

Associate Professor Russell B. Millar

Books:

Millar, R. B. 2011. Maximum likelihood estimation and inference: with examples in R, SAS and ADMB. Wiley, London. 357 p.

Publications in peer-reviewed journals and monographs:

1. Coleman, M. A., Ingleton, T. Millar, R. B., Davies P., Jordan, A., and Kelaher, B. P. Submitted. Habitat variables are poor surrogates for functional traits of fish assemblages. *Diversity and Distributions, Submitted*
2. Millar R, B. Submitted. Beyond DIC: New developments in Bayesian model comparison. *Biometrics, Submitted*
3. Broadhurst, M. K., Sterling, D. J., and Millar, R. B. Submitted. Modifying penaeid-trawl otter boards to reduce bottom contact: effects on catches and efficiencies. *ICES J. Mar. Sci.*
4. Possatto, F. E., Broadhurst, M. K., Winemiller, K. O., Spach, H. L., Millar, R. B., Santos, K. M., and Lamour, M. R. Submitted. Mapping the spatio-temporal distribution of batoids to improve conservation in a subtropical estuary. *Aquatic Conservation: Marine and Freshwater Ecosystems.*
5. Uhlmann, S. S., Broadhurst, M. K., and R. B. Millar. 2015. Effects of modified handling on the physiological stress of trawled-and-discarded yellowfin bream *Acanthopagrus australis*. *PLOS ONE*. In press.
6. Broadhurst, M. K., Sterling, D. J., and Millar, R. B. 2015. Effects of diel period and diurnal cloud cover on the species selection of short and long penaeid trawls. *Fisheries Research*. In press.
7. Broadhurst, M. K., Sterling, D. J., and Millar, R. B. 2015. Increasing lateral mesh openings in penaeid-trawl bodies to improve selection. *Fisheries Research*. In press.
8. McHugh, H. Broadhurst, M. K., Sterling, D. J., Millar R. B., Skilleter, G. and Kennelly, S. 2015. Relative benthic disturbances of conventional and novel otter boards. *ICES J. Mar. Sci.* In press.
9. McHugh, H. Broadhurst, M. K., Sterling, D. J., and Millar R. B. 2015. A simple anterior fish excluder (SAFE) for mitigating penaeid-trawl bycatch. *PLOS ONE*. doi:10.1371/journal.pone.0123124.
10. McHugh, H. Broadhurst, M. K., Sterling, D. J., and Millar R. B. 2015. Comparing three conventional penaeid-trawl otter boards and the new batwing design. *Fisheries Research*. 167: 180-189.
11. Broadhurst, M. K., Sterling, D. J., and Millar, R. B. 2015. Traditional vs novel ground gears: maximising the environmental performance of penaeid trawls. *Fisheries Research*. 167: 199-206.
12. Peregrin, L. S., Butcher, P. A., Broadhurst, M. K., and Millar, R. B. 2015. Angling-induced barotrauma among reproductively active snapper *Chrysophrys auratus*. *PLOS ONE*. doi:10.1371/journal.pone.0119158. 12pp.
13. Millar, R. B. 2015. A better estimator of mortality rate from age-frequency data. *Can. J. Fish. Aquat. Sci.* 72: 364-375.
14. Broadhurst, M. K., Butcher, P. A., Millar, R. B., Marshall, J. E., and Peddemors, V. M. 2014. Temporal hooking variability among sharks on south-eastern Australian demersal longlines and implications for their management. *Global Ecol. Cons.* 2: 181-189.
15. McHugh, M. J., Broadhurst, M. K., Sterling, D. J., and Millar, R. B. 2014. Comparing and modifying penaeid beam and otter trawls to improve ecological efficiencies. *Fish. Mgmt Ecol.* 21: 299-311.

