

## Publications

### Books (1)

1. **Anderson, M.J.**, Gorley, R.N. and Clarke, K.R. 2008. *PERMANOVA+ for PRIMER: Guide to Software and Statistical Methods*. PRIMER-E: Plymouth, UK. 214 pp. (book)

### Peer-reviewed journal articles (92 published or in press)

92. Smith, A.N.H., **Anderson, M.J.** and Pawley, M.D.M. 2017. Could ecologists be more random? Straightforward alternatives to haphazard spatial sampling. *Ecography* (in press).
91. Menger, J., Magnusson, W.E., **Anderson, M.J.**, Schlegel, M., Pe'er, G. and Henle, K. 2017. Environmental characteristics drive variation in Amazonian understorey bird assemblages. *PLoS ONE* 12(2): e0171540. doi:10.1371/journal.pone.0171540.
90. **Anderson, M.J.**, Walsh, D.C.I., Clarke, K.R., Gorley, R.N. and Guerra-Castro, E. 2017. Some solutions to the multivariate Behrens-Fisher problem for dissimilarity-based analyses. *Australian & New Zealand Journal of Statistics* 59: 57-79.
89. Smith, A.N.H. and **Anderson, M.J.** 2016. Marine reserves indirectly affect fine-scale habitat associations, but not overall density, of small benthic fishes. *Ecology and Evolution* 6: 6648–6661.
88. Grange, Z.L., Gartrell, B.D., Biggs, P.J., Nelson, N.J., **Anderson, M.J.** and French, N.P. 2016. Microbial genomics of a host-associated commensal bacterium in fragmented populations of endangered Takahe. *Microbial Ecology* 71: 1020-1029.
87. Ellingsen, K.E., **Anderson, M.J.**, Shackell, N.L., Tveraa, T., Yoccoz, N.G. and Frank, K.T. 2015. The role of a dominant predator in shaping biodiversity over space and time in a marine ecosystem. *Journal of Animal Ecology* 84:1242-1252.
86. Zintzen, V., Roberts, C.D., Shepard, L., Stewart, A.L., Struthers, C.D., **Anderson, M.J.**, McVeagh, M., Noren, M. and Fernholm, B. 2015. Review and phylogeny of the New Zealand hagfishes (Myxiniformes, Myxinidae), with description of three new species. *Zoological Journal of the Linnean Society* 174: 363-393.
85. **Anderson, M.J.** and Santana-Garcon, J. 2015. Measures of precision for dissimilarity-based multivariate analysis of ecological communities. *Ecology Letters* 18: 66-73.
84. Smith, H.L., **Anderson, M.J.**, Gillanders, B.M. and Connell, S.D. 2014. Longitudinal variation and effects of habitat on biodiversity of Australasian temperate reef fishes. *Journal of Biogeography* 41: 2128-2139.
83. Smith, A.N.H., **Anderson, M.J.**, Millar, R.B. and Willis, T.J. 2014. Effects of marine reserves in the context of spatial and temporal variation: an analysis using Bayesian zero-inflated mixed models. *Marine Ecology Progress Series* 499: 203-216.
82. Terlizzi, A., **Anderson, M.J.**, Bevilacqua, S. and Ugland, K. 2014. Species-accumulation curves and taxonomic surrogates: an integrated approach for estimation of regional species richness. *Diversity and Distributions* 20: 356-368.
81. Paul, W.L. and **Anderson, M.J.** 2013. Causal modelling with multivariate species data. *Journal of Experimental Marine Biology and Ecology* 448: 72-84.
80. Zintzen, V., Rogers, K.M., Roberts, C.D., Stewart, A.L. and **Anderson, M.J.** 2013. Hagfish feeding habits along a depth gradient inferred from stable isotopes. *Marine Ecology Progress Series* 485: 223-234.
79. **Anderson, M.J.** and Walsh, D.C.I. 2013. What null hypothesis are you testing? PERMANOVA, ANOSIM and the Mantel test in the face of heterogeneous dispersions. *Ecological Monographs* 83(4): 557-574.
78. **Anderson, M.J.**, Tolimieri, N. and Millar, R.B. 2013. Beta diversity of demersal fish assemblages in the north-eastern Pacific: interactions of latitude and depth. *PLoS ONE* 8(3): e57918. doi:10.1371/journal.pone.0057918.
77. Smith, A.N.H., **Anderson, M.J.** and Millar, R.B. 2012. Incorporating the intraspecific occupancy-abundance relationship into zero-inflated models. *Ecology* 93(12): 2526-2532.
76. Zintzen, V., **Anderson, M.J.**, Roberts, C.D., Harvey, E.S., Stewart, A.L. and Struthers, C.D. 2012. Diversity and composition of demersal fishes along a depth gradient assessed by baited remote underwater video. *PLoS ONE* 7(10): e48522. doi:10.1371/journal.pone.0048522.
75. Martin, A., McMinn, A., Davy, S.K., **Anderson, M.J.**, Miller, H.C., Hall, J.A., and Ryan, K.G. 2012. Preliminary evidence for the microbial loop in Antarctic sea ice using microcosm simulations. *Antarctic Science* 24: 547-553.
74. Stegen, J.C., Freestone, A.L., Crist, T.O., **Anderson, M.J.**, Chase, J.M., Comita, L.S., Cornell, H.V., Davies, K.F., Harrison, S.P., Hurlbert, A.H., Inouye, B.D., Kraft, N.J.B., Myers, J.A., Sanders, N.J., Swenson, N.G. and Vellend, M. 2012. Stochastic and deterministic drivers of spatial and temporal turnover in breeding bird communities. *Global Ecology and Biogeography* 22(2): 202-212.

