

Relatedness supplied as resemblances

Note the alternative means of supplying the variable information, to these dissimilarity measures and the biodiversity indices of Section 15, which is now available in PRIMER 7. In the Variable Relationship dialog box, Type•Resemblance>**Details** now requires specification of a numeric among-species resemblance matrix which could be constructed from genetic, functional, etc. data, but is illustrated here by first creating a species distance matrix through the Linnean tree with **Analyse>Similarity** when the aggregation file *Groundfish taxonomy* is the active window. This takes you to a similar Taxonomy dialog box as above and creates sheet *Resem2* of among-species distances 20, 40, 60, 80, 100. The Linnean tree could be viewed by **Analyse>Cluster** (next section) on *Resem2*, or in alternative format by **Tools>Tree** on *Groundfish taxonomy*. When *Resem2* is supplied as the Variable resemblance worksheet from **Details**, the same γ^{+} matrix results, naturally.

The image displays a collage of PRIMER 7 software windows illustrating the workflow to create a resemblance matrix from a taxonomy file.

- Groundfish density**: Shows a table of abundance data for groundfish species across samples S79 to S82.
- Groundfish taxonomy**: Shows a taxonomy table with columns for Genus, Family, Order, and Class. The 'Analyse' menu is open, showing 'Similarity' and 'Taxtest...'. The 'Similarity' option is selected.
- Variable Relationship**: The 'Type' is set to 'Resemblance'. The 'Details' button is highlighted.
- Resemblance (Data)**: The 'Variable resemblance worksheet' is set to 'Resem2'.
- Taxonomy (Master)**: Shows the 'Variable info. worksheet (taxonomic)' as 'Groundfish taxonomy'. The 'Current level of sample data' is set to 'Species'. The 'Use links' checkbox is checked.
- Variable simil...**: Shows the 'Master taxonomy' with 'Variable info. worksheet: Grou...' and 'Current aggregation level for d...'. The 'Weights are determined from u...'. The 'Taxon' column lists species, and the 'Branch weight' column shows weights of 1, 20, 40, 60, 80, and 100.
- Resem2**: Shows a table of dissimilarity (0 to 100) for groundfish species across samples S1 to S6.
- Resem3**: Shows a table of dissimilarity (0 to 100) for groundfish species across samples S1 to S6.
- Tree**: Shows a hierarchical tree structure for groundfish species, including Chondrichthyes, Rajiformes, Rajidae, Raja, Raja radiata, Raja naevus, Raja undulata, Raja davata, Raja microocellata, Raja brachyura, Raja montagui, Torpediniformes, Squaliformes, and Carchariniformes.

