions. *Ecol. Monogr.*, 71, 401–421.

83. Kolosovich, A.S., Chandra, S., Saito, L., Davis, C.J. & Atwell, L. (2012). Short-term survival and potential grazing effects of the New Zealand mudsnail in an uninvaded Western Great Basin watershed. *Aquat. Invasions*, 7, 203–209.

84. Kornijów, R., Strayer, D.L. & Caraco, N.F. (2010). Macroinvertebrate communities of hypoxic habitats created by an invasive plant (*Trapa natans*) in the freshwater tidal Hudson River. *Fundam. Appl. Limnol. / Arch. für Hydrobiol.*, 176, 199–207.

85. Kornis, M.S., Sharma, S. & Jake Vander Zanden, M. (2013). Invasion success and impact of an invasive fish, round goby, in Great Lakes tributaries. *Divers. Distrib.*, 19, 184–198.

86. Krakowiak, P.J. & Pennuto, C.M. (2008). Fish and macroinvertebrate communities in tributary streams of eastern Lake Erie with and without round gobies (*Neogobius melanostomus*, Pallas 1814). *J. Great Lakes Res.*, 34(4), 675-689.

87. Kuhns, L. a. & Berg, M.B. (1999). Benthic invertebrate community responses to round goby (*Neogobius melanostomus*) and zebra mussel (*Dreissena polymorpha*) invasion in southern Lake Michigan. *J. Great Lakes Res.*, 25, 910–917.

88. Latini, A.O. & Petrere, M. (2004). Reduction of a native fish fauna by alien species: An example from Brazilian freshwater tropical lakes. *Fish. Manag. Ecol.*, 11, 71–79.

89. Leal-flórez, J., Rueda, M. & Wolff, M. (2008). Role of the non-native fish *Oreochromis niloticu*s in the long-term variations of abundance and species composition of the native ichthyofauna in a Caribbean estuary, 82, 365–380.

90. Lejart, M. & Hily, C. (2011). Differential response of benthic macrofauna to the formation of novel oyster reefs (*Crassostrea gigas*, Thunberg) on soft and rocky substrate in the intertidal of the Bay of Brest, France. *J. Sea Res.*, 65, 84–93.

91. Leyse, K.E., Lawler, S.P. & Strange, T. (2004). Effects of an alien fish, *Gambusia affinis*, on an endemic California fairy shrimp, *Linderiella occidentalis*: implications for conservation of diversity in fishless waters. *Biol. Conserv.*, 118, 57–65.

92. Lodge, D.M., Kershner, M.W., Aloi, J.E. & Covich, A.P. (1994). Effects of an omnivorous crayfish (*Orconectes rusticus*) on a freshwater littoral food web. *Ecology*, 75, 1265–1281.

93. Lozano, S.J., Scharold, J. V. & Nalepa, T.F. (2001). Recent declines in benthic macroinvertebrate densities in Lake Ontario. *Can. J. Fish. Aquat. Sci.*, 58, 518–529.

94. Maezono, Y. & Miyashita, T. (2004). Impact of exotic fish removal on native communities in farm ponds. *Ecol. Res.*, 19, 263–267.

95. Mantovani, S., Castaldelli, G., Rossi, R. & Fano, E. (2006). The infaunal community in experimentally seeded low and high density Manila clam (*Tapes philippinarum*) beds in a Po River Delta lagoon (Italy). *ICES J. Mar. Sci.*, 63, 860–866.

96. Marks, J.C., Haden, G. a., O'Neill, M. & Pace, C. (2010). Effects of flow restoration and exotic species removal on recovery of native fish: lessons from a dam decommissioning. *Restor. Ecol.*, 18, 934–943.

97. Matsuzaki, S.-I.S., Usio, N., Takamura, N. & Washitani, I. (2009). Contrasting impacts of invasive engineers on freshwater ecosystems: an experiment and meta-analysis. *Oecologia*, 158, 673–86.

98. McKinnon, J., Gribben, P., Davis, A., Jolley, D. & Wright, J. (2009). Differences in soft-sediment macrobenthic assemblages invaded by *Caulerpa taxifolia* compared to uninvaded habitats. *Mar. Ecol. Prog. Ser.*, 380, 59–71.

99. Menezes, R.F., Attayde, J.L., Lacerot, G., Kosten, S., Coimbra e Souza, L., Costa, L.S., *et al.* (2011). Lower biodiversity of native fish but only marginally altered plankton biomass in tropical lakes hosting introduced piscivorous *Cichla* cf. *ocellaris*. *Biol. Invasions*, 14, 1353–1363.

100. Meyerson, L.A., Saltonstall, K., Windham, L., Kiviat, E. & Findlay, S. (2000). A comparison of *Phragmites australis* in freshwater and brackish marsh environments in North America, 89–103.

101. Michelan, T.S., Thomaz, S.M., Mormul, R.P. & Carvalho, P. (2010). Effects of an exotic invasive macrophyte (tropical signalgrass) on native plant community composition, species richness and functional diversity. *Freshw. Biol.*, 55, 1315–1326.

102. Mines, C.M., Ghadouani, A., Legendre, P., Yan, N.D. & Ivey, G.N. (2013). Examining shifts in zooplankton community variability following biological invasion. *Limnol. Oceanogr.*, 58, 399–408.

103. Mitchell, M.E., Lishawa, S.C., Geddes, P., Larkin, D.J., Treering, D. & Tuchman, N.C. (2011). Time-dependent impacts of cattail invasion in a Great Lakes coastal wetland complex. *Wetlands*, 31, 1143–1149.

104. Mörtl, M. & Rothhaupt, K.-O. (2003). Effects of adult *Dreissena polymorpha* on settling juveniles and associated macroinvertebrates. *Int. Rev. Hydrobiol.*, 88, 561–569.

105. Nalepa, T.F., Fanslow, D.L., Lansing, M.B. & Lang, G.A. (2003). Trends in the benthic macroinvertebrate community of Saginaw Bay, Lake Huron, 1987 to 1996: responses to phosphorus abatement and the zebra mussel, *Dreissena polymorpha*. *J. Great Lakes Res.*, 29, 14–33.

106. Neira, C., Grosholz, E.D., Levin, L. a & Blake, R. (2006). Mechanisms generating modification of benthos following tidal flat invasion by a *Spartina* hybrid. *Ecol. Appl.*, 16, 1391–404.

107. Neira, C., Levin, L.A. & Grosholz, E.D. (2005). Benthic macrofaunal communities of three sites in San Francisco Bay invaded by hybrid *Spartina*, with comparison to uninvaded habitats. *Mar. Ecol. Prog. Ser.*, 292, 111–126.

108. Nystrom, P., Bronmark, C. & Graneli, W. (2011). Influence of an exotic and a native crayfish species on a littoral benthic community influence of an exotic and a native crayfish species on a littoral benthic community. *Oikos*, 85, 545–553.

109. Osland, M.J., González, E. & Richardson, C.J. (2011). Restoring diversity after cattail expansion: disturbance, resilience, and seasonality in a tropical dry wetland. *Ecol. Appl.*, 21, 715–28.

110. Ozersky, T., Barton, D.R. & Evans, D.O. (2011). Fourteen years of dreissenid presence in the rocky littoral zone of a large lake: effects on macroinvertebrate abundance and diversity. *J. North Am. Benthol. Soc.*, 30, 913–922.

111. Zhu, B., Fitzgerald, D. G., Mayer, C. M., Rudstam, L. G., & Mills, E. L. (2006). Alteration of ecosystem function by zebra mussels in Oneida Lake: impacts on submerged macrophytes. Ecosystems, 9(6), 1017-1028.

112. Pace, M.L., Findlay, S.E.G. & Fischer, D. (1998). Effects of an invasive bivalve on the zooplankton community of the Hudson river. *Freshw. Biol.*, 39, 103–116.

113. Pelicice, F.M. & Agostinho, A.A. (2008). Fish fauna destruction after the introduction of a non-native predator (*Cichla kelberi*) in a Neotropical reservoir. *Biol. Invasions*, 11, 1789–1801.

114. Peters, J. a. & Lodge, D.M. (2013). Habitat, predation, and coexistence between invasive and native crayfishes: prioritizing lakes for invasion prevention. *Biol. Invasions*, 15, 2489–2502.

115. Pothoven, S. a., Höök, T.O., Nalepa, T.F., Thomas, M. V. & Dyble, J. (2012). Changes in zooplankton community structure associated with the disappearance of invasive alewife in Saginaw Bay, Lake Huron. *Aquat. Ecol.*, 47, 1–12.

116. Preston, D.L., Henderson, J.S. & Johnson, P.T.J. (2012). Community ecology of invasions: direct and indirect effects of multiple invasive species on aquatic communities. *Ecology*, 93, 1254–61.

117. Reed, T., Wielgus, S.J., Barnes, A.K., Schiefelbein, J.J. & Fettes, A.L. (2004). Refugia and local controls: benthic invertebrate dynamics in Lower Green Bay, Lake Michigan following zebra mussel invasion. *J. Great Lakes Res.*, 30, 390–396.

118. Reissig, M., Trochine, C., Queimaliños, C., Balseiro, E. & Modenutti, B. (2006). Impact of fish introduction on planktonic food webs in lakes of the Patagonian Plateau. *Biol. Conserv.*, 132, 437–447.

119. Ricciardi, A., Whoriskey, F.G. & Rasmussen, J.B. (1997). The role of the zebra mussel (*Dreissena polymorpha*) in structuring macroinvertebrate communities on hard substrata. *Can. J. Fish. Aquat. Sci.*, 54, 2596–2608.

120. Richburg, J.A., Iii, W.A.P. & Lowenstein, F. (2001). Effects of road salt and *Phragmites australis* invasion on the vegetation of a Western Massachusetts calcareous lake-basin *Wetlands*, 21(2), 247-255.

121. Ruokonen, T.J., Karjalainen, J., Kiljunen, M., Pursiainen, M. & Hämäläinen, H. (2012). Do introduced crayfish affect benthic fish in stony littoral habitats of large boreal lakes? *Biol. Invasions*, 14, 813–825.

122. Scharfy, D., Eggenschwiler, H., Olde Venterink, H., Edwards, P.J. & Güsewell, S. (2009). The invasive alien plant species *Solidago gigantea* alters ecosystem properties across habitats with differing fertility. *J. Veg. Sci.*, 20, 1072–1085.

123. Schilling, E.G., Loftin, C.S. & Huryn, A.D. (2009). Effects of introduced fish on macroinvertebrate communities in historically fishless headwater and kettle lakes. *Biol. Conserv.*, 142, 3030–3038.

124. Schooler, S.S., McEvoy, P.B. & Coombs, E.M. (2006). Negative per capita effects of purple loosestrife and reed canary grass on plant diversity of wetland communities. *Divers. Distrib.*, 12, 351–363.

125. Scott, S.E., Pray, C.L., Nowlin, W.H. & Zhang, Y. (2012). Effects of native and invasive species on stream ecosystem functioning. *Aquat. Sci.*, 74, 793–808.

126. Zhu, B., Mayer, C. M., Heckathorn, S. A., & Rudstam, L. G. (2007). Can dreissenid attachment and biodeposition affect submerged macrophyte growth. Journal of Aquatic Plant Management, 45, 71-76.

127. Shulse, C.D., Semlitsch, R.D. & Trauth, K.M. (2013). Mosquitofish dominate amphibian and invertebrate community development in experimental wetlands. *J. Appl. Ecol.*, 50, 1244–1256.

128. Shurin, J.B., Cottenie, K. & Hillebrand, H. (2009). Spatial autocorrelation and dispersal limitation in freshwater organisms . *159*, 1, 151–159.

129. Stewart, T.J., Johannsson, O.E., Holeck K., Sprules W.G. & O'Gorman R. (2010). The Lake Ontario zooplankton community before (1987–1991) and after (2001–2005) invasion-induced ecosystem change. *J. Great Lakes Res.*, 36, 596 – 605.

130. Stewart, T.W. & Haynes, J.M. (1994). Benthic macroinvertebrate communities of southwestern Lake Ontario following invasion of *Dreissena*. *J. Great Lakes Res.*, 20, 479–493.

131. Stiers, I., Crohain, N., Josens, G. & Triest, L. (2011). Impact of three aquatic invasive species on native plants and macroinvertebrates in temperate ponds. *Biol. Invasions*, 13, 2715–2726.

132. Strayer, D.L., Lutz, C., Malcom, H.M., Munger, K. & Shaw, W.H. (2003). Invertebrate communities associated with a native (*Vallisneria americana*) and an alien (*Trapa natans*) macrophyte in a large river. *Freshw. Biol.*, 48, 1938–1949.

133. Strecker, A.L. & Arnott, S.E. (2008). Invasive predator, *Bythotrephes*, has varied effects on ecosystem function in freshwater lakes. *Ecosystems*, 11, 490–503.

134. Strecker, A.L., Arnott, S.E., Yan, N.D. & Girard, R. (2006). Variation in the response of crustacean zooplankton species richness and composition to the invasive predator *Bythotrephes longimanus*. *Can. J. Fish. Aquat. Sci.*, 63, 2126–2136.

135. Strecker, A.L., Beisner, B.E., Arnott, S.E., Paterson, A.M., Winter, J.G., Johannsson, O.E., *et al.* (2011). Direct and indirect effects of an invasive planktonic predator on pelagic food webs. *Limnol. Oceanogr.* 56: 179-192.

136. Sylvester, F., Boltovskoy, D. & Cataldo, D. (2007). The invasive bivalve *Limnoperna fortunei* enhances benthic invertebrate densities in South American floodplain rivers. *Hydrobiologia*, 589, 15–27.

137. Taylor, S., Bishop, M., Kelaher, B. & Glasby, T. (2010). Impacts of detritus from the invasive alga *Caulerpa taxifolia* on a soft sediment community. *Mar. Ecol. Prog. Ser.*, 420, 73–81.

138. Thyrring, J., Thomsen, M.S. & Wernberg, T. (2013). Large-scale facilitation of a sessile community by an invasive habitat-forming snail. *Helgol. Mar. Res.*, 67, 789–794.

139. Trebitz, A.S. & Taylor, D.L. (2007). Exotic and invasive aquatic plants in Great Lakes coastal wetlands: distribution and relation to watershed land use and plant richness and cover. *J. Great Lakes Res.*, 33, 705–721.

140. Tsunoda, H., Mitsuo, Y., Ohira, M., Doi, M. & Senga, Y. (2010). Change of fish fauna in ponds after eradication of invasive piscivorous largemouth bass, *Micropterus salmoides*, in north-eastern Japan. *Aquat. Conserv. Mar. Freshw. Ecosyst.*, 20, 710–716.