73. Parker, K.A., **Anderson, M.J.**, Jenkins, P.F. and Brunton, D.H. 2012. The effects of translocation-induced isolation and fragmentation on the cultural evolution of bird song. *Ecology Letters* 15: 778-785.
72. Kraft, N.J.B., Sanders, N.J., Stegen, J.C., **Anderson, M.J.**, Crist, T.O., Cornell, H.V., Vellend, M., Chase, J.M., Comita, L.S., Davies, K.F., Freestone, A.L., Harrison, S.P., Inouye, B.D., Myers, J.A. and Swenson, N.G. 2012. Response to comments on “Disentangling the drivers of  $\beta$ -diversity along latitudinal and elevational gradients”. *Science* 335, 1573 (2012) DOI: 10.1126/science.1218697.
71. Sales, M., Ballesteros, E., **Anderson, M.J.**, Iveša, L. and Cardona, E. 2012. Biogeographical patterns of algal communities from the Mediterranean Sea: *Cystoseira crinita*-dominated assemblages as a case study. *Journal of Biogeography* 39: 140-152.
70. Zintzen, V., Roberts, C.D., **Anderson, M.J.**, Stewart, A.L., Struthers, C.D. and Harvey, E.S. 2011. Hagfish predatory behaviour and slime defence mechanism. *Scientific Reports* 1, no. 131, doi:10.1038/srep00131, published 27 October 2011, <http://www.nature.com/srep/2011/111027/srep00131/full/srep00131.html>.
69. Kraft, N.J.B., Comita, L.S., Chase, J.M., Sanders, N.J., Swenson, N.G., Crist, T.O., Stegen, J.C., Vellend, M., Boyle, B., **Anderson, M.J.**, Cornell, H.V., Davies, K.F., Freestone, A.L., Inouye, B.D., Harrison, S.P. and Myers, J.A. 2011. Disentangling the drivers of  $\beta$ -diversity along latitudinal and elevational gradients. *Science* 333(6050): 1755-1758.
68. Millar, R.M., **Anderson, M.J.** and Tolimieri, N. 2011. Much ado about nothings: using zero similarity points in distance-decay curves. *Ecology* 92: 1717-1722.
67. Martin, A., **Anderson, M.J.**, Thorn, C., Davy, S.K. and Ryan, K.G. 2011. Response of sea ice microbial communities to environmental disturbance: an *in situ* transplant experiment in the Antarctic. *Marine Ecology Progress Series* 424: 25-37.
66. Fukunaga, A. and **Anderson, M.J.** 2011. Bioaccumulation of copper, lead and zinc by the bivalves *Macomona liliiana* and *Austrovenus stutchburyi*. *Journal of Experimental Marine Biology and Ecology* 396: 244-252.
65. Fukunaga, A., **Anderson, M.J.** and Webster-Brown, J.G. 2011. Assessing the nature of the combined effects of copper and zinc on estuarine infaunal communities. *Environmental Pollution* 159:116-124.
64. **Anderson, M.J.**, Crist, T.O., Chase, J.M., Vellend, M., Inouye, B.D., Freestone, A.L., Sanders, N.J., Cornell, H.V., Comita, L.S., Davies, K.F., Harrison, S.P., Kraft, N.J.B., Stegen, J.C., Swenson, N.G. 2011. Navigating the multiple meanings of  $\beta$  diversity: a roadmap for the practicing ecologist. *Ecology Letters* 14: 19-28.
