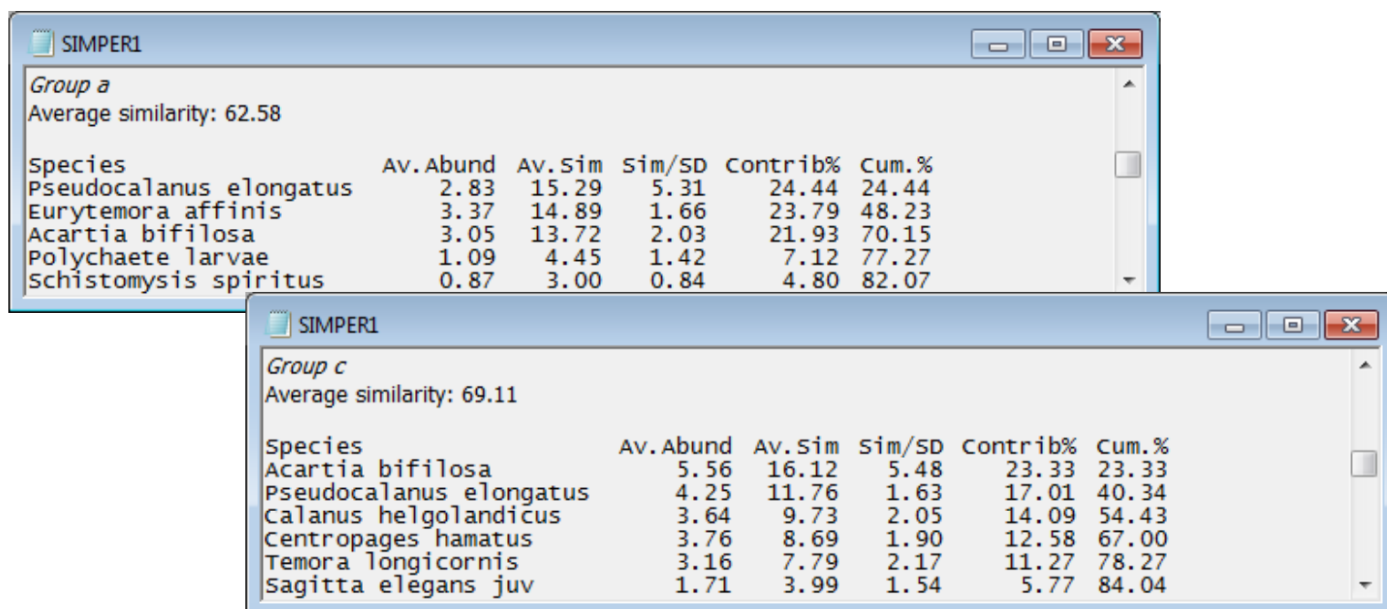


# Species typifying a group

Earlier in the results window, tables are given of the contributions of each species to the Bray-Curtis similarity *within* each of the groups (see Chapter 7 of the methods manual for the formula).



The image shows two screenshots of the SIMPER1 software window. The top window displays results for Group a, and the bottom window displays results for Group c. Both windows show a table of species contributions to within-group similarity, including average abundance, average similarity, similarity/standard deviation, contribution percentage, and cumulative percentage.

**Group a**  
Average similarity: 62.58

Species	Av. Abund	Av. Sim	Sim/SD	Contrib%	Cum. %
Pseudocalanus elongatus	2.83	15.29	5.31	24.44	24.44
Eurytemora affinis	3.37	14.89	1.66	23.79	48.23
Acartia bifilosa	3.05	13.72	2.03	21.93	70.15
Polychaete larvae	1.09	4.45	1.42	7.12	77.27
Schistomysis spiritus	0.87	3.00	0.84	4.80	82.07

**Group c**  
Average similarity: 69.11

Species	Av. Abund	Av. Sim	Sim/SD	Contrib%	Cum. %
Acartia bifilosa	5.56	16.12	5.48	23.33	23.33
Pseudocalanus elongatus	4.25	11.76	1.63	17.01	40.34
Calanus helgolandicus	3.64	9.73	2.05	14.09	54.43
Centropages hamatus	3.76	8.69	1.90	12.58	67.00
Temora longicornis	3.16	7.79	2.17	11.27	78.27
Sagitta elegans juv	1.71	3.99	1.54	5.77	84.04

The average Bray-Curtis similarity between all pairs of sites in group a is 62.6, made up mainly of contributions from just three species: *P. elongatus* (15.3, i.e. 24.4% of total), *E. affinis* (14.9, i.e. 23.8%), *A. bifilosa* (13.7, i.e. 21.9%), with a cumulative contribution of 70.2% of the total within-group similarity (the list is again truncated at 80%). These species can be described as typical of Group a (they also have a consistently large presence because the ratio of their contribution to its SD, across the within-group similarities, is relatively high, notably for *P. elongatus*). However, *A. bifilosa* and *P. elongatus* are also typical of group c, which is why they do not head the list of those contributing most to the discrimination between a and c. They did feature lower down in that list, since both have higher average (transformed) values in c than in a (column 1 and earlier shade plot).

Save and close the Bristol Channel ws workspace, and if you would like to try another example of SIMPER on a 1-way layout – but this time with *a priori* groups – open the WA fish ws workspace examined in Section 9, where ANOSIM tests showed that all pairwise comparisons of (predator) fish species gave significantly different (prey) diets, except two pairs involving *S. robustus*, for which therefore you should not attempt to interpret the SIMPER table of discriminating species.

Revision #2

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