Invertebrates have been hailed as useful ecological indicators because their short lifespan can indicate environmental change before effects on plants or vertebrates become noticeable. However, many reports of invertebrate studies seemingly move effortlessly from describing methods to presenting a species list and analysing data. The reality of managing large numbers of samples and type specimens, particularly for those less experienced in invertebrate identification, can be confusing and daunting. This poster outlines the approach taken by one person who sorted over 3200 pitfall traps per year for two years. Beetle, ant and spider diversity and abundance were measured across four different paddock types on 47 mixed farms across the wheat-sheep zone. There were ten traps per paddock, dug, set and collected by Grain & Graze’s regional project officers.

*Every vial needs a label or an overturned container can create chaos and tears.*

*Vials can be stored in containers according to geographic location, treatment type and taxon.*

*Voucher specimens grouped by sampling region allow easy revision during repeat samplings.*

*Organised data record sheets can make data entry straightforward.*

*Designating amusing and descriptive morphospecies names can aid memory when sorting. A series of carabid beetles were designated boggle eyes with a descriptive or regional suffix. This is much more memorable than carabid 35. Pictured is boggle eyes large black Murrumbidgee.*

Precision and Accuracy vs Time and Cost - In a large study there can be the requirement to balance the time spent sorting and identifying with the need for guaranteed accuracy. Some ecological surveys, those that monitor changes in diversity for example, are more suited to this method. An increase in taxonomic precision = increase in cost and time required.

Data collated by Peter McQuillan, Janet Smith, Margy Fitzgerald.

Big numbers from the ‘BiGG’ project
Managing large invertebrate sample numbers
Margy Fitzgerald

BiGG = ‘Biodiversity in Grain & Graze’, a collaborative research project funded by MLA, GRDC, AWI, NHT and LWA. http://www.grainandgraze.com.au BiGG is co-ordinated by Kerry Bridle, kerry@utas.edu.au