63. Zintzen, V., **Anderson, M.J.**, Roberts, C.D. and Diebel, C.E. 2011. Increasing variation in taxonomic distinctness reveals clusters of specialists in the deep sea. *Ecography* 34: 306-317.
62. Tolimieri, N. and **Anderson, M.J.** 2010. Taxonomic distinctness of demersal fishes of the California current: moving beyond simple measures of diversity for marine ecosystem-based management. *PLoS ONE* 5(5), e10653: 1-14.
61. Mardon, J., Saunders, S.M., **Anderson M.J.**, Couchoux, C. and Bonadonna, F. 2010. Species, gender and identity: cracking petrels’ socio-chemical code. *Chemical Senses* 35: 309-321.
60. Fukunaga, A., **Anderson, M.J.**, Webster-Brown, J.G. and Ford, R.B. 2010. Individual and combined effects of heavy metals on estuarine infaunal communities. *Marine Ecology Progress Series* 402: 123-136.
59. Gotelli, N.J., **Anderson, M.J.**, Arita, H.T., Chao, A., Colwell, R.K., Connolly, S.R., Currie, D.J., Dunn, R.R., Graves, G.R., Green, J.L., Grytnes, J.-A., Jiang, Y.-H., Jetz, W., Lyons, S.K., McCain, C.M., Magurran, A.E., Rahbek, C., Rangel, T.F.L.V.B., Soberón, J., Webb, C.O., Willig, M.R. 2009. Patterns and causes of species richness: a general simulation model for macroecology. *Ecology Letters* 12: 873-886.
58. Watson, D.L., **Anderson M.J.**, Kendrick, G.A., Nardi, K. and Harvey, E.S. 2009. Effects of protection from fishing on the lengths of targeted and non-targeted fish species at the Houtman Abrolhos Islands, Western Australia. *Marine Ecology Progress Series* 384: 241-249.
57. Terlizzi, A., **Anderson, M.J.**, Bevilacqua, S., Fraschetti, S., Włodarska-Kowalcuk, M. and Ellingsen, K.E. 2009. Beta diversity and taxonomic sufficiency: do higher-level taxa reflect heterogeneity in species composition? *Diversity and Distributions* 15: 450-458.
56. Hewitt, J.E., **Anderson, M.J.**, Hickey, C.W., Kelly, S. and Thrush, S.F. 2009. Enhancing the ecological significance of sediment contamination guidelines through integration with community analysis. *Environmental Science & Technology* 43: 2118-2123.
55. **Anderson, M.J.** 2008. Animal-sediment relationships revisited: characterising species’ distributions along an environmental gradient using canonical analysis and quantile regression splines. *Journal of Experimental Marine Biology and Ecology* 366: 16-27.
54. Lear, G., **Anderson, M.J.**, Smith, J.P., Boxen, K. and Lewis, G.D. 2008. Spatial and temporal heterogeneity of the bacterial communities in stream epilithic biofilms. *FEMS Microbiology Ecology* 65: 463-473.

