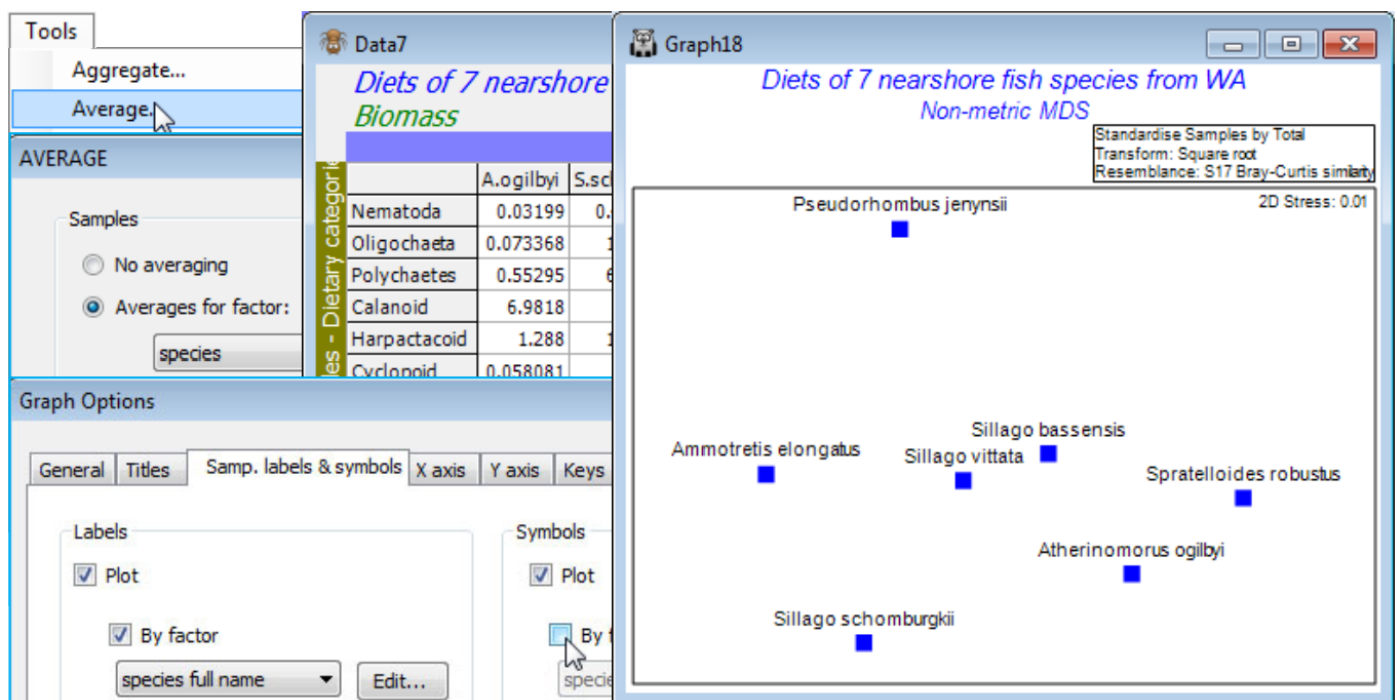
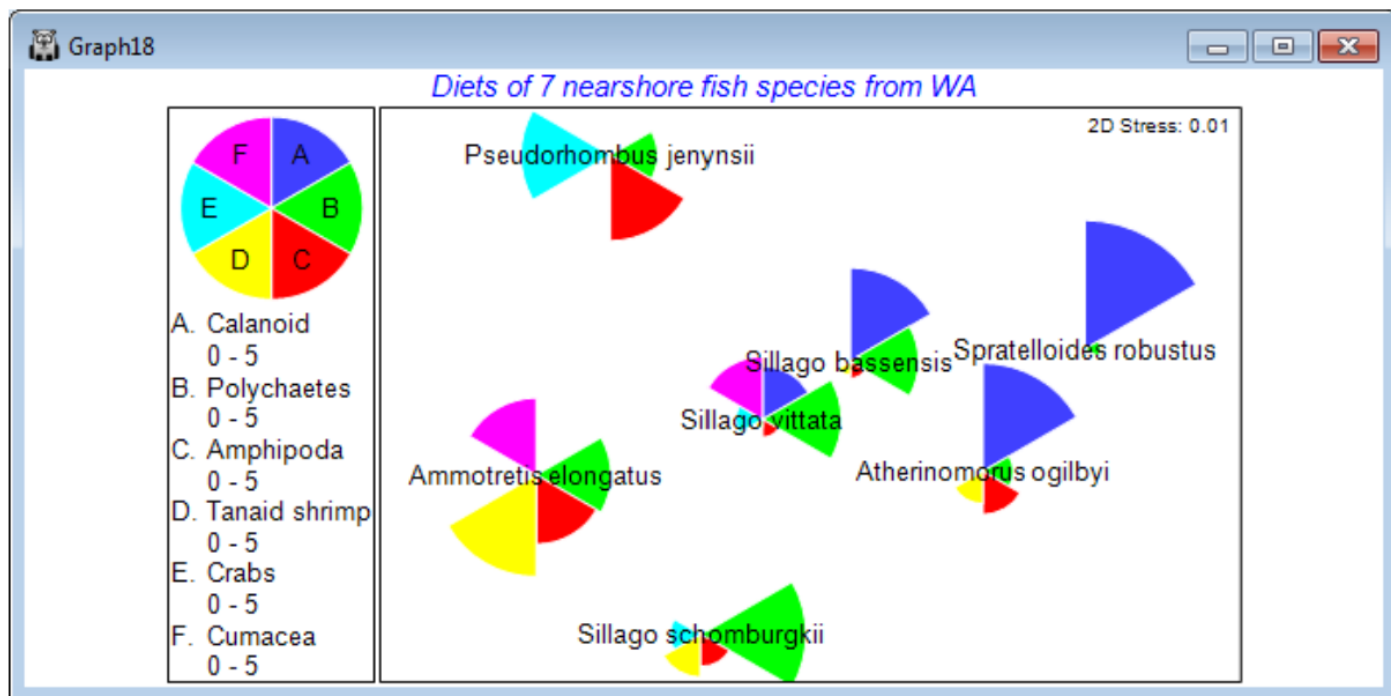


