

# A4 Index to data sets used in examples

Below is an index to the data sets used in examples, listed in order of appearance in the text. With each dataset are given the name and location of the data file, the original reference, a description of its use as an example in the manual and the page number where this can be found (italicised and in parentheses).

1. Ekofisk oil-field macrofauna ([ekma.pri](#) in Examples v6\Ekofisk), [Gray, Clarke, Warwick et al. \(1990\)](#) - demonstrate one-way PERMANOVA (1.8), model selection procedures, diagnostics and building models in DISTLM (4.10) and visualising models using dbRDA (4.11).
2. Victorian avifauna ([vic.pri](#) in Examples add-on\VictAvi), [Mac Nally & Timewell \(2005\)](#) - demonstrate Monte Carlo  $P$  values (1.12). Also used at the level of individual surveys ([vicsurv.pri](#)) to demonstrate a repeated measures design (1.32) and also PCO (3.4), negative eigenvalues (3.5), scree plots (3.5) and vector overlays (3.6).
3. Subtidal epibiota ([sub.pri](#) in Examples add-on\SubEpi), [Glasby \(1999\)](#) - demonstrate a two-way crossed design (1.14) and contrasts (1.19) in PERMANOVA.
4. Tasmanian meiofauna ([tas.pri](#) in Examples add-on\TasMei), [Warwick, Clarke & Gee \(1990\)](#) - demonstrate fixed versus random factors (1.20), components of variation (1.21), expected mean squares (1.22), constructing F from EMS (1.23), exchangeable units (1.24), inference space and power (1.25), and testing the design (1.26).
5. Holdfast invertebrates ([hold.pri](#), [holdenv.pri](#) and [Mollusca.agg](#) in Examples add-on\HoldNZ), [Anderson, Diebel, Blom et al. \(2005\)](#) - demonstrate a nested design (1.27), estimating components of variation (1.28), and pooling or excluding terms (1.29). Also used later to demonstrate analyses with covariates in PERMANOVA (1.35) and marginal and conditional tests with DISTLM (4.6).
6. Plankton net study ([plank.pri](#) in Examples add-on\Plankton), [Winsor & Clarke \(1940\)](#) - demonstrate designs that lack replication (1.30) and increased power as a result of blocking (1.30).
7. Woodstock plants ([wsk.pri](#) in Examples add-on\Woodstock), [Prober, Thiele & Hunt \(2007\)](#) - demonstrate a split-plot design (1.31).
8. Birds from Borneo ([born.pri](#) in Examples add-on\BorneoBirds), [Cleary, Genner, Boyle et al. \(2005\)](#) - demonstrate an unbalanced design (1.34).
9. New Zealand fish ([fishNZ.pri](#) in Examples add-on\FishNZ), [Anderson & Millar \(2004\)](#) - demonstrate analyses involving linear combinations of mean squares (1.36).
10. Mediterranean molluscs ([medmoll.pri](#) in Examples add-on\MedMoll), [Terlizzi, Scuderi, Frascchetti et al. \(2005\)](#) - demonstrate an asymmetrical design (1.37).

11. Bumpus' sparrows ([spar.pri](#) in Examples add-on\BumpSpar), [Bumpus \(1898\)](#) - demonstrate test of dispersion in Euclidean space (2.3).
  12. Tikus Island corals ([tick.pri](#) in Examples v6\Corals), [Warwick, Clarke & Suharsono \(1990\)](#) - demonstrate test of dispersion for ecological data (2.7) and how choice of dissimilarity measure matters (2.8). Also used later to demonstrate how CAP tells you nothing about relative within-group dispersions (5.9).
  13. Norwegian macrofauna ([norbio.pri](#) and [norenv.pri](#) in Examples add-on\NorMac), [Ellingsen & Gray \(2002\)](#) - demonstrate use of the test of dispersion to investigate beta diversity (2.9).
  14. Okura macrofauna ([okura.pri](#), in Examples add-on\Okura), [Anderson, Ford, Feary et al. \(2004\)](#) - demonstrate tests of dispersion in nested designs (2.11). Also used to demonstrate PCO of distances among centroids (3.8) and PCO versus MDS when samples are split into groups (3.9).
  15. Cryptic fish assemblages ([cryptic.pri](#) in Examples add-on\Cryptic), [Willis & Anderson \(2003\)](#) - demonstrate PERMDISP for a two-factor crossed design, in conjunction with PERMANOVA (2.12).
  16. Clyde macrofauna and environmental data ([clma.pri](#) and [clev.pri](#), in Examples v6\Clydemac), [Pearson & Blackstock \(1984\)](#) - demonstrate PCO versus PCA for environmental data (3.7) and simple linear regression using DISTLM (4.4).
  17. Thau lagoon bacteria ([thbac.pri](#) and [thvsp.pri](#) in Examples add-on\Thau), [Amanieu, Legendre, Troussellier et al. \(1989\)](#) - demonstrate analysing variables in sets using DISTLM (4.14).
  18. Oribatid mites ([ormites.pri](#) and [orenvgeo.pri](#) in Examples add-on\OrbMit), [Borcard, Legendre & Drapeau \(1992\)](#) - demonstrate analysing categorical predictor variables using DISTLM (4.15).
  19. Flea-beetles ([flea.pri](#) in Examples add-on\FleaBeet), [Lubischew \(1962\)](#) - demonstrate the rationale for CAP by comparing unconstrained vs constrained ordination (5.2).
  20. Poor Knights Islands fish ([pkfish.pri](#) in Examples add-on\PKFish), [Willis & Denny \(2000\)](#) - demonstrate discriminant analysis based on Bray-Curtis using CAP (5.4).
  21. Iris data ([iris.pri](#) in Examples add-on\Iris), [Anderson \(1935\)](#) - demonstrate classical discriminant analysis and MANOVA test statistics using CAP (5.6). Also used later to show how the positions of new samples are added into a discriminant-type analysis, with prediction of group membership (5.10).
  22. Fal estuary biota ([Fa.xls](#) in Examples v6\Fal; [falbio.pri](#) and [falenv.pri](#) in Examples add-on\FalEst), [Sommerfield, Gee & Warwick \(1994\)](#) - demonstrate canonical correlation analysis with CAP based on the Bray-Curtis measure relating biota to a single environmental gradient (5.11).
  23. Hunting spiders ([hspi.pri](#) and [hspienv.pri](#) in Examples add-on\Spiders), [van der Aart & Smeek-Enserink \(1975\)](#) - demonstrate a canonical correlation-type analysis using CAP on the basis of chi-squared distances (5.16).
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