53. Cullen, L.E., Adams, M.A., **Anderson, M.J.** and Grierson, P.F. 2008. Analyses of  $\delta^{13}\text{C}$  and  $\delta^{18}\text{O}$  in tree rings of *Callitris columellaris* provide evidence of a change in stomatal control of photosynthesis in response to regional changes in climate. *Tree Physiology* 28: 1525-1533.
52. Watson, D.L., Harvey, E.S., Kendrick, G.A., Nardi, K. and **Anderson, M.J.** 2007. Protection from fishing alters the species composition of fish assemblages in a temperate-tropical transition zone. *Marine Biology* 152: 1197-1206.
51. McGill, B., Etienne, R., Gray, J., Alonso, D., **Anderson, M.**, Benecha, H., Dornelas, M., Enquist, B., Green, J., He, F., Hurlbert, A., Magurran, A., Marquet, P., Maurer, B., Ostling, A., Soykan, C., Ugland, K., White, E. 2007. Species Abundance Distributions: moving beyond single prediction theories to integration within an ecological framework. *Ecology Letters* 10: 995-1015.
50. Atalah, J., Otto, S., **Anderson, M.J.**, Costello, M.J., Lenz, M. and Wahl, M. 2007. Temporal variance of disturbance did not affect diversity and structure of a marine fouling community in north-eastern New Zealand. *Marine Biology* 153: 199-211.
49. Wheldon, M.C., **Anderson, M.J.** and Johnson, B.W. 2007. Identifying treatment effects in multi-channel measurements in electroencephalographic studies: multivariate permutation tests and multiple comparisons. *Australian & New Zealand Journal of Statistics* 49: 397-413.
48. Atalah, J., **Anderson, M.J.** and Costello, M.C. 2007. Temporal variability and intensity of grazing: a mesocosm experiment. *Marine Ecology Progress Series* 341: 15-24.
47. Ford, R.B., **Anderson, M.J.** and Kelly, S. 2007. Subtle and negligible effects of rainfall on estuarine infauna: evidence from three years of event-driven sampling. *Marine Ecology Progress Series* 340: 17-27.
46. Oppenheimer, S., Astheimer, L., **Anderson, M.J.** and Buttemer, B. 2007. Morphometric measures as a moderate predictor of gender in the White-browed Babbler *Pomatostomus superciliosus gilgandra*. *Corella* 31: 15-18.
45. Terlizzi, A., **Anderson, M.J.**, Fraschetti, S. and Benedetti-Cecchi, L. 2007. Scales of spatial variation in Mediterranean subtidal sessile assemblages at different depths. *Marine Ecology Progress Series* 332: 25-39.
44. Langlois, T.J., **Anderson, M.J.**, Brock, M. and Murman, G. 2006. Importance of rock lobster size-structure for trophic interactions: choice of soft-sediment bivalve prey. *Marine Biology* 149: 447-454.
43. Langlois, T.J., **Anderson, M.J.** and Babcock, R.C. 2006. Inconsistent effects of reefs on different size classes of macrofauna in adjacent sand habitats. *Journal of Experimental Marine Biology and Ecology* 334: 269-282.
42. Langlois, T.J., **Anderson, M.J.**, Babcock, R.C. and Kato, S. 2006. Marine reserves demonstrate trophic interactions across habitats. *Oecologia* 147: 134-142.
41. **Anderson, M.J.**, Ellingsen, K.E., McArdle, B.H. 2006. Multivariate dispersion as a measure of beta diversity. *Ecology Letters* 9: 683-693.
40. **Anderson, M.J.** 2006. Distance-based tests for homogeneity of multivariate dispersions. *Biometrics* 62: 245-253.
39. **Anderson, M.J.**, Millar, R.B., Blom, W.M. and Diebel, C.E. 2005. Nonlinear multivariate models of successional change in community structure using the von Bertalanffy curve. *Oecologia* 146: 279-286.
38. Watson, D.L., Harvey, E.S., **Anderson, M.J.** and Kendrick, G.A. 2005. A comparison of temperate reef fish assemblages recorded by three underwater stereo-video techniques. *Marine Biology* 148: 415-425.
37. Terlizzi, A., Scuderi, D., Fraschetti, S. and **Anderson, M.J.** 2005. Quantifying effects of pollution on biodiversity: a case study of highly diverse molluscan assemblages in the Mediterranean. *Marine Biology* 148: 293-305.
36. Millar, R.B., **Anderson, M.J.** and Zunun, G. 2005. Fitting nonlinear environmental gradients to community data: a general distance-based approach. *Ecology* 86: 2245-2251.
35. **Anderson, M.J.**, Connell, S.D., Gillanders, B.M., Diebel, C.E., Blom, W.M., Landers, T.J. and Saunders, J.E. 2005. Relationships between taxonomic resolution and spatial scales of multivariate variation in kelp holdfast assemblages. *Journal of Animal Ecology* 74: 636-646.
34. Langlois, T.J., **Anderson, M.J.** and Babcock, R.C. 2005. Reef-associated predators influence adjacent soft-sediment communities. *Ecology* 86: 1508-1519.
33. Hewitt, J.E., **Anderson, M.J.** and Thrush, S.F. 2005. Assessing and monitoring ecological community health in marine systems. *Ecological Applications* 15: 942-953.
32. **Anderson, M.J.**, Diebel, C.E., Blom, W.M. and Landers, T.J. 2005. Consistency and variation in kelp holdfast assemblages: spatial patterns of biodiversity for the major phyla at different taxonomic resolutions. *Journal of Experimental Marine Biology and Ecology* 320: 35-56.
31. Terlizzi, A., Benedetti-Cecchi, L., Bevilacqua, S., Fraschetti, S., Guidetti, P. and **Anderson, M.J.** 2005. Multivariate and univariate asymmetrical analyses in environmental impact assessment: a case study of Mediterranean subtidal sessile assemblages. *Marine Ecology Progress Series* 289: 27-42.

