Grouping variables in BEST

After the initial choice of Method, the next area on the BEST dialog inputs the explanatory (*fitted*) data worksheet and, in a new option in PRIMER 7, allows the user to specify an indicator for that sheet which groups its variables into indivisible sets. For example, one ‘explanation’ of differences in community structure might simply be geographical location. If that is a latitudinal gradient it could be represented by a single explanatory variable, but if the samples have 2-d rectangular co-ordinates (or even 3-d), then it would not make sense for the BEST search procedure to consider explanations which included the *x* but not the *y* co-ordinate. If this pair of variables are specified as a group – they have the same level of the indicator – then they will be selected (or not) as a single unit. (Whether it is sensible to include geographic location in the explanatory set for a community pattern is another matter altogether, since location cannot be causal *per se* – an organism does not know its GPS co-ordinates! Instead, the model is more likely to be that of species responding to other enviromental variables which are changing with geographical position, and those should be the variables in the explanatory set). Other examples of grouping might be to separate variables of different types: Valesini FJ *et al* 2014, *Estuar Coasts* 37: 525-547 give a BEST analysis of this sort in which estuarine fish communities are related to groups of variables representing wave exposure, substrate type, marine water intrusion etc., in order to determine if one or more sets of variables are particularly influential – Chapter 11 of CiMC gives slightly more detail.

Revision #2
Created 3 October 2024 01:18:56 by Arden
Updated 12 February 2025 01:17:24 by Abby Miller