141. Vázquez-Luis, M., Sanchez-Jerez, P. & Bayle-Sempere, J.T. (2008). Changes in amphipod (Crustacea) assemblages associated with shallow-water algal habitats invaded by *Caulerpa racemosa* var. *cylindracea* in the western Mediterranean Sea. *Mar. Environ. Res.*, 65, 416–26.

142. Vázquez-Luis, M., Sanchez-Jerez, P. & Bayle-Sempere, J.T. (2009). Comparison between amphipod assemblages associated with *Caulerpa racemosa* var. *cylindracea* and those of other Mediterranean habitats on soft substrate. *Estuar. Coast. Shelf Sci.*, 84, 161–170.

143. Volta, P., Jeppesen, E., Leoni, B., Campi, B., Sala, P., Garibaldi, L., *et al.* (2013). Recent invasion by a non-native cyprinid (common bream *Abramis brama*) is followed by major changes in the ecological quality of a shallow lake in southern Europe. *Biol. Invasions*, 15, 2065–2079.

144. Wernberg, T., Thomsen, M.S., Staehr, P. a. & Pedersen, M.F. (2004). Epibiota communities of the introduced and indigenous macroalgal relatives *Sargassum muticum* and *Halidrys siliquosa* in Limfjorden (Denmark). *Helgol. Mar. Res.*, 58, 154–161.

145. Wilson, S.J. & Ricciardi, A. (2009). Epiphytic macroinvertebrate communities on Eurasian watermilfoil (*Myriophyllum spicatum*) and native milfoils *Myriophyllum sibericum* and *Myriophyllum alterniflorum* in eastern North America. *Can. J. Fish. Aquat. Sci.*, 66, 18–30.

146. Windham, L. & Lathrop, R.G. (1999). Effects of *Phragmites australis* (common reed) invasion on aboveground biomass and soil properties in brackish tidal marsh of the Mullica River, New Jersey. *Estuaries*, 22(4), 927-935.

147. De Winton, M.D., Taumoepeau, A.T. & Clayton, J.S. (2002). Fish effects on charophyte establishment in a shallow, eutrophic New Zealand lake. *New Zeal. J. Mar. Freshw. Res.,* 36(4), 815-823.

148. Wittmann, M.E., Chandra, S., Reuter, J.E., Caires, A., Schladow, S.G. & Denton, M. (2012). Harvesting an invasive bivalve in a large natural lake: species recovery and impacts on native benthic macroinvertebrate community structure in Lake Tahoe, USA. *Aquat. Conserv. Mar. Freshw. Ecosyst.*, 22, 588–597.

149. Yozzo, D.J. & Osgood, D.T. (2012). Invertebrate communities of low-salinity wetlands: overview and comparison between *Phragmites* and *Typha* marshes within the Hudson River estuary. *Estuaries and Coasts*, 36, 575–584.

150. Zambrano, L., Perrow, M.R. & Mac, C. (1999). Impact of introduced carp (*Cyprinus carpio*) in subtropical shallow ponds in Central Mexico. *J. Aquat. Ecosyst. Stress Recovery,* 281–288.

151. Zedler, J.B. & Kercher, S. (2004). Causes and consequences of invasive plants in wetlands: opportunities, opportunists, and outcomes. *CRC. Crit. Rev. Plant Sci.*, 23, 431–452.

TABLE S3. Database used to perform meta-regression analyses. OM: Organic Matter. SMD: Standardized Mean Difference between the response variable in the invaded and control site. Var.: Variability in SMD. Ref: Literature references that can be consulted in Table S2.

Invasive Species	Trophic Position Invader	Response Variable	Response Functional Group	SMD	Var.	Habitat type	Type of Study	Ref
Batillaria australis	Filter-collector	Diversity	Benthic invertebrates	0,27	0,01	Estuary	Observational	138
Batillaria australis	Filter-collector	Diversity	Benthic invertebrates	0,12	0,01	Estuary	Observational	138
Batillaria australis	Filter-collector	Diversity	Benthic invertebrates	0,91	0,01	Estuary	Observational	138
Batillaria australis	Filter-collector	Diversity	Benthic invertebrates	0,81	0,01	Estuary	Observational	138
Bellamya chinensis	Filter-collector	Abundance	Phytoplankton	-1,60	0,49	Lake	Mesocosm	71
Bellamya chinensis	Filter-collector	Abundance	Phytoplankton	-0,88	0,38	Lake	Mesocosm	71
Corbicula fluminea	Filter-collector		Nutrients-N	0,52	0,72	Estuary	Observational	68
Corbicula fluminea	Filter-collector		Nutrients-N	-0,44	0,71	Estuary	Observational	68
Corbicula fluminea	Filter-collector		Nutrients-N	-0,10	0,67	Estuary	Observational	68
Corbicula fluminea	Filter-collector		Nutrients-N	-0,56	0,73	Estuary	Observational	68
Corbicula fluminea	Filter-collector		Nutrients-P	-0,09	0,67	Estuary	Observational	68
Corbicula fluminea	Filter-collector		Nutrients-P	-0,10	0,67	Estuary	Observational	68
Corbicula fluminea	Filter-collector		OM	1,37	1,07	Estuary	Observational	68
Corbicula fluminea	Filter-collector		OM	-0,32	0,69	Estuary	Observational	68
Corbicula fluminea	Filter-collector	Abundance	Benthic invertebrates	3,81	2,19	Estuary	Observational	68
Corbicula fluminea	Filter-collector	Abundance	Benthic invertebrates	3,09	1,61	Estuary	Observational	68
Corbicula fluminea	Filter-collector	Diversity	Benthic invertebrates	3,49	1,92	Estuary	Observational	68
Corbicula fluminea	Filter-collector	Diversity	Benthic invertebrates	9,31	10,60	Estuary	Observational	68
Corbicula fluminea	Filter-collector	Diversity	Benthic invertebrates	-2,02	0,97	Estuary	Observational	68
Corbicula fluminea	Filter-collector	Diversity	Benthic invertebrates	2,39	1,17	Estuary	Observational	68
Corbicula fluminea	Filter-collector	Abundance	Benthic invertebrates	0,30	0,24	Lake	Manipulative	148
Corbicula fluminea	Filter-collector	Diversity	Benthic invertebrates	3,13	0,52	Lake	Manipulative	148
Corbicula fluminea	Filter-collector	Abundance	Benthic invertebrates	0,55	0,24	Lake	Manipulative	148
Corbicula fluminea	Filter-collector	Diversity	Benthic invertebrates	2,17	0,37	Lake	Manipulative	148
Crassostrea gigas	Filter-collector	Abundance	Benthic invertebrates	4,04	0,92	Estuary	Manipulative	52
Crassostrea gigas	Filter-collector	Abundance	Benthic invertebrates	0,29	0,25	Estuary	Manipulative	52
Crassostrea gigas	Filter-collector	Abundance	Benthic invertebrates	2,19	0,45	Estuary	Manipulative	52
Crassostrea gigas	Filter-collector	Abundance	Benthic invertebrates	0,27	0,25	Estuary	Manipulative	52
Crassostrea gigas	Filter-collector	Diversity	Benthic invertebrates	2,51	0,51	Estuary	Manipulative	52
Crassostrea gigas	Filter-collector	Diversity	Benthic invertebrates	3,20	0,67	Estuary	Manipulative	52
Crassostrea gigas	Filter-collector	Diversity	Benthic invertebrates	5,62	1,54	Estuary	Manipulative	52
Crassostrea gigas	Filter-collector	Diversity	Benthic invertebrates	1,20	0,31	Estuary	Manipulative	52
Crassostrea gigas	Filter-collector	Diversity	Benthic invertebrates	0,92	0,28	Estuary	Manipulative	52
Crassostrea gigas	Filter-collector	Diversity	Benthic invertebrates	0,48	0,26	Estuary	Manipulative	52
Crassostrea gigas	Filter-collector	Diversity	Benthic invertebrates	2,45	0,49	Estuary	Manipulative	52
Crassostrea gigas	Filter-collector	Diversity	Benthic invertebrates	0,26	0,25	Estuary	Manipulative	52
Crassostrea gigas	Filter-collector	Diversity	Benthic invertebrates	1,43	0,33	Estuary	Manipulative	52
Crassostrea gigas	Filter-collector	Diversity	Benthic invertebrates	1,12	0,30	Estuary	Manipulative	52
Crassostrea gigas	Filter-collector	Diversity	Benthic invertebrates	0,37	0,26	Estuary	Manipulative	52
Crassostrea gigas	Filter-collector	Diversity	Benthic invertebrates	0,29	0,25	Estuary	Manipulative	52
Crassostrea gigas	Filter-collector	Diversity	Benthic invertebrates	2,88	0,59	Estuary	Manipulative	52
Crassostrea gigas	Filter-collector	Diversity	Benthic invertebrates	3,35	0,71	Estuary	Manipulative	52
Crassostrea gigas	Filter-collector	Diversity	Benthic invertebrates	1,22	0,31	Estuary	Manipulative	52
Crassostrea gigas	Filter-collector	Diversity	Benthic invertebrates	1,48	0,34	Estuary	Manipulative	52
Crassostrea gigas	Filter-collector	Abundance	Benthic invertebrates	1,93	0,40	Estuary	Manipulative	52
Crassostrea gigas	Filter-collector	Abundance	Benthic invertebrates	3,60	0,78	Estuary	Manipulative	52
Crassostrea gigas	Filter-collector	Abundance	Benthic invertebrates	1,31	0,32	Estuary	Manipulative	52
Crassostrea gigas	Filter-collector	Abundance	Benthic invertebrates	1,19	0,31	Estuary	Manipulative	52
Crassostrea gigas	Filter-collector		OM	1,14	0,65	Estuary	Manipulative	53
Crassostrea gigas	Filter-collector		OM	0,57	0,54	Estuary	Manipulative	53

Crassostrea gigas	Filter-collector		OM	1,12	0,65	Estuary	Manipulative	53
Crassostrea gigas	Filter-collector		OM	0,41	0,52	Estuary	Manipulative	53
Crassostrea gigas	Filter-collector		Nutrients-N	0,57	0,54	Estuary	Manipulative	53
Crassostrea gigas	Filter-collector		Nutrients-N	0,46	0,52	Estuary	Manipulative	53
Crassostrea gigas	Filter-collector		Nutrients-N	0,46	0,52	Estuary	Manipulative	53
Crassostrea gigas	Filter-collector		Nutrients-N	0,42	0,52	Estuary	Manipulative	53
Crassostrea gigas	Filter-collector		OM	0,47	0,53	Estuary	Manipulative	53
Crassostrea gigas	Filter-collector		OM	0,49	0,53	Estuary	Manipulative	53
Crassostrea gigas	Filter-collector		OM	0,45	0,52	Estuary	Manipulative	53
Crassostrea gigas	Filter-collector		OM	0,50	0,53	Estuary	Manipulative	53
Crassostrea gigas	Filter-collector	Abundance	Benthic invertebrates	2,33	0,83	Estuary	Observational	90
Crassostrea gigas	Filter-collector	Abundance	Benthic invertebrates	4,68	2,14	Estuary	Observational	90
Crassostrea gigas	Filter-collector	Diversity	Benthic invertebrates	7,88	5,34	Estuary	Observational	90
Crassostrea gigas	Filter-collector	Diversity	Benthic invertebrates	12,32	12,48	Estuary	Observational	90
Dreissena polymorpha	Filter-collector	Diversity	Benthic invertebrates	1,44	0,18	Lake	Observational	6
Dreissena polymorpha	Filter-collector	Abundance	Benthic invertebrates	1,34	0,17	Lake	Observational	6
Dreissena polymorpha	Filter-collector	Abundance	Phytoplankton	-1,47	0,23	Lake	Observational	9
Dreissena polymorpha	Filter-collector	Abundance	Phytoplankton	-2,98	0,54	Lake	Observational	9
Dreissena polymorpha	Filter-collector	Abundance	Fish	0,35	0,51	Lake	Observational	11
Dreissena polymorpha	Filter-collector	Abundance	Fish	-1,74	0,85	Lake	Observational	11
Dreissena polymorpha	Filter-collector	Abundance	Benthic invertebrates	1,34	0,37	Lake	Mesocosm	15
Dreissena polymorpha	Filter-collector	Abundance	Benthic invertebrates	3,16	0,77	Lake	Mesocosm	15
Dreissena polymorpha	Filter-collector	Diversity	Benthic invertebrates	0,76	0,31	Lake	Mesocosm	15
Dreissena polymorpha	Filter-collector	Diversity	Benthic invertebrates	3,21	0,79	Lake	Mesocosm	15
Dreissena polymorpha	Filter-collector	Abundance	Benthic invertebrates	1,65	0,50	Lake	Observational	17
Dreissena polymorpha	Filter-collector	Diversity	Benthic invertebrates	1,19	0,42	Lake	Observational	17
Dreissena polymorpha	Filter-collector	Abundance	Benthic invertebrates	2,74	2,28	Lake	Observational	51
Dreissena polymorpha	Filter-collector	Abundance	Zooplankton	-5,36	0,77	Lake	Observational	22
Dreissena polymorpha	Filter-collector	Abundance	Zooplankton	-5,12	0,71	Lake	Observational	22
Dreissena polymorpha	Filter-collector	Abundance	Zooplankton	-5,52	0,80	Lake	Observational	22
Dreissena polymorpha	Filter-collector	Abundance	Zooplankton	-4,45	0,57	Lake	Observational	22
Dreissena polymorpha	Filter-collector	Abundance	Zooplankton	-2,47	0,28	Lake	Observational	22
Dreissena polymorpha	Filter-collector	Abundance	Zooplankton	-3,73	0,45	Lake	Observational	22
Dreissena polymorpha	Filter-collector	Abundance	Zooplankton	-14,47	4,65	Lake	Observational	22
Dreissena polymorpha	Filter-collector	Abundance	Zooplankton	-14,80	4,86	Lake	Observational	22
Dreissena polymorpha	Filter-collector	Abundance	Zooplankton	-14,67	4,78	Lake	Observational	22
Dreissena polymorpha	Filter-collector		Nutrients-N	0,05	1,00	River	Observational	28
Dreissena polymorpha	Filter-collector		Nutrients-P	0,42	1,18	River	Observational	28
Dreissena polymorpha	Filter-collector	Abundance	Zooplankton	-0,16	0,70	River	Observational	28
Dreissena polymorpha	Filter-collector	Abundance	Zooplankton	-1,22	0,93	River	Observational	28
Dreissena polymorpha	Filter-collector	Abundance	Zooplankton	-0,72	0,36	Lake	Mesocosm	42
Dreissena polymorpha	Filter-collector	Abundance	Zooplankton	0,48	0,35	Lake	Mesocosm	42
Dreissena polymorpha	Filter-collector		Nutrients-P	-1,08	0,22	River	Observational	43
Dreissena polymorpha	Filter-collector		Nutrients-N	8,05	1,96	River	Observational	43
Dreissena polymorpha	Filter-collector	Abundance	Phytoplankton	-4,94	0,85	River	Observational	43
Dreissena polymorpha	Filter-collector		Turbidity	-1,65	0,26	River	Observational	43
Dreissena polymorpha	Filter-collector	Abundance	Benthic invertebrates	4,00	2,16	Lake	Observational	59
Dreissena polymorpha	Filter-collector	Abundance	Benthic invertebrates	10,37	10,82	Lake	Observational	59
Dreissena polymorpha	Filter-collector	Abundance	Benthic invertebrates	1,37	0,38	Lake	Manipulative	65
Dreissena polymorpha	Filter-collector	Diversity	Benthic invertebrates	1,64	0,42	Lake	Manipulative	65
Dreissena polymorpha	Filter-collector	Diversity	Benthic invertebrates	0,24	0,29	Lake	Manipulative	65
Dreissena polymorpha	Filter-collector		Nutrients-P	-0,91	0,48	Lake	Observational	67
Dreissena polymorpha	Filter-collector		Nutrients-P	-2,11	0,77	Lake	Observational	67
Dreissena polymorpha	Filter-collector		Nutrients-P	-1,52	0,60	Lake	Observational	67
Dreissena polymorpha	Filter-collector		Nutrients-N	-1,55	0,61	Lake	Observational	67
Dreissena polymorpha	Filter-collector		Nutrients-N	-0,31	0,42	Lake	Observational	67
Dreissena polymorpha	Filter-collector		Nutrients-N	-1,55	0,61	Lake	Observational	67