30. **Anderson, M.J.** and Thompson, A.A. 2004. Multivariate control charts for ecological and environmental monitoring. *Ecological Applications* 14: 1921-1935.
29. Millar, R.B. and **Anderson, M.J.** 2004. Remedies for pseudoreplication. *Fisheries Research* 70: 397-407.
28. Geffen, E., **Anderson, M.J.** and Wayne, R.K. 2004. Climate and habitat barriers to dispersal in the highly mobile gray wolf. *Molecular Ecology* 13: 2481-2490.
27. McArdle, B.H. and **Anderson, M.J.** 2004. Variance heterogeneity, transformations and models of species abundance: a cautionary tale. *Canadian Journal of Fisheries and Aquatic Sciences* 61: 1294-1302.
26. **Anderson, M.J.** and Millar, R.B. 2004. Spatial variation and effects of habitat on temperate reef fish assemblages in northeastern New Zealand. *Journal of Experimental Marine Biology and Ecology* 305(2): 191-221.
25. **Anderson, M.J.**, Ford, R.B., Feary, D.A. and Honeywill, C. 2004. Quantitative measures of sedimentation in an estuarine system and its relationship with intertidal soft-sediment infauna. *Marine Ecology Progress Series* 272: 33-48.
24. Willis, T.J. and **Anderson, M.J.** 2003. Structure of cryptic reef fish assemblages: relationships with habitat characteristics and predator density. *Marine Ecology Progress Series* 257: 209-221.
23. Millar, R.B. and **Anderson, M.J.** 2003. The kinetics of monospermic and polyspermic fertilization in free-spawning marine invertebrates. *Journal of Theoretical Biology* 224: 79-85.
22. **Anderson, M.J.** and Robinson, J. 2003. Generalized discriminant analysis based on distances. *Australian & New Zealand Journal of Statistics* 45(3): 301-318.
21. **Anderson, M.J.** and Willis, T.J. 2003. Canonical analysis of principal coordinates: a useful method of constrained ordination for ecology. *Ecology* 84: 511-525.
20. **Anderson, M.J.** and ter Braak, C.J.F. 2003. Permutation tests for multi-factorial analysis of variance. *Journal of Statistical Computation and Simulation* 73: 85-113.
19. **Anderson, M.J.** 2001. Permutation tests for univariate or multivariate analysis of variance and regression. *Canadian Journal of Fisheries and Aquatic Sciences* 58: 626-639.
18. **Anderson, M.J.** 2001. A new method for non-parametric multivariate analysis of variance. *Austral Ecology* 26: 32-46.
17. **Anderson, M.J.** and Robinson, J. 2001. Permutation tests for linear models. *Australian and New Zealand Journal of Statistics* 43: 75-88.
16. McArdle, B.H. and **Anderson, M.J.** 2001. Fitting multivariate models to community data: a comment on distance-based redundancy analysis. *Ecology* 82(1): 290-297.
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14. Connell, S.D. and **Anderson, M.J.** 1999. Predation by fish on assemblages of intertidal epibiota: effects of predator size and patch size. *Journal of Experimental Marine Biology and Ecology* 241: 15-29.
13. **Anderson, M.J.** and Connell, S.D. 1999. Predation by fish on intertidal oysters. *Marine Ecology Progress Series* 187: 203-211.
12. **Anderson, M.J.** and Legendre, P. 1999. An empirical comparison of permutation methods for tests of partial regression coefficients in a linear model. *Journal of Statistical Computation and Simulation* 62: 271-303.
11. **Anderson, M.J.** 1999. Distinguishing direct from indirect effects of grazers in intertidal estuarine assemblages. *Journal of Experimental Marine Biology and Ecology* 234: 199-218.
10. Legendre, P. and **Anderson, M.J.** 1999. Distance-based redundancy analysis: testing multispecies responses in multifactorial ecological experiments. *Ecological Monographs* 69: 1-24.
9. **Anderson, M.J.** 1998. Effects of patch size on colonization in estuaries: revisiting the species-area relationship. *Oecologia* 118: 87-98.
8. Iliadou, K. and **Anderson, M.J.** 1998. Morphometric comparative analysis of pharyngeal bones of the genus *Scardinius* (Pisces: Cyprinidae) in Greece. *Journal of Natural History* 32: 923-941.
7. **Anderson, M.J.** and Gribble, N.A. 1998. Partitioning the variation among spatial, temporal and environmental components in a multivariate data set. *Australian Journal of Ecology* 23: 158-167.
6. **Anderson, M.J.** and Underwood, A.J. 1997. Effects of gastropod grazers on recruitment and succession of an estuarine assemblage: a univariate and multivariate approach. *Oecologia* 109: 442-453.
5. **Anderson, M.J.** 1996. A chemical cue induces settlement of Sydney rock oysters, *Saccostrea commercialis*, in the laboratory and in the field. *Biological Bulletin* 190: 350-358.
4. **Anderson, M.J.** 1995. Variations in biofilms colonizing artificial surfaces: seasonal effects and effects of grazers. *Journal of the Marine Biological Association, U.K.* 75: 705-714.
3. Underwood, A.J. and **Anderson, M.J.** 1994. Seasonal and temporal aspects of recruitment and succession in an intertidal estuarine fouling assemblage. *Journal of the Marine Biological Association, U.K.* 74: 563-584.

