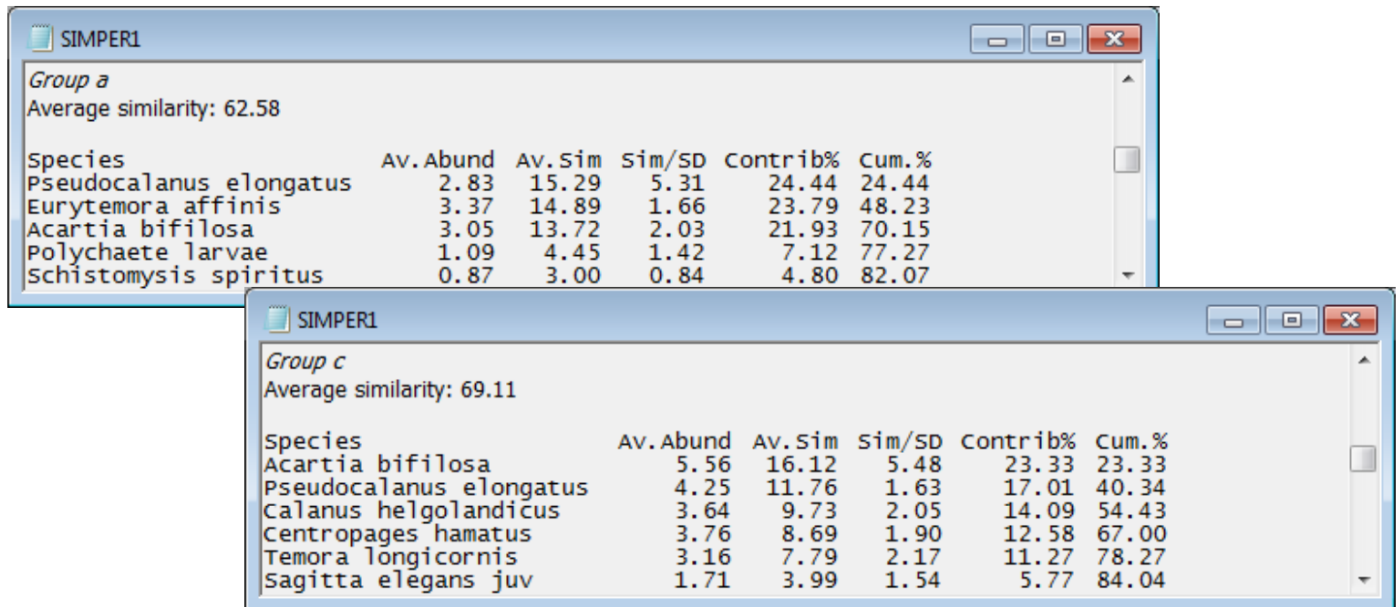


Species typifying a group

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 is titled 'SIMPER1' and shows results for 'Group a' with an average similarity of 62.58. The bottom window is also titled 'SIMPER1' and shows results for 'Group c' with an average similarity of 69.11. Both windows display a table of species contributions to within-group similarity, including average abundance, average similarity, similarity standard deviation, contribution percentage, and cumulative percentage.

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

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.

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