Dreissena polymorpha	Filter-collector		Turbidity	-0,06	0,42	Lake	Observational	67
Dreissena polymorpha	Filter-collector		Turbidity	-0,07	0,42	Lake	Observational	67
Dreissena polymorpha	Filter-collector		Turbidity	-0,17	0,42	Lake	Observational	67
Dreissena polymorpha	Filter-collector	Abundance	Phytoplankton	-1,07	0,51	Lake	Observational	67
Dreissena polymorpha	Filter-collector	Abundance	Phytoplankton	-1,24	0,54	Lake	Observational	67
Dreissena polymorpha	Filter-collector	Abundance	Phytoplankton	-1,63	0,63	Lake	Observational	67
Dreissena polymorpha	Filter-collector	Abundance	Fish	-0,43	0,43	Lake	Observational	67
Dreissena polymorpha	Filter-collector	Abundance	Zooplankton	0,18	0,42	Lake	Observational	67
Dreissena polymorpha	Filter-collector	Abundance	Zooplankton	0,39	0,43	Lake	Observational	67
Dreissena polymorpha	Filter-collector	Abundance	Benthic invertebrates	3,56	1,41	Lake	Manipulative	87
Dreissena polymorpha	Filter-collector	Abundance	Phytoplankton	0,11	0,40	Lake	Manipulative	87
Dreissena polymorpha	Filter-collector	Abundance	Benthic invertebrates	2,02	0,37	Lake	Manipulative	104
Dreissena polymorpha	Filter-collector		OM	2,49	0,44	Lake	Manipulative	104
Dreissena polymorpha	Filter-collector		OM	1,11	0,27	Lake	Manipulative	104
Dreissena polymorpha	Filter-collector		OM	1,11	0,27	Lake	Manipulative	104
Dreissena polymorpha	Filter-collector	Abundance	Benthic invertebrates	0,22	0,68	Lake	Observational	105
Dreissena polymorpha	Filter-collector	Abundance	Benthic invertebrates	0,17	0,67	Lake	Observational	105
Dreissena polymorpha	Filter-collector	Abundance	Benthic invertebrates	0,21	0,68	Lake	Observational	105
Dreissena polymorpha	Filter-collector	Abundance	Benthic invertebrates	-0,84	0,82	Lake	Observational	105
Dreissena polymorpha	Filter-collector	Abundance	Benthic invertebrates	-1,75	1,32	Lake	Observational	105
Dreissena polymorpha	Filter-collector	Abundance	Benthic invertebrates	-1,16	0,95	Lake	Observational	105
Dreissena polymorpha	Filter-collector	Diversity	Benthic invertebrates	5,02	1,86	Lake	Observational	105
Dreissena polymorpha	Filter-collector	Diversity	Benthic invertebrates	-1,43	0,56	Lake	Observational	105
Dreissena polymorpha	Filter-collector		Nutrients-N	1,16	0,51	Lake	Mesocosm	110
Dreissena polymorpha	Filter-collector		Nutrients-N	1,10	0,50	Lake	Mesocosm	110
Dreissena polymorpha	Filter-collector	Abundance	Phytoplankton	-0,35	0,41	Lake	Mesocosm	110
Dreissena polymorpha	Filter-collector	Abundance	Phytoplankton	-0,08	0,40	Lake	Mesocosm	110
Dreissena polymorpha	Filter-collector	Abundance	Zooplankton	-1,16	0,41	River	Observational	112
Dreissena polymorpha	Filter-collector	Abundance	Zooplankton	-11,72	8,64	River	Observational	112
Dreissena polymorpha	Filter-collector	Abundance	Benthic invertebrates	1,64	0,32	Lake	Observational	117
Dreissena polymorpha	Filter-collector	Diversity	Benthic invertebrates	2,17	0,39	Lake	Observational	117
Dreissena polymorpha	Filter-collector	Abundance	Benthic invertebrates	5,72	1,21	Lake	Manipulative	119
Dreissena polymorpha	Filter-collector	Abundance	Benthic invertebrates	1,33	0,25	Lake	Observational	119
Dreissena polymorpha	Filter-collector	Abundance	Benthic invertebrates	6,67	1,57	Lake	Manipulative	119
Dreissena polymorpha	Filter-collector	Abundance	Benthic invertebrates	2,95	0,47	Lake	Manipulative	119
Dreissena polymorpha	Filter-collector	Abundance	Benthic invertebrates	2,62	0,41	Lake	Manipulative	119
Dreissena polymorpha	Filter-collector	Abundance	Benthic invertebrates	3,14	1,19	Lake	Observational	129
Dreissena polymorpha	Filter-collector	Abundance	Benthic invertebrates	2,50	0,90	Lake	Observational	129
Dreissena polymorpha	Filter-collector	Abundance	Fish	1,52	0,24	Lake	Observational	76
Dreissena polymorpha	Filter-collector	Abundance	Fish	1,90	0,28	Lake	Observational	76
Dreissena polymorpha	Filter-collector	Abundance	Fish	0,96	0,22	Lake	Observational	76
Dreissena polymorpha	Filter-collector	Abundance	Fish	-0,60	0,21	Lake	Observational	76
Dreissena polymorpha	Filter-collector	Abundance	Fish	-1,18	0,23	Lake	Observational	76
Dreissena polymorpha	Filter-collector	Abundance	Fish	-0,10	0,19	Lake	Observational	76
Dreissena polymorpha	Filter-collector	Abundance	Fish	1,87	0,61	Lake	Observational	78
Dreissena polymorpha	Filter-collector	Abundance	Fish	1,26	0,48	Lake	Observational	78
Dreissena polymorpha	Filter-collector	Abundance	Fish	1,18	0,46	Lake	Observational	78
Dreissena polymorpha	Filter-collector	Abundance	Fish	2,51	0,80	Lake	Observational	78
Dreissena polymorpha	Filter-collector	Abundance	Fish	3,73	1,32	Lake	Observational	78
Dreissena polymorpha	Filter-collector	Abundance	Fish	-0,33	0,37	Lake	Observational	78
Dreissena polymorpha	Filter-collector	Abundance	Fish	-2,84	0,92	Lake	Observational	78
Dreissena polymorpha	Filter-collector	Abundance	Fish	-2,39	0,76	Lake	Observational	78
Dreissena polymorpha	Filter-collector	Abundance	Fish	-2,03	0,65	Lake	Observational	78
Dreissena polymorpha	Filter-collector		Turbidity	-0,65	0,16	Lake	Observational	111
Dreissena polymorpha	Filter-collector		Nutrients-P	-6,12	0,92	Lake	Observational	111
Dreissena polymorpha	Filter-collector	Abundance	Macrophytes	0,06	0,67	Lake	Observational	111
Dreissena polymorpha	Filter-collector	Abundance	Macrophytes	6,80	1,10	Lake	Observational	111

Dreissena polymorpha	Filter-collector	Abundance	Macrophytes	-0,63	0,15	Lake	Observational	126
Dreissena polymorpha	Filter-collector	Abundance	Macrophytes	0,81	0,16	Lake	Observational	126
Dreissena spp.	Filter-collector	Abundance	Benthic invertebrates	6,57	0,67	Lake	Observational	93
Dreissena spp.	Filter-collector	Abundance	Benthic invertebrates	-1,25	0,08	Lake	Observational	93
Dreissena spp.	Filter-collector	Abundance	Benthic invertebrates	2,33	0,07	Lake	Observational	110
Ficopomatus enigmaticus	Filter-collector	Abundance	Macrophytes	8,46	0,82	Estuary	Observational	14
Ficopomatus enigmaticus	Filter-collector	Abundance	Phytoplankton	-0,41	0,41	Estuary	Mesocosm	24
Ficopomatus enigmaticus	Filter-collector	Abundance	Phytoplankton	-1,59	0,60	Estuary	Mesocosm	24
Ficopomatus enigmaticus	Filter-collector	Abundance	Phytoplankton	-0,36	0,41	Estuary	Mesocosm	24
Ficopomatus enigmaticus	Filter-collector		Turbidity	-0,27	0,41	Estuary	Mesocosm	24
Ficopomatus enigmaticus	Filter-collector		Turbidity	-0,82	0,45	Estuary	Mesocosm	24
Ficopomatus enigmaticus	Filter-collector		Turbidity	-0,18	0,40	Estuary	Mesocosm	24
Ficopomatus enigmaticus	Filter-collector		OM	42,48	55,69	Estuary	Observational	23
Ficopomatus enigmaticus	Filter-collector	Abundance	Phytoplankton	-2,08	0,50	Estuary	Mesocosm	23
Ficopomatus enigmaticus	Filter-collector		Turbidity	-1,67	0,42	Estuary	Mesocosm	23
Ficopomatus enigmaticus	Filter-collector		OM	1,31	0,37	Estuary	Mesocosm	23
Limnoperla fortunei	Filter-collector	Abundance	Benthic invertebrates	-0,39	0,41	Estuary	Manipulative	136
Nuttallia obscurata	Filter-collector		OM	1,86	1,41	Estuary	Manipulative	32
Nuttallia obscurata	Filter-collector		Nutrients-N	0,55	0,73	Estuary	Manipulative	32
Nuttallia obscurata	Filter-collector		OM	1,69	1,28	Estuary	Manipulative	32
Nuttallia obscurata	Filter-collector		Nutrients-N	-0,04	0,67	Estuary	Manipulative	32
Potamopyrgus antipodarum	Filter-collector	Abundance	Phytoplankton	-0,66	1,44	Lake	Mesocosm	83
Potamopyrgus antipodarum	Filter-collector	Abundance	Phytoplankton	-0,76	1,57	Lake	Mesocosm	83
Potamopyrgus antipodarum	Filter-collector	Abundance	Phytoplankton	0,24	1,06	Lake	Mesocosm	83
Potamopyrgus antipodarum	Filter-collector	Abundance	Phytoplankton	-3,30	11,86	Lake	Mesocosm	83
Tapes philippinarum	Filter-collector	Abundance	Benthic invertebrates	-0,17	0,34	Estuary	Manipulative	95
Tapes philippinarum	Filter-collector	Diversity	Benthic invertebrates	0,22	0,34	Estuary	Manipulative	95
Cyprinus carpio	Omnivore	Abundance	Macrophytes	-2,91	0,04	Lake	Observational	8
Cyprinus carpio	Omnivore		Turbidity	1,11	0,33	Lake	Manipulative	41
Cyprinus carpio	Omnivore		Turbidity	0,52	0,31	Lake	Manipulative	41
Cyprinus carpio	Omnivore		Nutrients-N	3,45	1,89	Lake	Manipulative	41
Cyprinus carpio	Omnivore		Nutrients-N	0,68	0,40	Lake	Manipulative	41
Cyprinus carpio	Omnivore		Nutrients-N	0,48	0,53	Lake	Manipulative	41
Cyprinus carpio	Omnivore		Nutrients-N	0,56	0,39	Lake	Manipulative	41
Cyprinus carpio	Omnivore		Nutrients-P	1,11	0,45	Lake	Manipulative	41
Cyprinus carpio	Omnivore		Nutrients-P	0,47	0,39	Lake	Manipulative	41
Cyprinus carpio	Omnivore		Nutrients-P	2,31	0,70	Lake	Manipulative	41
Cyprinus carpio	Omnivore		Nutrients-P	1,04	0,44	Lake	Manipulative	41
Cyprinus carpio	Omnivore	Abundance	Phytoplankton	0,33	0,38	Lake	Manipulative	41
Cyprinus carpio	Omnivore	Abundance	Phytoplankton	0,48	0,39	Lake	Manipulative	41
Cyprinus carpio	Omnivore	Abundance	Phytoplankton	1,37	0,49	Lake	Manipulative	41
Cyprinus carpio	Omnivore	Abundance	Phytoplankton	0,60	0,40	Lake	Manipulative	41
Cyprinus carpio	Omnivore		Turbidity	3,23	1,72	Lake	Mesocosm	49
Cyprinus carpio	Omnivore		Turbidity	1,70	0,84	Lake	Mesocosm	49
Cyprinus carpio	Omnivore		Nutrients-N	0,80	0,57	Lake	Mesocosm	49
Cyprinus carpio	Omnivore		Nutrients-N	0,64	0,55	Lake	Mesocosm	49
Cyprinus carpio	Omnivore		Nutrients-N	4,37	2,73	Lake	Mesocosm	49
Cyprinus carpio	Omnivore		Nutrients-N	2,12	1,02	Lake	Mesocosm	49
Cyprinus carpio	Omnivore		Nutrients-P	3,34	1,80	Lake	Mesocosm	49
Cyprinus carpio	Omnivore	Abundance	Phytoplankton	2,92	1,49	Lake	Mesocosm	49
Cyprinus carpio	Omnivore	Abundance	Phytoplankton	-1,48	0,75	Lake	Mesocosm	49
Cyprinus carpio	Omnivore	Abundance	Macrophytes	-0,81	0,58	Lake	Mesocosm	49
Cyprinus carpio	Omnivore	Abundance	Macrophytes	-0,77	0,57	Lake	Mesocosm	49
Cyprinus carpio	Omnivore	Abundance	Benthic invertebrates	-2,89	1,47	Lake	Mesocosm	49
Cyprinus carpio	Omnivore	Abundance	Benthic invertebrates	-2,37	1,16	Lake	Mesocosm	49
Cyprinus carpio	Omnivore	Abundance	Zooplankton	1,22	0,67	Lake	Mesocosm	49
Cyprinus carpio	Omnivore	Abundance	Zooplankton	0,93	0,60	Lake	Mesocosm	49