2. **Anderson, M.J.** and Underwood, A.J. 1994. Effects of substratum on the recruitment and development of an intertidal estuarine fouling assemblage. *Journal of Experimental Marine Biology and Ecology* 184: 217-236.
1. Byrne, M. and **Anderson, M.J.** 1994. Hybridization of sympatric *Patiriella* species (Echinodermata: Asteroidea) in New South Wales. *Evolution* 48: 564-576.

#### *Book chapters (2)*

2. **Anderson, M.J.** 1996. Indirect effects of grazing gastropods on recruitment of Sydney Rock oysters. pp. 339-347. In: Floyd, R.B., Sheppard, A.W. and De Barro, P.J. (eds.). *Frontiers of Population Ecology*. CSIRO Publishing, Melbourne, Victoria.
1. Byrne, M. and **Anderson, M.J.** 1994. Gametic compatibility and the hybridization between sympatric *Patiriella* species (Echinodermata: Asteroidea) in New South Wales (Abstract). In: David, B., Guille, A., Féral, J. P. and Roux, M. (eds.). *Echinoderms Through Time*. Balkema, Rotterdam.

#### *Book reviews (2)*

2. **Anderson, M.J.** 2003. Review of: McCune, B. and Grace, J.B. 2002. *Analysis of Ecological Communities*. MjM Software Design, Gleneden Beach, Oregon. *Journal of Experimental Marine Biology and Ecology* 289: 303-305.
1. **Anderson, M.J.** 1999. Book Review: Legendre, P. and Legendre, L. 1998. *Numerical Ecology*, 2nd English Edition. Elsevier BV, Amsterdam, the Netherlands. *Journal of Experimental Marine Biology and Ecology* 239: 315-317.

#### *Conference proceedings (1)*

1. **Anderson, M.J.** 2002. Teaching multivariate statistics to ecologists and the design of ecological experiments to statisticians: lessons from both sides. *Proceedings of the Sixth International Conference on Teaching of Statistics, July 7 - 12, 2002, Cape Town, South Africa*. Published by ISI Permanent Office, Netherlands.