Bubble plots on averages

For these data, a segmented bubble plot on a 2-d ordination provides a succinct summary of the relative balance of the main dietary components for these 7 fish species, when examined on data averaged over all replicate gut samples for each fish species (as in Fig. 7.16 of CiMC). On **Data6**, the standardised then transformed data sheet, take **Tools>Average>**(Samples•Averages for factor: **species**), giving a matrix of 7 samples (the 7 fish species) by 32 dietary categories, **Data7**. Compute Bray-Curtis similarities on this and produce the 2-d *n*MDS configuration, which has minimal stress and is therefore an excellent representation of the dietary dissimilarities among the fish species. The *means plot* below labels by the full species name and harmonises the symbols to a blue square.



Now, uncheck the History box on the **General** menu, remove the subtitle from the **Titles** tab and turn this into a segmented bubble plot by **Special>Main>✓Bubble plot>**(Worksheet: **Data7**), and **Change** variables to *Calanoid (copepods)*, *Polychaetes*, *Amphipods*, *Tanaids*, *Crabs*, *Cumaceans*, also increasing the Bubble scale. On the **Key** dialog, set a uniform range of 0-5 (square root scale, so the segment sizes in the key will represent an average 25% of diet by volume), change Boundary colour to white and make any other desired colour changes. (If the names are required displaced from the bubble centres, or the key back-transformed to original units, key/titles moved etc., as in the equivalent Fig. 7.16 of CiMC for example, the plot can be copied and pasted to Powerpoint or other presentation software; this will be in vector not bitmap format so can readily be edited). Resave this fish diets workspace as **WA fish ws** for use in the next section, and close it.



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