Cyprinus carpio	Omnivore	Abundance	Zooplankton	2,08	1,00	Lake	Mesocosm	49
Cyprinus carpio	Omnivore	Abundance	Zooplankton	1,23	0,68	Lake	Mesocosm	49
Cyprinus carpio	Omnivore	Abundance	Zooplankton	-0,81	0,58	Lake	Mesocosm	49
Cyprinus carpio	Omnivore	Abundance	Zooplankton	-0,91	0,60	Lake	Mesocosm	49
Cyprinus carpio	Omnivore	Abundance	Macrophytes	1,93	0,47	Lake	Manipulative	81
Cyprinus carpio	Omnivore	Abundance	Macrophytes	-2,16	0,51	Lake	Manipulative	81
Cyprinus carpio	Omnivore		Turbidity	4,58	5,17	Lake	Manipulative	97
Cyprinus carpio	Omnivore	Abundance	Phytoplankton	2,75	2,29	Lake	Manipulative	97
Cyprinus carpio	Omnivore		Nutrients-N	1,39	1,08	Lake	Manipulative	97
Cyprinus carpio	Omnivore		Nutrients-P	-1,92	1,46	Lake	Manipulative	97
Cyprinus carpio	Omnivore		Nutrients-N	-4,38	4,78	Lake	Manipulative	97
Cyprinus carpio	Omnivore	Abundance	Zooplankton	-0,52	0,72	Lake	Manipulative	97
Cyprinus carpio	Omnivore	Abundance	Zooplankton	1,92	1,46	Lake	Manipulative	97
Cyprinus carpio	Omnivore	Abundance	Zooplankton	1,83	1,38	Lake	Manipulative	97
Cyprinus carpio	Omnivore		Nutrients-P	0,31	0,47	Lake	Observational	150
Cyprinus carpio	Omnivore		Nutrients-P	0,53	0,48	Lake	Observational	150
Cyprinus carpio	Omnivore		Nutrients-N	-0,16	0,46	Lake	Observational	150
Cyprinus carpio	Omnivore		Nutrients-N	0,38	0,47	Lake	Observational	150
Cyprinus carpio	Omnivore		Nutrients-N	0,15	0,46	Lake	Observational	150
Cyprinus carpio	Omnivore		Nutrients-N	0,22	0,46	Lake	Observational	150
Cyprinus carpio	Omnivore		Turbidity	0,35	0,68	Lake	Observational	150
Cyprinus carpio	Omnivore		OM	0,46	0,69	Lake	Observational	150
Cyprinus carpio	Omnivore		Turbidity	0,29	0,46	Lake	Observational	150
Cyprinus carpio	Omnivore	Abundance	Phytoplankton	0,15	0,46	Lake	Observational	150
Cyprinus carpio	Omnivore	Abundance	Zooplankton	-0,19	0,46	Lake	Observational	150
Cyprinus carpio	Omnivore	Abundance	Zooplankton	-0,66	0,49	Lake	Observational	150
Cyprinus carpio	Omnivore	Abundance	Zooplankton	-0,60	0,48	Lake	Observational	150
Cyprinus carpio	Omnivore	Abundance	Macrophytes	-0,50	0,64	Lake	Observational	150
Cyprinus carpio	Omnivore	Abundance	Macrophytes	-0,63	0,66	Lake	Observational	150
Cyprinus carpio	Omnivore	Abundance	Macrophytes	-0,73	0,67	Lake	Observational	150
Cyprinus carpio	Omnivore	Abundance	Benthic invertebrates	-0,17	0,63	Lake	Observational	150
Cyprinus carpio	Omnivore	Diversity	Benthic invertebrates	-0,09	0,46	Lake	Observational	150
Cyprinus carpio	Omnivore	Abundance	Fish	0,41	0,64	Lake	Observational	150
Dikerogammarus pulex	Omnivore	Abundance	Benthic invertebrates	0,48	0,08	River	Observational	75
Dikerogammarus pulex	Omnivore	Diversity	Benthic invertebrates	-0,17	0,08	River	Observational	75
Dikerogammarus pulex	Omnivore	Diversity	Benthic invertebrates	-0,79	0,09	River	Observational	75
Gambusia affinis	Omnivore	Abundance	Benthic invertebrates	-2,26	1,76	Lake	Mesocosm	91
Gambusia affinis	Omnivore	Abundance	Benthic invertebrates	-0,90	0,84	Lake	Mesocosm	91
Gambusia affinis	Omnivore	Abundance	Zooplankton	0,52	0,72	Lake	Mesocosm	91
Gambusia affinis	Omnivore	Abundance	Zooplankton	-3,32	3,04	Lake	Mesocosm	91
Gambusia affinis	Omnivore	Abundance	Benthic invertebrates	-1,38	0,39	Lake	Manipulative	127
Gambusia affinis	Omnivore	Diversity	Benthic invertebrates	-1,16	0,22	Lake	Manipulative	127
Gambusia holbrooki	Omnivore	Abundance	Fish	-3,84	1,58	Estuary	Mesocosm	27
Gambusia holbrooki	Omnivore	Abundance	Fish	-8,70	6,43	Estuary	Mesocosm	27
Gambusia holbrooki	Omnivore	Abundance	Phytoplankton	-1,97	1,50	Lake	Manipulative	30
Gambusia holbrooki	Omnivore		Nutrients-N	1,90	1,44	Lake	Manipulative	30
Gambusia holbrooki	Omnivore	Abundance	Macrophytes	0,62	0,75	Lake	Manipulative	30
Gambusia holbrooki	Omnivore	Abundance	Zooplankton	-2,39	0,85	Lake	Mesocosm	116
Gambusia holbrooki	Omnivore	Abundance	Phytoplankton	2,34	0,84	Lake	Mesocosm	116
Gambusia holbrooki	Omnivore		Nutrients-N	1,75	0,64	Lake	Mesocosm	116
Gambusia holbrooki	Omnivore		Nutrients-P	0,15	0,40	Lake	Mesocosm	116
Hypostomus plecostomus	Omnivore	Abundance	Phytoplankton	-5,00	3,41	River	Manipulative	125
Hypostomus plecostomus	Omnivore		OM	-6,72	5,76	River	Manipulative	125
Hypostomus plecostomus	Omnivore	Abundance	Phytoplankton	-0,47	0,53	River	Manipulative	125
Hypostomus plecostomus	Omnivore		OM	1,19	0,66	River	Manipulative	125
Hypostomus plecostomus	Omnivore	Abundance	Phytoplankton	-2,09	1,01	River	Manipulative	125
Hypostomus plecostomus	Omnivore		OM	-0,04	0,50	River	Manipulative	125

Hypostomus plecostomus	Omnivore	Abundance	Phytoplankton	-1,51	0,77	River	Manipulative	125
Hypostomus plecostomus	Omnivore		OM	-0,79	0,57	River	Manipulative	125
Hypostomus plecostomus	Omnivore		OM	-10,25	12,73	River	Manipulative	125
Hypostomus plecostomus	Omnivore		OM	1,55	0,78	River	Manipulative	125
Hypostomus plecostomus	Omnivore		OM	-0,05	0,50	River	Manipulative	125
Hypostomus plecostomus	Omnivore		OM	-0,82	0,58	River	Manipulative	125
Orconectes rusticus	Omnivore	Abundance	Benthic invertebrates	-2,29	1,79	River	Observational	19
Orconectes rusticus	Omnivore	Abundance	Phytoplankton	1,40	1,09	River	Observational	19
Orconectes rusticus	Omnivore	Abundance	Macrophytes	-0,33	0,25	Lake	Observational	57
Orconectes rusticus	Omnivore	Abundance	Macrophytes	-0,48	0,26	Lake	Observational	57
Orconectes rusticus	Omnivore	Abundance	Macrophytes	-1,78	0,38	Lake	Observational	57
Orconectes rusticus	Omnivore	Abundance	Benthic invertebrates	0,02	0,40	Lake	Observational	57
Orconectes rusticus	Omnivore	Diversity	Benthic invertebrates	-0,02	0,40	Lake	Observational	57
Orconectes rusticus	Omnivore	Abundance	Phytoplankton	0,38	0,34	Lake	Mesocosm	71
Orconectes rusticus	Omnivore	Abundance	Phytoplankton	0,71	0,36	Lake	Mesocosm	71
Orconectes rusticus	Omnivore	Abundance	Macrophytes	-1,92	0,93	Lake	Manipulative	92
Orconectes rusticus	Omnivore	Abundance	Benthic invertebrates	-0,91	0,60	Lake	Manipulative	92
Orconectes rusticus	Omnivore	Abundance	Phytoplankton	-0,35	0,51	Lake	Manipulative	92
Orconectes rusticus	Omnivore	Abundance	Macrophytes	-0,90	0,33	Lake	Observational	114
Orconectes rusticus	Omnivore	Diversity	Macrophytes	-2,00	0,49	Lake	Observational	114
Orconectes rusticus	Omnivore		OM	-1,04	0,34	Lake	Observational	114
Oreochromis niloticus	Omnivore		Nutrients-N	2,40	6,78	Lake	Manipulative	47
Oreochromis niloticus	Omnivore		Nutrients-N	8,69	76,59	Lake	Manipulative	47
Oreochromis niloticus	Omnivore		Nutrients-P	4,57	21,85	Lake	Manipulative	47
Oreochromis niloticus	Omnivore	Abundance	Phytoplankton	7,54	57,81	Lake	Manipulative	47
Oreochromis niloticus	Omnivore		Turbidity	2,12	5,49	Lake	Manipulative	47
Oreochromis niloticus	Omnivore	Diversity	Fish	1,19	0,05	Estuary	Observational	89
Oreochromis niloticus	Omnivore	Diversity	Fish	-1,68	0,06	Estuary	Observational	89
Pacifastacus leniusculus	Omnivore	Abundance	Benthic invertebrates	-0,17	0,28	River	Observational	37
Pacifastacus leniusculus	Omnivore	Diversity	Benthic invertebrates	-0,48	0,29	River	Observational	37
Pacifastacus leniusculus	Omnivore	Diversity	Benthic invertebrates	-0,39	0,28	River	Observational	37
Pacifastacus leniusculus	Omnivore	Abundance	Benthic invertebrates	-1,40	0,56	Lake	Manipulative	108
Pacifastacus leniusculus	Omnivore	Abundance	Macrophytes	-4,74	2,19	Lake	Manipulative	108
Pacifastacus leniusculus	Omnivore	Abundance	Phytoplankton	0,88	0,46	Lake	Manipulative	108
Pacifastacus leniusculus	Omnivore	Abundance	Fish	1,81	0,30	River	Observational	121
Pacifastacus leniusculus	Omnivore	Abundance	Fish	1,67	0,29	River	Observational	121
Pacifastacus leniusculus	Omnivore	Abundance	Fish	-0,78	0,22	River	Observational	121
Pacifastacus leniusculus	Omnivore	Abundance	Fish	-2,45	0,38	River	Observational	121
Pomacea canaliculata	Omnivore	Abundance	Macrophytes	-6,00	2,86	Lake	Observational	31
Pomacea canaliculata	Omnivore	Diversity	Macrophytes	-1,41	0,53	Lake	Observational	31
Pomacea canaliculata	Omnivore	Abundance	Phytoplankton	0,91	0,45	Lake	Observational	31
Pomacea canaliculata	Omnivore		Nutrients-P	1,55	0,56	Lake	Observational	31
Pomacea canaliculata	Omnivore		Nutrients-N	1,01	0,46	Lake	Observational	31
Pomacea canaliculata	Omnivore	Abundance	Macrophytes	-2,91	0,43	Lake	Manipulative	31
Pomacea canaliculata	Omnivore	Abundance	Phytoplankton	0,76	0,24	Lake	Manipulative	31
Procambarus clarkii	Omnivore	Abundance	Phytoplankton	0,85	0,58	River	Manipulative	79
Procambarus clarkii	Omnivore	Abundance	Phytoplankton	-1,32	0,70	River	Manipulative	79
Procambarus clarkii	Omnivore	Abundance	Benthic invertebrates	0,15	0,50	River	Manipulative	79
Procambarus clarkii	Omnivore	Abundance	Benthic invertebrates	-1,17	0,66	River	Manipulative	79
Procambarus clarkii	Omnivore	Diversity	Benthic invertebrates	-1,25	0,68	River	Manipulative	79
Procambarus clarkii	Omnivore	Diversity	Benthic invertebrates	-1,52	0,67	River	Manipulative	79
Procambarus clarkii	Omnivore	Diversity	Benthic invertebrates	-0,08	0,50	River	Manipulative	79
Procambarus clarkii	Omnivore	Diversity	Benthic invertebrates	0,80	0,51	River	Manipulative	79
Procambarus clarkii	Omnivore	Abundance	Phytoplankton	-1,03	0,62	River	Manipulative	80
Procambarus clarkii	Omnivore		OM	-2,72	1,36	River	Manipulative	80
Procambarus clarkii	Omnivore	Abundance	Benthic invertebrates	1,05	0,63	River	Manipulative	80
Procambarus clarkii	Omnivore	Abundance	Benthic invertebrates	-1,23	0,68	River	Manipulative	80