16. Millar, R. B., and S. McKechnie. 2014. A one-step-ahead pseudo DIC for comparison of Bayesian state-space models. *Biometrics*. 972-980.
17. Gribben, P. E., Millar, R. B., and Jeffs, A. G. 2014. Fertilization success of the New Zealand geoduck, *Panopea zelandica*: Effects of sperm concentration, gamete age, and contact time. *Aquaculture Research*. 45: 1380-1388.
18. Broadhurst, M. K., Sterling, D. J., and Millar, R. B. 2014. Configuring the mesh size, taper and wing depth of penaeid trawls to reduce environmental impacts. *PLoS ONE*. doi:10.1371/journal.pone.0099434
19. Park, H-H., Millar, R. B., Park, C-D, Park, S-W, Lee S. I, Bae, B-S., An, H-C., Cho S-K, and Lee, K. 2014. Comparison of catches and species composition for flounders caught using gillnets, gillnets with supporting lines, and trammel nets. *J. Kor. Soc. Fish. Tech.* 50: 1-11.
20. Broadhurst, M. K., Sterling, D. J., and Millar, R. B. 2014. Engineering and catch implications of variable wing-end spread on a penaeid trawl. *Fish. Res.* 153: 24-30.
21. White, W. L., and Millar, R. B. 2014. Quantitative Research. In Wright-St Clair, V. A., Reid, D., Shaw, S. and Ramsbotham, J. *Evidence-based Health Practice*. Oxford University Press. p. 39-48.
22. 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. *Mar. Ecol. Prog. Ser.* 499: 203-216. doi: 10.3354/meps10653
23. Sewell, M. A. Millar, R. B., Yu, P., Kapsenberg, L., and Hofmann, G. 2014. Ocean acidification and fertilization in the Antarctic sea urchin *Sterechninus neumayeri*: the importance of polyspermy. *Environmental Science and Technology*. 48: 713-722,
24. Revill, A. S., Broadhurst, M. K., and Millar, R. B. 2013. Mortality of adult plaice, *Pleuronectes platessa* and sole, *Solea solea* discarded from English Channel beam trawlers. *Fish. Res.* 147: 320-326.
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27. 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.
28. Stevenson, B. C., and Millar R. B. 2013. Promising the moon? Evaluation of indigenous and lunar fishing calendars using semiparametric generalized mixed models of recreational catch data. *Environmental and Ecological Statistics*. 20: 591-608. DOI: 10.1007/s10651-013-0236-5
29. Broadhurst, M. K., Sterling, D. J., and Millar, R. B. 2013. Relative engineering and catching performance of paired penaeid-trawling systems. *Fish. Res.* 143: 143-152.
30. Millar, R. B., McKechnie, S., and Jordon, C. E. 2012. Simple estimators of salmonid escapement and its variance using a new area-under-the-curve method. *Can. J. Fish. Aquat. Sci.* 69: 1002-1015.
31. Smith, A. N. H., Anderson, M. J., and Millar, R. B. 2012. Incorporating the intraspecific occupancy-abundance relationship into zero-inflated models. *Ecology*. 93: 2526-2532.
32. MacBeth, W. G., Millar, R. B., Johnson, D. D., Gray, C. A., Keech, R. S., and Collins, D. 2012. Assessment of the relative performance of a square-mesh codend design across multiple vessels in a demersal trawl fishery. *Fish. Res.* 134-136: 29-41.

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37. Broadhurst, M. K., and Millar, R. B. 2011. Square-mesh codend length and selectivity in southeastern Australian stow nets. *Fish. Mgmt Ecol.* 18: 39-49.
38. Millar, R. B. 2010. Reliability of size-selectivity estimates from paired-trawl and covered-codend experiments. *ICES J. Mar. Sci.* 67: 530-536.
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43. Broadhurst, M. K., Millar, R. B., Brand, C. P. and Uhlmann, S. S. 2009. Modified sorting to mitigate the collateral mortality of trawled school prawns *Metapenaeus macleayi*. *Fish. Bull.* 107: 286-297.
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46. Graham, K. J., Broadhurst, M. K., Wooden, M. E. L. and Millar, R. B. 2009. Effects of codend circumference and twine diameter on selection in south-eastern Australian fish trawls. *Fish. Res.* 95: 341-349.
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48. Broadhurst, M. K., Millar, R. B., Brand, C. P. and Uhlmann, S. S. 2008. Mortality of discards from southeastern Australian beach seines and gillnets. *Diseases of Aquatic Organisms.* 80: 51-61.
49. Broadhurst, M. K., Wooden, M. E. L. and Millar, R. B. 2007. Isolating selection mechanisms in beach seines. *Fish. Res.* 88: 56-69.
50. Millar, R. B., and Stewart, W. S. 2007. Assessment of locally influential observations in Bayesian models. *Bayesian Analysis.* 2: 365-384.
51. Park, H-H., Millar, R. B., An, H-C. and Kim, H-Y. 2007. Size selectivity of drum-nets for whelk (*Buccinum opisoplectum dall*) in the Korean coastal waters of the East Sea. *Fish. Res.* 86: 113-119.
52. Macbeth, W. G., Millar, R. B., Broadhurst, M. K., Hewitt, C. W. and Wooden, M. E. L. 2007. Intra-fleet variability in the size selectivity of a square-mesh trawl codend for school prawns (*Metapenaeus macleayi*). *Fish. Res.* 86: 92-98.

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55. Broadhurst, M. K., Millar, R. B., Wooden, M. E. L. and Macbeth, W. G. 2006. Optimizing codend configuration in a multispecies demersal trawl fishery. *Fish. Mgmt. Ecology.* 13: 81-92.
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