Procambarus clarkii	Omnivore		Turbidity	1,71	1,29	Lake	Manipulative	97
Procambarus clarkii	Omnivore	Abundance	Phytoplankton	1,66	1,26	Lake	Manipulative	97
Procambarus clarkii	Omnivore		Nutrients-N	1,30	1,03	Lake	Manipulative	97
Procambarus clarkii	Omnivore		Nutrients-P	-0,95	0,86	Lake	Manipulative	97
Procambarus clarkii	Omnivore		Nutrients-N	-1,61	1,22	Lake	Manipulative	97
several fish spp	Omnivore	Diversity	Fish	-0,12	0,09	Lake	Observational	5
several fish spp	Omnivore	Diversity	Fish	0,41	0,12	Lake	Manipulative	5
Abramis brama	Predator		Turbidity	0,22	0,40	Lake	Observational	143
Abramis brama	Predator		Nutrients-P	0,86	0,46	Lake	Observational	143
Abramis brama	Predator		Nutrients-N	2,64	0,95	Lake	Observational	143
Abramis brama	Predator		Nutrients-N	0,88	0,46	Lake	Observational	143
Agosia chrysogater	Predator	Abundance	Benthic invertebrates	0,32	0,34	River	Manipulative	55
Agosia chrysogater	Predator	Abundance	Benthic invertebrates	0,42	0,34	River	Manipulative	55
Agosia chrysogater	Predator	Abundance	Benthic invertebrates	-0,88	0,38	River	Manipulative	55
Agosia chrysogater	Predator	Abundance	Benthic invertebrates	-0,18	0,34	River	Manipulative	55
Agosia chrysogater	Predator	Abundance	Benthic invertebrates	-2,54	0,72	River	Manipulative	55
Agosia chrysogater	Predator	Abundance	Benthic invertebrates	-2,21	0,63	River	Manipulative	55
Agosia chrysogater	Predator	Abundance	Benthic invertebrates	0,03	0,33	River	Manipulative	55
Agosia chrysogater	Predator	Abundance	Benthic invertebrates	0,26	0,34	River	Manipulative	55
Agosia chrysogater	Predator	Abundance	Benthic invertebrates	-0,38	0,34	River	Manipulative	55
Agosia chrysogater	Predator	Abundance	Benthic invertebrates	-0,35	0,34	River	Manipulative	55
Agosia chrysogater	Predator	Abundance	Benthic invertebrates	-2,76	0,79	River	Manipulative	55
Agosia chrysogater	Predator	Abundance	Benthic invertebrates	5,86	2,41	River	Manipulative	55
Agosia chrysogater	Predator	Abundance	Benthic invertebrates	-1,74	0,52	River	Manipulative	55
Agosia chrysogater	Predator	Abundance	Benthic invertebrates	2,08	0,59	River	Manipulative	55
Agosia chrysogater	Predator	Abundance	Benthic invertebrates	-1,28	0,43	River	Manipulative	55
Agosia chrysogater	Predator	Abundance	Benthic invertebrates	-1,70	0,51	River	Manipulative	55
Agosia chrysogater	Predator	Abundance	Benthic invertebrates	-1,43	0,46	River	Manipulative	55
Agosia chrysogater	Predator	Abundance	Benthic invertebrates	-1,37	0,45	River	Manipulative	55
Agosia chrysogater	Predator	Abundance	Benthic invertebrates	-1,93	0,56	River	Manipulative	55
Agosia chrysogater	Predator	Abundance	Benthic invertebrates	-3,53	1,09	River	Manipulative	55
Alosa pseudoharengus	Predator	Abundance	Zooplankton	-0,90	0,06	Lake	Manipulative	115
Alosa pseudoharengus	Predator	Abundance	Phytoplankton	-0,11	0,05	Lake	Manipulative	115
Alosa pseudoharengus	Predator		Nutrients-P	0,05	0,05	Lake	Observational	115
Bythotrephes longimanus	Predator	Abundance	Phytoplankton	1,27	0,45	Lake	Observational	10
Bythotrephes longimanus	Predator	Abundance	Phytoplankton	1,39	0,89	Lake	Observational	10
Bythotrephes longimanus	Predator	Abundance	Zooplankton	1,24	0,43	Lake	Observational	21
Bythotrephes longimanus	Predator		Turbidity	-0,03	0,53	Lake	Observational	50
Bythotrephes longimanus	Predator		Nutrients-P	-1,09	0,67	Lake	Observational	50
Bythotrephes longimanus	Predator	Abundance	Phytoplankton	-0,16	0,54	Lake	Observational	50
Bythotrephes longimanus	Predator	Abundance	Phytoplankton	-0,64	0,42	Lake	Observational	50
Bythotrephes longimanus	Predator	Diversity	Zooplankton	-0,18	0,04	Lake	Observational	75
Bythotrephes longimanus	Predator	Diversity	Zooplankton	-0,27	0,04	Lake	Observational	75
Bythotrephes longimanus	Predator	Diversity	Zooplankton	0,02	0,04	Lake	Observational	75
Bythotrephes longimanus	Predator	Diversity	Zooplankton	0,20	0,04	Lake	Observational	75
Bythotrephes longimanus	Predator	Diversity	Zooplankton	0,10	0,04	Lake	Observational	75
Bythotrephes longimanus	Predator	Diversity	Zooplankton	0,16	0,04	Lake	Observational	75
Bythotrephes longimanus	Predator	Abundance	Zooplankton	-0,79	0,25	Lake	Observational	102
Bythotrephes longimanus	Predator	Abundance	Zooplankton	-0,61	0,54	Lake	Observational	133
Bythotrephes longimanus	Predator	Abundance	Zooplankton	-2,19	1,06	Lake	Observational	133
Bythotrephes longimanus	Predator	Abundance	Zooplankton	-4,59	2,95	Lake	Observational	133
Bythotrephes longimanus	Predator	Abundance	Phytoplankton	-1,04	0,75	Lake	Observational	133
Bythotrephes longimanus	Predator		Nutrients-P	-1,47	0,46	Lake	Observational	134
Bythotrephes longimanus	Predator	Abundance	Phytoplankton	-1,12	0,41	Lake	Observational	134
Bythotrephes longimanus	Predator	Diversity	Zooplankton	-1,13	0,41	Lake	Observational	134
Bythotrephes longimanus	Predator	Diversity	Zooplankton	-0,74	0,38	Lake	Observational	134
Bythotrephes longimanus	Predator	Abundance	Zooplankton	-1,02	0,40	Lake	Observational	134

Bythotrephes longimanus	Predator		OM	-0,34	0,21	Lake	Observational	135
Bythotrephes longimanus	Predator		Nutrients-N	1,23	0,25	Lake	Observational	135
Bythotrephes longimanus	Predator		Nutrients-N	0,60	0,22	Lake	Observational	135
Bythotrephes longimanus	Predator		Nutrients-P	-1,04	0,24	Lake	Observational	135
Bythotrephes longimanus	Predator	Abundance	Zooplankton	-0,93	0,26	Lake	Observational	135
Centrarchids	Predator	Diversity	Fish	-0,53	0,16	River	Observational	25
Centrarchids	Predator	Abundance	Fish	-0,72	0,17	River	Observational	25
Cercopagis pengoi	Predator	Abundance	Zooplankton	-1,18	0,42	Lake	Observational	22
Cercopagis pengoi	Predator	Abundance	Zooplankton	-3,99	1,12	Lake	Observational	22
Cercopagis pengoi	Predator	Abundance	Zooplankton	-2,85	0,74	Lake	Observational	22
Cercopagis pengoi	Predator	Diversity	Zooplankton	0,84	0,46	Lake	Observational	129
Cercopagis pengoi	Predator	Diversity	Zooplankton	0,45	0,42	Lake	Observational	130
Cichla kelberi	Predator	Abundance	Fish	-1,18	0,15	Lake	Observational	113
Cichla kelberi	Predator	Diversity	Fish	-1,38	0,15	Lake	Observational	113
Cichla ocellaris	Predator	Abundance	Fish	-1,33	0,62	Lake	Observational	99
Cichla ocellaris	Predator	Abundance	Zooplankton	1,32	0,61	Lake	Observational	99
Cichla ocellaris	Predator	Abundance	Zooplankton	0,79	0,51	Lake	Observational	99
Cichla ocellaris	Predator	Abundance	Zooplankton	0,61	0,49	Lake	Observational	99
Cichla ocellaris	Predator	Abundance	Zooplankton	1,35	0,62	Lake	Observational	99
Cichla ocellaris	Predator	Abundance	Phytoplankton	0,60	0,48	Lake	Observational	99
Cichla ocellaris	Predator	Diversity	Fish	-2,28	0,94	Lake	Observational	99
Cichla ocellaris	Predator	Diversity	Zooplankton	0,81	0,51	Lake	Observational	99
Cichla ocellaris	Predator		Nutrients-P	3,55	1,64	Lake	Observational	99
Cichla ocellaris	Predator		Nutrients-N	0,53	0,48	Lake	Observational	99
Cichla ocellaris	Predator		Turbidity	0,14	0,45	Lake	Observational	99
Cichla ocellaris	Predator	Diversity	Phytoplankton	0,45	0,47	Lake	Observational	99
Clarias gariepinus	Predator	Diversity	Benthic invertebrates	-6,07	1,08	River	Manipulative	72
Clarias gariepinus	Predator	Diversity	Benthic invertebrates	-1,23	0,20	River	Manipulative	72
Clarias gariepinus	Predator	Diversity	Benthic invertebrates	-4,66	0,70	River	Manipulative	72
Clarias gariepinus	Predator	Diversity	Benthic invertebrates	-3,96	0,55	River	Manipulative	72
Clarias gariepinus	Predator	Abundance	Benthic invertebrates	1,09	0,20	River	Manipulative	72
Clarias gariepinus	Predator	Diversity	Benthic invertebrates	0,52	0,17	River	Manipulative	72
Gymnocephalus cernuus	Predator	Abundance	Benthic invertebrates	-1,40	0,12	Lake	Observational	58
Gymnocephalus cernuus	Predator	Abundance	Benthic invertebrates	0,58	0,10	Lake	Observational	58
Gymnocephalus cernuus	Predator	Abundance	Zooplankton	-0,37	0,10	Lake	Observational	58
Gymnocephalus cernuus	Predator	Abundance	Zooplankton	-0,93	0,11	Lake	Observational	58
Gymnocephalus cernuus	Predator	Abundance	Zooplankton	-0,39	0,10	Lake	Observational	58
Gymnocephalus cernuus	Predator	Abundance	Zooplankton	-2,08	0,15	Lake	Observational	58
Gymnocephalus cernuus	Predator	Abundance	Zooplankton	-1,26	0,12	Lake	Observational	58
Gymnocephalus cernuus	Predator	Abundance	Zooplankton	-3,69	0,27	Lake	Observational	58
Gymnocephalus cernuus	Predator	Abundance	Fish	1,27	0,12	Lake	Observational	58
Gymnocephalus cernuus	Predator	Abundance	Fish	4,34	0,34	Lake	Observational	58
Lepomis macrochirus	Predator	Diversity	Zooplankton	-2,50	1,23	Lake	Mesocosm	128
Lepomis macrochirus	Predator	Abundance	Phytoplankton	3,15	1,65	Lake	Mesocosm	128
Micropterus salmoides	Predator	Diversity	Fish	-0,92	0,34	Lake	Observational	94
Micropterus salmoides	Predator	Abundance	Fish	-2,10	0,50	Lake	Observational	94
Micropterus salmoides	Predator	Diversity	Fish	-0,42	0,71	Lake	Manipulative	140
Micropterus salmoides	Predator	Diversity	Fish	-0,54	0,57	Lake	Observational	140
Micropterus sp.	Predator	Diversity	Fish	-0,35	0,09	Lake	Observational	69
Misgurnus angullicaudatus	Predator		Nutrients-N	2,20	1,06	River	Mesocosm	74
Misgurnus angullicaudatus	Predator		Nutrients-N	0,50	0,53	River	Mesocosm	74
Misgurnus angullicaudatus	Predator		Nutrients-P	-11,06	14,73	River	Mesocosm	74
Misgurnus angullicaudatus	Predator		Turbidity	1,16	0,66	River	Mesocosm	74
Neogobius melanostomus	Predator	Abundance	Benthic invertebrates	-0,94	0,47	Lake	Manipulative	87
Neogobius melanostomus	Predator	Abundance	Phytoplankton	1,24	0,52	Lake	Manipulative	87
Neogobius melanostomus	Predator	Abundance	Benthic invertebrates	-2,13	1,03	River	Observational	77
Neogobius melanostomus	Predator	Diversity	Benthic invertebrates	-0,20	0,50	River	Observational	77

Neogobius melanostomus	Predator	Diversity	Benthic invertebrates	-0,36	0,52	River	Observational	77
Neogobius melanostomus	Predator	Abundance	Fish	-0,13	0,05	River	Observational	85
Neogobius melanostomus	Predator	Diversity	Fish	0,59	0,05	River	Observational	85
Neogobius melanostomus	Predator	Diversity	Fish	0,42	0,05	River	Observational	85
Neogobius melanostomus	Predator	Abundance	Benthic invertebrates	0,29	0,51	River	Observational	86
Neogobius melanostomus	Predator	Diversity	Benthic invertebrates	-1,78	0,87	River	Observational	86
Neogobius melanostomus	Predator	Diversity	Benthic invertebrates	-1,36	0,72	River	Observational	86
Neogobius melanostomus	Predator	Abundance	Fish	-0,60	0,54	River	Observational	86
Neogobius melanostomus	Predator	Diversity	Fish	-0,40	0,52	River	Observational	86
Neogobius melanostomus	Predator	Diversity	Fish	-0,12	0,50	River	Observational	86
Neogobius melanostomus	Predator		Turbidity	0,49	0,53	River	Observational	86
Notonecta undulata	Predator	Diversity	Zooplankton	-2,78	1,40	Lake	Mesocosm	128
Notonecta undulata	Predator	Abundance	Phytoplankton	2,39	1,16	Lake	Mesocosm	128
Oncorhynchus mykiss	Predator	Abundance	Benthic invertebrates	-1,65	0,99	River	Manipulative	13
Oncorhynchus mykiss	Predator	Abundance	Phytoplankton	5,76	5,60	River	Manipulative	13
Oncorhynchus mykiss	Predator	Abundance	Benthic invertebrates	-3,05	0,49	River	Observational	26
Oncorhynchus mykiss	Predator	Abundance	Benthic invertebrates	-4,83	0,92	River	Observational	26
Oncorhynchus mykiss	Predator	Abundance	Benthic invertebrates	-4,51	0,30	River	Observational	26
Oncorhynchus mykiss	Predator	Abundance	Benthic invertebrates	-5,58	1,16	River	Observational	26
Oncorhynchus mykiss	Predator	Abundance	Fish	-4,29	0,77	River	Observational	73
Oncorhynchus mykiss	Predator	Abundance	Benthic invertebrates	-0,50	1,25	River	Manipulative	73
Oncorhynchus mykiss	Predator	Abundance	Benthic invertebrates	-0,18	1,03	River	Manipulative	73
Oncorhynchus mykiss	Predator	Abundance	Benthic invertebrates	0,47	1,22	River	Manipulative	73
Oncorhynchus mykiss	Predator	Abundance	Benthic invertebrates	-0,01	1,00	River	Manipulative	73
Oncorhynchus mykiss	Predator	Abundance	Benthic invertebrates	-0,39	1,15	River	Observational	73
Oncorhynchus mykiss	Predator	Abundance	Benthic invertebrates	0,26	1,07	River	Observational	73
Oncorhynchus mykiss	Predator	Abundance	Benthic invertebrates	-1,18	2,39	River	Observational	73
Oncorhynchus mykiss	Predator	Abundance	Benthic invertebrates	-0,77	1,59	River	Observational	73
Oncorhynchus mykiss	Predator	Abundance	Benthic invertebrates	-1,40	0,56	Lake	Manipulative	108
Oncorhynchus mykiss	Predator	Abundance	Macrophytes	-0,67	0,44	Lake	Manipulative	108
Oncorhynchus mykiss	Predator	Abundance	Phytoplankton	0,80	0,45	Lake	Manipulative	108
Osmerus mordax	Predator	Abundance	Zooplankton	-0,38	1,15	Lake	Observational	16
Osmerus mordax	Predator	Abundance	Zooplankton	0,74	1,55	Lake	Observational	16
Perca fluvialitis	Predator	Abundance	Zooplankton	-0,11	0,10	Lake	Observational	58
Perca fluvialitis	Predator	Abundance	Zooplankton	0,34	0,10	Lake	Observational	58
Perca fluvialitis	Predator	Abundance	Zooplankton	-2,94	0,21	Lake	Observational	58
Perca fluvialitis	Predator	Abundance	Zooplankton	-11,13	1,72	Lake	Observational	58
Salmo trutta	Predator	Abundance	Phytoplankton	0,94	0,86	River	Manipulative	62
Salmo trutta	Predator	Abundance	Phytoplankton	-1,08	0,92	River	Manipulative	62
Salmo trutta	Predator	Abundance	Zooplankton	1,03	0,90	River	Manipulative	62
Salmo trutta	Predator	Abundance	Zooplankton	0,48	0,72	River	Manipulative	62
Salmo trutta	Predator	Abundance	Zooplankton	0,85	0,82	River	Manipulative	62
Salmo trutta	Predator	Abundance	Zooplankton	-0,20	0,68	River	Manipulative	62
Salmo trutta	Predator	Diversity	Benthic invertebrates	-0,43	0,71	River	Manipulative	62
Salmo trutta	Predator	Diversity	Benthic invertebrates	-0,09	0,67	River	Manipulative	62
Salmo trutta	Predator	Abundance	Benthic invertebrates	-0,36	0,70	River	Manipulative	62
Salmo trutta	Predator	Abundance	Benthic invertebrates	0,59	0,74	River	Manipulative	62
Salvelinus fontinalis	Predator	Abundance	Benthic invertebrates	-1,88	0,39	Lake	Observational	123
Salvelinus fontinalis	Predator	Abundance	Benthic invertebrates	-1,34	0,32	Lake	Observational	123
Salvelinus fontinalis	Predator	Abundance	Benthic invertebrates	-1,76	0,38	Lake	Observational	123
Salvelinus fontinalis	Predator	Abundance	Benthic invertebrates	-2,47	0,50	Lake	Observational	123
Salvelinus fontinalis	Predator	Abundance	Benthic invertebrates	-1,52	0,34	Lake	Observational	123
Salvelinus fontinalis	Predator	Abundance	Benthic invertebrates	-2,19	0,45	Lake	Observational	123
Salvelinus fontinalis	Predator	Abundance	Benthic invertebrates	-0,96	0,29	Lake	Observational	123
Salvelinus fontinalis	Predator	Diversity	Benthic invertebrates	-7,38	20,64	Lake	Observational	123
Salvelinus fontinalis	Predator	Abundance	Benthic invertebrates	-5,39	11,40	Lake	Observational	123
Salvelinus fontinalis	Predator	Abundance	Benthic invertebrates	-7,48	12,67	Lake	Observational	123

Salvelinus fontinalis	Predator	Diversity	Benthic invertebrates	-29,74	190,51	Lake	Observational	123
several fish spp	Predator	Abundance	Phytoplankton	-0,71	0,77	Lake	Manipulative	147
several fish spp	Predator	Abundance	Macrophytes	-1,20	0,98	Lake	Manipulative	147
several fish spp	Predator	Abundance	Phytoplankton	0,63	0,10	River	Observational	61
several fish spp	Predator	Abundance	Macrophytes	0,86	0,10	River	Observational	61
several fish spp	Predator	Diversity	Benthic invertebrates	-0,25	0,10	River	Observational	61
several fish spp	Predator	Diversity	Benthic invertebrates	-0,98	0,11	River	Observational	61
several fish spp	Predator	Abundance	Benthic invertebrates	0,28	0,10	River	Observational	61
several fish spp	Predator	Abundance	Benthic invertebrates	-0,17	0,10	River	Observational	61
several fish spp	Predator	Abundance	Benthic invertebrates	-0,28	0,10	River	Observational	61
several fish spp	Predator	Abundance	Benthic invertebrates	-0,08	0,10	River	Observational	61
several fish spp	Predator	Abundance	Zooplankton	0,29	0,10	River	Observational	61
several fish spp	Predator	Abundance	Benthic invertebrates	0,35	0,10	River	Observational	61
several fish spp	Predator	Abundance	Benthic invertebrates	-0,92	0,11	River	Observational	61
several fish spp	Predator	Abundance	Phytoplankton	0,56	0,10	River	Observational	61
several fish spp	Predator	Diversity	Benthic invertebrates	-0,40	0,10	River	Observational	61
several fish spp	Predator	Diversity	Benthic invertebrates	-1,49	0,12	River	Observational	61
several fish spp	Predator		Turbidity	-0,11	0,10	River	Observational	61
several fish spp	Predator		Nutrients-P	-0,10	0,10	River	Observational	61
several fish spp	Predator		Nutrients-N	0,23	0,10	River	Observational	61
several fish spp	Predator		Nutrients-N	0,18	0,10	River	Observational	61
several fish spp	Predator	Abundance	Zooplankton	-0,21	0,03	Lake	Observational	82
several fish spp	Predator	Abundance	Zooplankton	-0,12	0,05	Lake	Manipulative	82
several fish spp	Predator	Abundance	Zooplankton	-0,45	0,03	Lake	Observational	82
several fish spp	Predator	Abundance	Zooplankton	-1,43	0,06	Lake	Manipulative	82
several fish spp	Predator	Abundance	Zooplankton	1,07	0,03	Lake	Observational	82
several fish spp	Predator	Abundance	Zooplankton	1,60	0,06	Lake	Manipulative	82
several fish spp	Predator	Diversity	Fish	-5,37	6,86	Lake	Observational	88
several fish spp	Predator	Diversity	Fish	-2,26	1,76	Lake	Observational	88
several fish spp	Predator	Diversity	Fish	-1,78	1,35	Lake	Observational	88
several fish spp	Predator	Abundance	Fish	-4,51	5,11	River	Observational	96
several fish spp	Predator	Abundance	Fish	-2,48	2,07	River	Manipulative	96
several fish spp	Predator	Abundance	Fish	-2,79	2,42	River	Manipulative	96
several fish spp	Predator	Abundance	Benthic invertebrates	-2,22	0,79	Lake	Manipulative	108
several fish spp	Predator	Abundance	Macrophytes	-4,85	2,27	Lake	Manipulative	108
several fish spp	Predator	Abundance	Phytoplankton	1,44	0,57	Lake	Manipulative	108
several fish spp	Predator	Diversity	Zooplankton	-1,31	0,35	Lake	Observational	118
several fish spp	Predator	Abundance	Phytoplankton	0,92	0,53	Lake	Observational	118
several fish spp	Predator	Abundance	Phytoplankton	1,15	0,57	Lake	Observational	118
several fish spp	Predator	Abundance	Benthic invertebrates	-1,72	0,44	Lake	Observational	123
several fish spp	Predator	Abundance	Benthic invertebrates	-0,82	0,32	Lake	Observational	123
several fish spp	Predator	Abundance	Benthic invertebrates	-2,35	0,56	Lake	Observational	123
Alternanthera philoxeroides	Primary-producer	Abundance	Benthic invertebrates	2,11	0,06	Lake	Observational	12
Arundo donax	Primary-producer	Diversity	Macrophytes	-3,96	0,68	River	Observational	38
Arundo donax	Primary-producer	Diversity	Macrophytes	-1,08	0,24	River	Observational	38
Cabomba caroliniana	Primary-producer		Nutrients-P	-0,13	0,67	Lake	Observational	63
Cabomba caroliniana	Primary-producer	Abundance	Phytoplankton	0,72	0,78	Lake	Observational	63
Cabomba caroliniana	Primary-producer	Abundance	Macrophytes	0,52	0,73	Lake	Observational	63
Cabomba caroliniana	Primary-producer	Diversity	Benthic invertebrates	-0,37	0,70	Lake	Observational	63
Cabomba caroliniana	Primary-producer	Diversity	Macrophytes	-0,54	0,73	Lake	Observational	63
Cabomba caroliniana	Primary-producer	Abundance	Macrophytes	1,47	1,13	Lake	Observational	63
Caulerpa taxifolia	Primary-producer	Abundance	Phytoplankton	2,37	0,56	Estuary	Manipulative	18
Caulerpa taxifolia	Primary-producer	Abundance	Phytoplankton	1,38	0,38	Estuary	Manipulative	18
Caulerpa taxifolia	Primary-producer	Abundance	Phytoplankton	1,76	0,44	Estuary	Manipulative	18
Caulerpa taxifolia	Primary-producer	Abundance	Benthic invertebrates	-1,56	0,40	Estuary	Manipulative	18
Caulerpa taxifolia	Primary-producer	Abundance	Benthic invertebrates	-0,83	0,32	Estuary	Manipulative	18
Caulerpa taxifolia	Primary-producer	Abundance	Benthic invertebrates	-0,66	0,31	Estuary	Manipulative	18

Caulerpa taxifolia	Primary-producer	Diversity	Benthic invertebrates	-1,06	0,34	Estuary	Manipulative	18
Caulerpa taxifolia	Primary-producer	Diversity	Benthic invertebrates	0,40	0,29	Estuary	Manipulative	18
Caulerpa taxifolia	Primary-producer	Diversity	Benthic invertebrates	-0,42	0,29	Estuary	Manipulative	18
Caulerpa taxifolia	Primary-producer		OM	1,78	1,35	Estuary	Observational	44
Caulerpa taxifolia	Primary-producer		OM	1,67	1,26	Estuary	Observational	44
Caulerpa taxifolia	Primary-producer		Turbidity	-0,07	0,40	Estuary	Observational	98
Caulerpa taxifolia	Primary-producer	Abundance	Benthic invertebrates	2,98	1,11	Estuary	Observational	98
Caulerpa taxifolia	Primary-producer	Abundance	Benthic invertebrates	-1,83	0,67	Estuary	Observational	98
Caulerpa taxifolia	Primary-producer	Abundance	Benthic invertebrates	3,42	1,33	Estuary	Observational	98
Caulerpa taxifolia	Primary-producer	Abundance	Benthic invertebrates	0,05	0,40	Estuary	Observational	98
Caulerpa taxifolia	Primary-producer	Diversity	Benthic invertebrates	0,45	0,42	Estuary	Observational	98
Caulerpa taxifolia	Primary-producer	Diversity	Benthic invertebrates	-2,63	0,95	Estuary	Observational	98
Caulerpa taxifolia	Primary-producer	Diversity	Benthic invertebrates	2,03	0,73	Estuary	Observational	98
Caulerpa taxifolia	Primary-producer	Diversity	Benthic invertebrates	-1,11	0,50	Estuary	Observational	98
Caulerpa taxifolia	Primary-producer	Diversity	Benthic invertebrates	-1,12	0,24	Estuary	Observational	98
Caulerpa taxifolia	Primary-producer	Diversity	Benthic invertebrates	-0,96	0,23	Estuary	Observational	98
Caulerpa taxifolia	Primary-producer	Abundance	Benthic invertebrates	-1,36	0,26	Estuary	Observational	98
Caulerpa taxifolia	Primary-producer	Abundance	Benthic invertebrates	-2,09	0,33	Estuary	Observational	98
Caulerpa taxifolia	Primary-producer	Abundance	Benthic invertebrates	-5,42	1,72	Estuary	Manipulative	137
Caulerpa taxifolia	Primary-producer	Diversity	Benthic invertebrates	-2,33	0,55	Estuary	Manipulative	137
Caulerpa taxifolia	Primary-producer	Abundance	Benthic invertebrates	-0,25	0,68	Estuary	Observational	141
Caulerpa taxifolia	Primary-producer	Abundance	Benthic invertebrates	-1,60	1,22	Estuary	Observational	141
Caulerpa taxifolia	Primary-producer	Diversity	Benthic invertebrates	0,28	0,68	Estuary	Observational	141
Caulerpa taxifolia	Primary-producer	Diversity	Benthic invertebrates	-2,70	2,23	Estuary	Observational	141
Caulerpa taxifolia	Primary-producer	Abundance	Benthic invertebrates	1,38	1,07	Estuary	Observational	142
Caulerpa taxifolia	Primary-producer	Abundance	Benthic invertebrates	2,06	1,58	Estuary	Observational	142
Caulerpa taxifolia	Primary-producer	Abundance	Benthic invertebrates	1,06	0,91	Estuary	Observational	142
Caulerpa taxifolia	Primary-producer	Abundance	Benthic invertebrates	1,40	1,09	Estuary	Observational	142
Caulerpa taxifolia	Primary-producer	Diversity	Benthic invertebrates	2,81	2,36	Estuary	Observational	142
Caulerpa taxifolia	Primary-producer	Diversity	Benthic invertebrates	3,69	3,59	Estuary	Observational	142
Caulerpa taxifolia	Primary-producer	Diversity	Benthic invertebrates	1,29	1,02	Estuary	Observational	142
Caulerpa taxifolia	Primary-producer	Diversity	Benthic invertebrates	1,11	0,93	Estuary	Observational	142
Eichhornia crassipes	Primary-producer	Abundance	Benthic invertebrates	-2,92	1,08	Lake	Observational	36
Eichhornia crassipes	Primary-producer		OM	1,47	0,75	Lake	Manipulative	54
Eichhornia crassipes	Primary-producer		Nutrients-P	0,68	0,55	Lake	Manipulative	54
Eichhornia crassipes	Primary-producer		Nutrients-N	-0,29	0,51	Lake	Manipulative	54
Eichhornia crassipes	Primary-producer		Turbidity	0,66	0,55	Lake	Manipulative	54
Gonyostomum semen	Primary-producer		Turbidity	0,16	0,67	Lake	Observational	2
Gonyostomum semen	Primary-producer	Abundance	Benthic invertebrates	0,78	0,12	Lake	Observational	2
Gonyostomum semen	Primary-producer	Diversity	Benthic invertebrates	-0,03	0,11	Lake	Observational	2
Gonyostomum semen	Primary-producer		OM	1,05	0,90	Lake	Observational	2
Hydrocotyle ranunculoides	Primary-producer	Diversity	Macrophytes	-4,11	0,53	Lake	Observational	131
Ludwigia grandiflora	Primary-producer	Diversity	Macrophytes	-7,83	1,41	Lake	Observational	131
Lythrum salicaria	Primary-producer		OM	5,39	2,71	Lake	Observational	46
Lythrum salicaria	Primary-producer	Diversity	Macrophytes	-1,40	0,07	Lake	Observational	56
Lythrum salicaria	Primary-producer	Abundance	Macrophytes	-0,40	0,06	Lake	Observational	56
Lythrum salicaria	Primary-producer	Diversity	Macrophytes	-2,44	1,95	Lake	Observational	124
Lythrum salicaria	Primary-producer	Diversity	Macrophytes	-1,72	1,30	Lake	Observational	124
Lythrum salicaria	Primary-producer	Diversity	Macrophytes	-0,27	0,08	Lake	Observational	139
Myriophyllum aquaticus	Primary-producer	Diversity	Macrophytes	-3,69	0,50	Lake	Observational	131
Myriophyllum spicatum	Primary-producer		Nutrients-N	-0,25	0,68	Lake	Observational	35
Myriophyllum spicatum	Primary-producer		Nutrients-P	-0,74	0,78	Lake	Observational	35
Myriophyllum spicatum	Primary-producer	Abundance	Phytoplankton	-0,21	0,68	Lake	Observational	35
Myriophyllum spicatum	Primary-producer	Diversity	Benthic invertebrates	-1,39	0,39	Lake	Observational	35
Myriophyllum spicatum	Primary-producer	Abundance	Benthic invertebrates	-1,04	0,34	Lake	Observational	35
Myriophyllum spicatum	Primary-producer	Abundance	Benthic invertebrates	-0,40	0,32	Lake	Observational	145
Myriophyllum spicatum	Primary-producer	Abundance	Benthic invertebrates	-0,88	0,32	River	Observational	145

Myriophyllum spicatum	Primary-producer	Abundance	Benthic invertebrates	0,68	0,12	Lake	Observational	145
Myriophyllum spicatum	Primary-producer	Abundance	Benthic invertebrates	1,28	0,28	Lake	Observational	145
Myriophyllum spicatum	Primary-producer	Diversity	Benthic invertebrates	-0,36	0,51	Lake	Observational	145
Phalaris arundinacea	Primary-producer	Diversity	Macrophytes	-3,31	3,02	Lake	Observational	151
Phragmites australis	Primary-producer	Abundance	Fish	-2,98	0,22	Estuary	Observational	1
Phragmites australis	Primary-producer	Abundance	Benthic invertebrates	-0,51	0,10	Estuary	Observational	1
Phragmites australis	Primary-producer	Abundance	Fish	-3,41	0,11	Estuary	Observational	1
Phragmites australis	Primary-producer	Abundance	Benthic invertebrates	-1,10	0,05	Estuary	Observational	1
Phragmites australis	Primary-producer	Abundance	Benthic invertebrates	-0,33	0,51	Lake	Observational	3
Phragmites australis	Primary-producer	Diversity	Benthic invertebrates	-5,32	3,79	Lake	Observational	3
Phragmites australis	Primary-producer	Diversity	Benthic invertebrates	-0,42	0,41	Lake	Manipulative	7
Phragmites australis	Primary-producer	Diversity	Benthic invertebrates	-0,04	0,40	Lake	Manipulative	7
Phragmites australis	Primary-producer	Diversity	Benthic invertebrates	1,85	0,67	Lake	Manipulative	7
Phragmites australis	Primary-producer	Abundance	Benthic invertebrates	-1,49	0,58	Lake	Manipulative	7
Phragmites australis	Primary-producer	Abundance	Benthic invertebrates	-3,02	1,13	Lake	Manipulative	7
Phragmites australis	Primary-producer	Abundance	Benthic invertebrates	-1,79	0,66	Lake	Manipulative	7
Phragmites australis	Primary-producer	Diversity	Macrophytes	-6,38	0,52	Lake	Observational	45
Phragmites australis	Primary-producer	Abundance	Macrophytes	2,39	1,90	River	Observational	48
Phragmites australis	Primary-producer		Nutrients-N	0,04	0,67	River	Observational	48
Phragmites australis	Primary-producer		Nutrients-P	-0,58	0,54	River	Observational	48
Phragmites australis	Primary-producer	Abundance	Benthic invertebrates	0,97	0,05	Lake	Observational	64
Phragmites australis	Primary-producer	Abundance	Fish	-2,78	0,80	Estuary	Observational	66
Phragmites australis	Primary-producer	Abundance	Fish	-0,46	0,35	Estuary	Observational	66
Phragmites australis	Primary-producer	Abundance	Fish	-2,16	0,62	Estuary	Observational	66
Phragmites australis	Primary-producer	Abundance	Fish	-3,50	1,08	Estuary	Observational	66
Phragmites australis	Primary-producer	Abundance	Fish	-2,62	0,75	Estuary	Observational	66
Phragmites australis	Primary-producer	Abundance	Fish	-1,61	0,49	Estuary	Observational	66
Phragmites australis	Primary-producer	Diversity	Benthic invertebrates	0,16	0,33	River	Observational	70
Phragmites australis	Primary-producer	Diversity	Benthic invertebrates	0,36	0,34	River	Observational	70
Phragmites australis	Primary-producer	Diversity	Benthic invertebrates	2,48	0,71	River	Observational	70
Phragmites australis	Primary-producer	Diversity	Benthic invertebrates	2,47	0,70	River	Observational	70
Phragmites australis	Primary-producer	Abundance	Benthic invertebrates	0,06	0,33	River	Observational	70
Phragmites australis	Primary-producer	Abundance	Benthic invertebrates	-0,94	0,39	River	Observational	70
Phragmites australis	Primary-producer	Abundance	Benthic invertebrates	0,66	0,36	River	Observational	70
Phragmites australis	Primary-producer	Abundance	Benthic invertebrates	1,13	0,41	River	Observational	70
Phragmites australis	Primary-producer	Diversity	Macrophytes	-1,70	0,51	Lake	Observational	100
Phragmites australis	Primary-producer	Diversity	Macrophytes	1,27	0,36	Lake	Observational	120
Phragmites australis	Primary-producer	Diversity	Macrophytes	0,43	0,07	Lake	Observational	139
Phragmites australis	Primary-producer	Abundance	Macrophytes	11,64	4,97	Estuary	Observational	146
Phragmites australis	Primary-producer	Diversity	Benthic invertebrates	-0,88	0,01	River	Observational	149
Phragmites australis	Primary-producer	Diversity	Benthic invertebrates	-1,39	0,01	River	Observational	149
Sargassum muticum	Primary-producer	Abundance	Benthic invertebrates	0,89	0,42	Estuary	Observational	144
Sargassum muticum	Primary-producer	Abundance	Benthic invertebrates	1,29	0,53	Estuary	Observational	144
Sargassum muticum	Primary-producer	Abundance	Benthic invertebrates	0,94	0,43	Estuary	Observational	144
Sargassum muticum	Primary-producer	Abundance	Benthic invertebrates	0,64	0,43	Estuary	Observational	144
Solidago gigantea	Primary-producer	Diversity	Macrophytes	-0,35	0,15	Lake	Observational	122
Solidago gigantea	Primary-producer	Abundance	Macrophytes	1,42	0,18	Lake	Observational	122
Spartina alterniflora	Primary-producer		OM	1,18	0,97	Estuary	Manipulative	34
Spartina alterniflora	Primary-producer		OM	-0,04	0,67	Estuary	Manipulative	34
Spartina alterniflora	Primary-producer		Nutrients-N	0,14	0,67	Estuary	Manipulative	34
Spartina alterniflora	Primary-producer		Nutrients-N	-0,45	0,71	Estuary	Manipulative	34
Spartina alterniflora	Primary-producer		Nutrients-P	0,13	0,67	Estuary	Manipulative	34
Spartina alterniflora	Primary-producer		Nutrients-P	0,05	0,67	Estuary	Manipulative	34
Spartina alterniflora	Primary-producer	Abundance	Benthic invertebrates	-0,47	0,39	Estuary	Observational	33
Spartina alterniflora	Primary-producer		OM	0,84	0,22	Estuary	Observational	107
Spartina alterniflora	Primary-producer		OM	1,05	0,23	Estuary	Observational	107
Spartina alterniflora	Primary-producer		OM	-0,21	0,20	Estuary	Observational	107

Spartina alterniflora	Primary-producer	Abundance	Phytoplankton	0,77	0,22	Estuary	Observational	107
Spartina alterniflora	Primary-producer	Abundance	Phytoplankton	0,02	0,20	Estuary	Observational	107
Spartina alterniflora	Primary-producer	Abundance	Phytoplankton	-0,13	0,20	Estuary	Observational	107
Spartina alterniflora	Primary-producer	Abundance	Benthic invertebrates	-1,83	0,30	Estuary	Observational	107
Spartina alterniflora	Primary-producer	Abundance	Benthic invertebrates	-0,30	0,20	Estuary	Observational	107
Spartina alterniflora	Primary-producer	Abundance	Benthic invertebrates	-0,45	0,21	Estuary	Observational	107
Spartina alterniflora	Primary-producer	Diversity	Benthic invertebrates	-0,43	0,21	Estuary	Observational	107
Spartina alterniflora	Primary-producer	Diversity	Benthic invertebrates	-1,04	0,23	Estuary	Observational	107
Spartina alterniflora	Primary-producer	Diversity	Benthic invertebrates	0,88	0,22	Estuary	Observational	107
Spartina alterniflora	Primary-producer		OM	1,91	0,31	Estuary	Observational	106
Spartina alterniflora	Primary-producer	Abundance	Phytoplankton	2,12	0,34	Estuary	Observational	106
Spartina alterniflora	Primary-producer	Diversity	Benthic invertebrates	-1,58	0,28	Estuary	Observational	106
Spartina alterniflora	Primary-producer	Abundance	Benthic invertebrates	-1,81	0,30	Estuary	Observational	106
Spartina alterniflora	Primary-producer	Abundance	Benthic invertebrates	-1,14	0,24	Estuary	Observational	106
Spartina alterniflora	Primary-producer	Diversity	Benthic invertebrates	-1,86	0,31	Estuary	Observational	106
Spartina anglica	Primary-producer	Diversity	Benthic invertebrates	-3,39	1,31	Estuary	Observational	39
Spartina anglica	Primary-producer	Diversity	Benthic invertebrates	-3,25	1,24	Estuary	Observational	39
Spartina anglica	Primary-producer	Diversity	Benthic invertebrates	-1,03	0,49	Estuary	Observational	39
Spartina anglica	Primary-producer	Diversity	Benthic invertebrates	-1,48	0,58	Estuary	Observational	39
Spartina anglica	Primary-producer	Abundance	Benthic invertebrates	-1,51	0,58	Estuary	Observational	39
Spartina anglica	Primary-producer	Abundance	Benthic invertebrates	-1,23	0,52	Estuary	Observational	39
Spartina anglica	Primary-producer		OM	-1,06	0,49	Estuary	Observational	39
Spartina anglica	Primary-producer		OM	-0,21	0,40	Estuary	Observational	39
Spartina anglica	Primary-producer	Abundance	Macrophytes	1,54	0,59	Estuary	Observational	39
Spartina anglica	Primary-producer		OM	0,48	0,21	Estuary	Observational	60
Spartina anglica	Primary-producer		OM	-1,13	0,24	Estuary	Observational	60
Trapa natans	Primary-producer		Nutrients-P	-2,64	2,16	River	Observational	29
Trapa natans	Primary-producer		Nutrients-P	-0,91	0,84	River	Observational	29
Trapa natans	Primary-producer		Nutrients-N	-3,62	3,48	River	Observational	29
Trapa natans	Primary-producer		Nutrients-N	-2,79	2,33	River	Observational	29
Trapa natans	Primary-producer	Abundance	Benthic invertebrates	-5,57	7,31	River	Observational	84
Trapa natans	Primary-producer	Abundance	Benthic invertebrates	-1,11	0,41	River	Observational	132
Trapa natans	Primary-producer	Abundance	Benthic invertebrates	2,43	0,69	River	Observational	132
Typha angustifolia	Primary-producer	Abundance	Benthic invertebrates	-2,61	0,07	Lake	Observational	64
Typha glauca	Primary-producer	Diversity	Macrophytes	-3,05	0,55	Lake	Observational	3
Typha glauca	Primary-producer	Abundance	Macrophytes	5,20	1,17	Lake	Observational	3
Typha glauca	Primary-producer		OM	1,62	0,61	Lake	Observational	3
Typha glauca	Primary-producer	Diversity	Macrophytes	-2,43	0,25	Lake	Observational	103
Typha glauca	Primary-producer	Diversity	Macrophytes	-1,90	0,20	Lake	Observational	103
Typha glauca	Primary-producer	Diversity	Macrophytes	-0,73	0,14	Lake	Observational	103
Typha glauca	Primary-producer		OM	1,08	0,16	Lake	Observational	103
Typha glauca	Primary-producer		OM	0,38	0,14	Lake	Observational	103
Typha glauca	Primary-producer		OM	-0,15	0,13	Lake	Observational	103
Typha sp.	Primary-producer	Diversity	Macrophytes	-3,28	2,97	Estuary	Manipulative	109
Typha sp.	Primary-producer	Diversity	Macrophytes	-4,59	5,19	Estuary	Manipulative	109
Typha sp.	Primary-producer	Diversity	Macrophytes	-6,06	8,56	Estuary	Manipulative	109
Typha sp.	Primary-producer	Diversity	Macrophytes	-5,74	7,75	Estuary	Manipulative	109
Typha sp.	Primary-producer	Diversity	Macrophytes	0,31	0,22	Lake	Observational	139
Urochloa mutica	Primary-producer	Diversity	Benthic invertebrates	-0,32	0,51	River	Observational	40
Urochloa mutica	Primary-producer	Abundance	Benthic invertebrates	-0,36	0,52	River	Observational	40
Urochloa subquadripara	Primary-producer	Diversity	Macrophytes	-1,67	0,51	Lake	Observational	101
Urochloa subquadripara	Primary-producer	Diversity	Macrophytes	-1,25	0,32	Lake	Observational	101
Urochloa subquadripara	Primary-producer	Diversity	Macrophytes	-1,95	0,47	Lake	Observational	101
Urochloa subquadripara	Primary-producer	Diversity	Macrophytes	-2,82	1,05	Lake	Observational	101
Vallisneria spiralis	Primary-producer	Abundance	Zooplankton	11,76	5,89	Lake	Observational	20
Vinca major	Primary-producer	Diversity	Macrophytes	-9,11	2,75	River	Observational	38

TABLE S4: Results from analysis of (A): overall publication bias (not attending at characteristics of the invader or the resident community), and subdivided by (B): the trophic position of the invader, (C): the functional group of the invaded community, and (D): physicochemical conditions of the invaded ecosystem. Publication bias (funnel plot asymmetry) is tested with the Egger's test (Z). The trim and fill analysis estimates the number of missing studies on the right side of the funnel plot (studies reporting positive effects of invasion). The fail safe number estimates the number of non-significant unpublished (or missing) studies that would to reduce the observed significance level to P≥0.05.

	N	Publication Bias	Trim & Fill	Fail Safe
(A) Overall				
Abundance	397	Z= -2.36, P= 0.02	55±12.92	10,423
Diversity	717	Z= -2.11, P= 0.03	19±8.41	3,189
(B) Trophic positon				
Primary Producers	164	Z= -0.81, P= 0.42	16±7.82	8,088
Filter Collector	171	Z= 0.14, P= 0.89	31±7.75	6,069
Omnivore	101	Z= -2.32, P= 0.02	3±6.02	773
Predator	183	Z= -5.00, P< 0.01	1±7.88	12,218
(C) Functional group				
Macrophytes	84	Z= -1.62, P= 0.11	18±5.27	3,222
Phytoplankton	78	Z= 0.36, P= 0.72	2±5.31	76
Zooplankton	85	Z= -5.12, P< 0.01	0±1.2	4,270
Benthic invertebrates	278	Z= 1.49, P= 0.14	0±9.32	278
Fish	76	Z= -4.10, P< 0.01	13±5.23	581
(D) Physicochemical				
Turbidity	36	Z= 3.79, P< 0.01	9±3.30	27
Organic Matter	48	Z= 1.84, P= 0.07	7±4.55	462
Nutrients-N	54	Z= 1.41, P= 0.16	1±4.47	372
Nutrients-P	36	Z= -0.91, P= 0.36	0±3.50	36

TABLE S5. Results from meta-regression models used to investigate the influence of invasive species on the abundance of resident aquatic communities. The trophic position of the invader is indicated in bold before each block of moderators (functional components of resident aquatic communities). Q_M and the associated P-value provide a test for the effect of moderators on the mean effect size, while Q_E provides a test of residual heterogeneity, estimated by τ^2. Measures of between-study variation (I^2) and the amount of variance (σ) attributed to three random variables are also included. Results are only shown for functional components examined by more than one study.

Trophic group and functional component	Mean effect	95%CI		P	Model statistics	Random Variables (σ)
Primary Producer						
Fish	-2.42	-3.44	-1.41	***	Q_E= 500.8, df= 73, P< 0.01	Habitat= 0.84
Benthic Inverts	-0.35	-0.75	0.04	*	Q_M= 132.3, df= 4, P< 0.01	Type Control= 2.20
Macrophytes	1.99	0.88	3.09	***	τ^2= 1.63±0.3, I^2= 84.5%	
Phytoplankton	0.96	0.03	1.90	***		
Filter- Collector						
Fish	0.22	-0.90	1.34	n.s.	Q_E= 761.7, df= 97, P< 0.01	Type Study= 0.18
Benthic Inverts	1.24	0.16	2.33	*	Q_M= 304.1, df= 5, P< 0.01	Type Control= 0.68
Zooplankton	-2.43	-3.57	-1.30	***	τ^2= 5.1±0.8, I^2= 91.87%	
Phytoplankton	-1.84	-2.96	-0.72	***		
Macrophytes	1.68	0.47	2.88	**		
Omnivore						
Fish	-0.58	-1.64	0.47	n.s.	Q_E= 287.3, df= 76, P< 0.01	Habitat= 7.13
Benthic Inverts	-0.79	-1.48	-0.10	*	Q_M= 93.9, df= 5, P< 0.01	Type Control= 0.08
Zooplankton	0.06	-0.68	0.79	n.s.	τ^2= 1.31±0.32, I^2= 71.89%	
Phytoplankton	0.23	-0.33	0.78	n.s.		
Macrophytes	-1.25	-1.90	-0.59	***		
Predator						
Fish	-0.15	-0.42	0.13	n.s.	Q_E= 870.7, df= 131 P< 0.01	Habitat= 0.06
Benthic Inverts	-0.68	-0.83	-0.54	***	Q_M= 120.4, df= 5, P< 0.01	Type Study= 1.37
Zooplankton	-0.30	-0.41	-0.18	***	τ^2= 2.19±0.34, I^2= 90.26%	Type Control= 0.01
Phytoplankton	0.36	0.12	0.60	**		
Macrophytes	-0.25	-0.29	0.79	n.s.		

n.s.= not significant, *= significant at P≤ 0.05, ** significant at P≤ 0.01, *** significant at P≤ 0.001

TABLE S6. Results from meta-regression mdoels used to investigate the influence of invasive species on the environmental characteristics of invaded habitats. Q_M and the associated P-value provide a test for the effect of moderators (trophic group) on the mean effect size, while Q_E provides a test of residual heterogeneity, estimated by τ^2. Measures of between-study variation (I^2) and the amount of variance (σ) attributed to three random variables are also included.

Environmental factor and Trophic group	Mean effect	95%CI		P	Model statistics	Random Variables (σ)
Turbidity						
Primary-producer	0.28	-0.63	1.19	n.s.	Q_E= 22.13 df= 23, P< 0.01	Habitat= 0.03
Filter-collector	-0.73	-1.28	-0.18	**	Q_M= 22.63, df= 4, P< 0.01	Type Study= 0.06
Omnivore	0.89	0.20	1.59	*	τ^2= 0.0±0.11, I^2= 0.0%	
Predator	0.27	-0.35	0.89	n.s.		
Organic matter						
Primary-producer	0.47	0.22	0.72	***	Q_E= 122.7, df= 44, P< 0.01	
Filter-collector	1.00	0.64	1.35	***	Q_M= 46.4, df= 4, P< 0.01	
Omnivore	-0.35	-0.85	0.14	n.s.	τ^2= 0.37±0.18, I^2= 45.26%	
Predator	-0.34	-1.24	0.57	n.s.		
Nutrients-N						
Primary-producer	-0.24	-1.10	0.63	n.s.	Q_E= 94.8 df= 50, P< 0.01	Type Study= 0.21
Filter-collector	0.36	-0.28	1.01	n.s.	Q_M= 14.7, df= 4, P< 0.01	
Omnivore	0.78	0.14	1.41	*	τ^2= 0.17±0.14, I^2= 23.79%	
Predator	0.90	0.24	1.55	**		
Nutrients-P						
Primary-producer	-0.24	-1.19	0.71	n.s.	Q_E= 85.03, df= 32 P< 0.01	Habitat= 0.34
Filter-collector	-1.3	-2.22	-0.37	**	Q_M= 32.08, df= 4, P< 0.01	Type Control= 0.08
Omnivore	1.28	0.31	2.25	**	τ^2= 0.95±0.40, I^2= 66.53%	
Predator	0.19	-0.67	1.04	n.s.		

n.s.= not significant, *= significant at P≤ 0.05, ** significant at P≤ 0.01, *** significant at P≤ 0.001

TABLE S7. Results from regression analysis performed to investigate the context dependency of impacts. Regressions are calculated between effect sizes in one habitat or experimental setting (e.g. Lake) and another (e.g. River). Statistics correspond to type II linear regression models. A significant positive slope indicates that impacts are consistent between habitats.

Model	**N**	**R^2**	**P**	**Intercept**	**Slope**
Lake ~ River	32	0.12	0.05	-0.08	1.07
Estuary ~ River	11	0.12	n.s.	0.82	-1.21
Estuary ~ Lake	20	0.47	<0.001	0.14	0.85
Manipulative ~ Mesocosm	14	0.41	0.01	0.48	0.45
Manipulative ~ Observational	31	0.37	<0.001	0.07	0.77
Mesocosm ~ Observational	19	0.28	0.01	-0.56	1.61
Before/after ~ Native	11	0.22	n.s.	0.53	2.45
Native ~ No species	23	0.37	<0.001	-0.10	0.57
No species ~ Uninvaded	32	0.20	<0.001	0.19	2.36
Before/after ~ No species	19	0.19	0.05	0.08	0.66
Before/after ~ Uninvaded	18	0.53	<0.001	0.46	1.15
Native ~ Uninvaded	26	0.08	n.s.	0.26	0.98

FIGURE S1. Top 10 invasive species covered in this study by number of effect sizes extracted from the literature review.

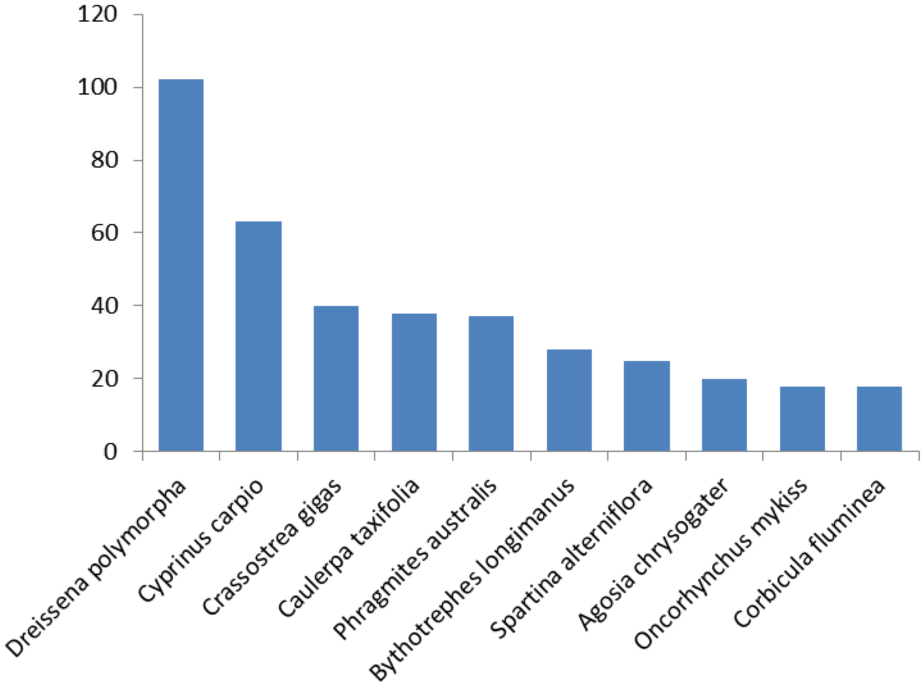

FIGURE S2. Characteristics of the database used in this study for meta-analyses. N= 147 articles incorporated in the database, from which we retrieved 733 cases.

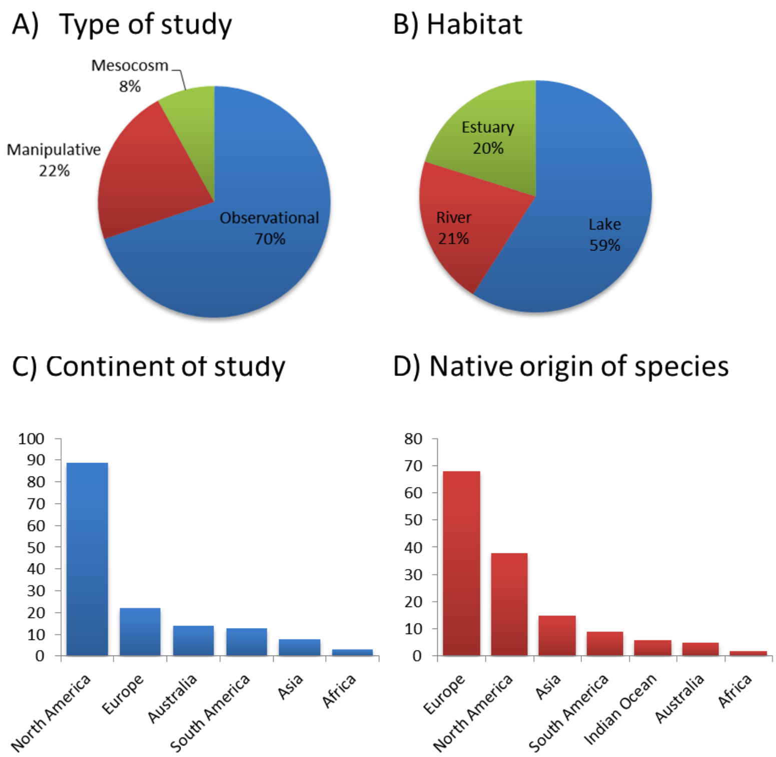

FIGURE S3. Observed effect sizes in the complete dataset *vs.* the reduced dataset including only one effect size per study (to avoid pseudo-replication). Effect sizes correspond to the impact of invasive species on the abundance of resident aquatic communities. Sample size of the complete database= 396, sample size of the reduced database= 115. Error bars represent the standard deviation of the mean effect. Differences between both databases are not significant (ANOVA, $F_{1, 395}$= 3.93, P> 0.05).

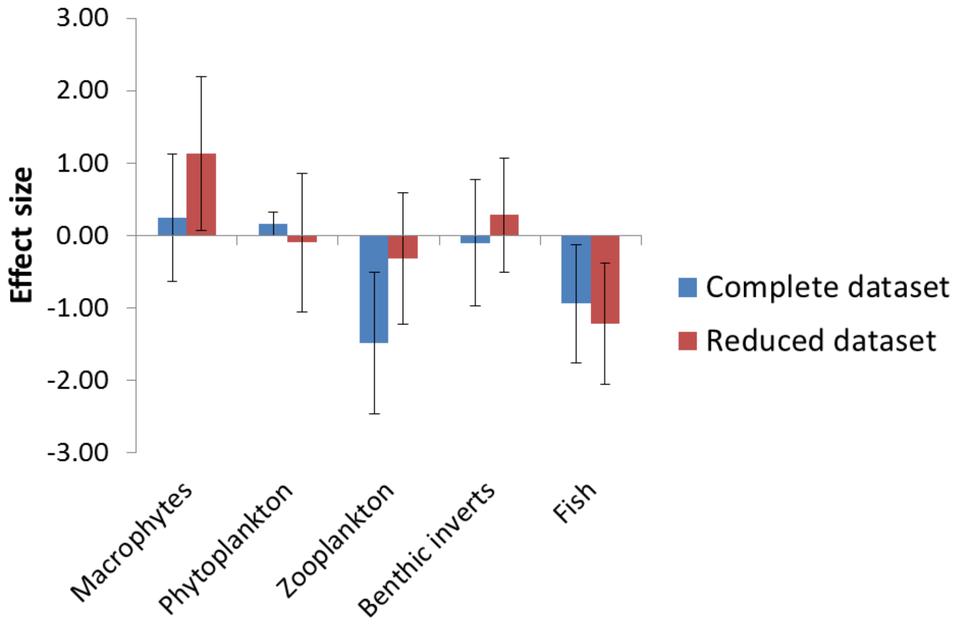

FIGURE S4. Impacts of invasive species on the richness of resident aquatic communities as determined by the trophic position of the invader. In parentheses, the number of study cases considered. Error bars represent 95% confidence intervals and are only displayed when the number of effect sizes analysed was ≥ 5. A significant effect of invasion is found when error bars do not overlap zero. Further statistics resulting from meta-regression models can be consulted in Table 1.