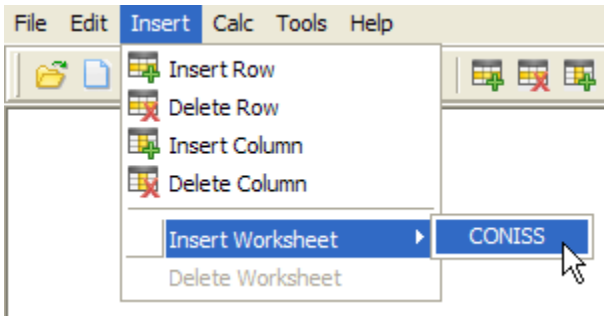
CONISS

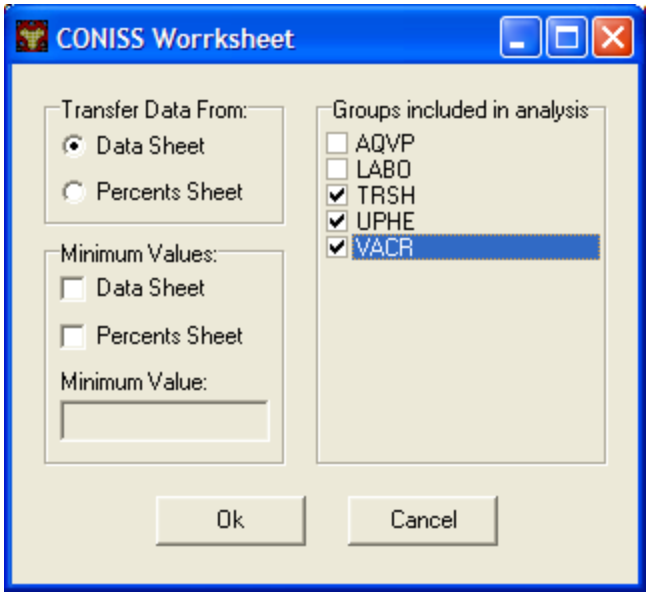
To run CONISS, you first create a CONISS worksheet in Tilia. This worksheet will contain only the data you want in the analysis. You then run CONISS with the data in this worksheet and save the results to a .dgx file. To plot a dendrogram, make a diagram, then open the .dgx file. The following steps explain how to run CONISS and display the dendrogram on a diagram.

1. Create a CONISS worksheet

Make the menu selections **Insert→Insert Worksheet→CONISS**.



This selection will pop up the CONISS Worksheet dialog box.



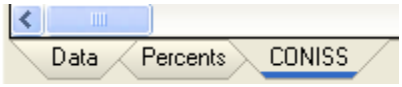
In the **Transfer Data From** box, indicate whether data should be transferred from the Data sheet or the Percents sheet. If the Percents sheet doesn't exist, then the only selection will be the data sheet. If the analysis will be based on percentage data, it is still normally best to select the Data sheet and let CONISS calculate the percentages, which will ensure that percentages for each sample add to 100%.

In the **Minimum Values** box, you can set a minimum value that variables must exceed to be transferred. This value can be a minimum number of specimens or a minimum percent value. Even if data are

transferred from the Data sheet, the minimum value can be based on the Percents sheet. For example, count data could be transferred from the Data sheet, but only variables that exceed 2% in the Percents sheet would be transferred. By default, neither box is checked. If a box is checked, the **Minimum Value** box will be enabled.

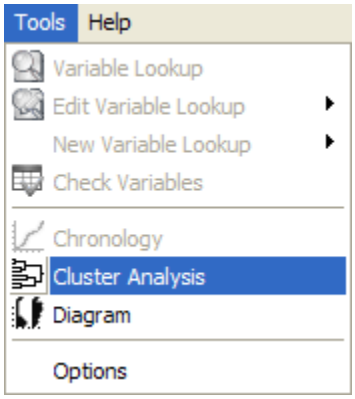
The groups in the Data sheet will be listed in the **Groups included in analysis** box. Check those that you want to include in the analysis. In the example above, trees and shrubs (TRSH), upland herbs (UPHE), and vascular cryptogams (VACR) are selected. Not selected are aquatic vascular plants (AQVP), and laboratory measurements (LABO). The latter include items such as the sample volumes and spike counts for concentration calculations. Sums are automatically not copied to the CONISS worksheet.

When the **Ok** button is clicked, a new worksheet will appear with the data to be used in the CONISS analysis:



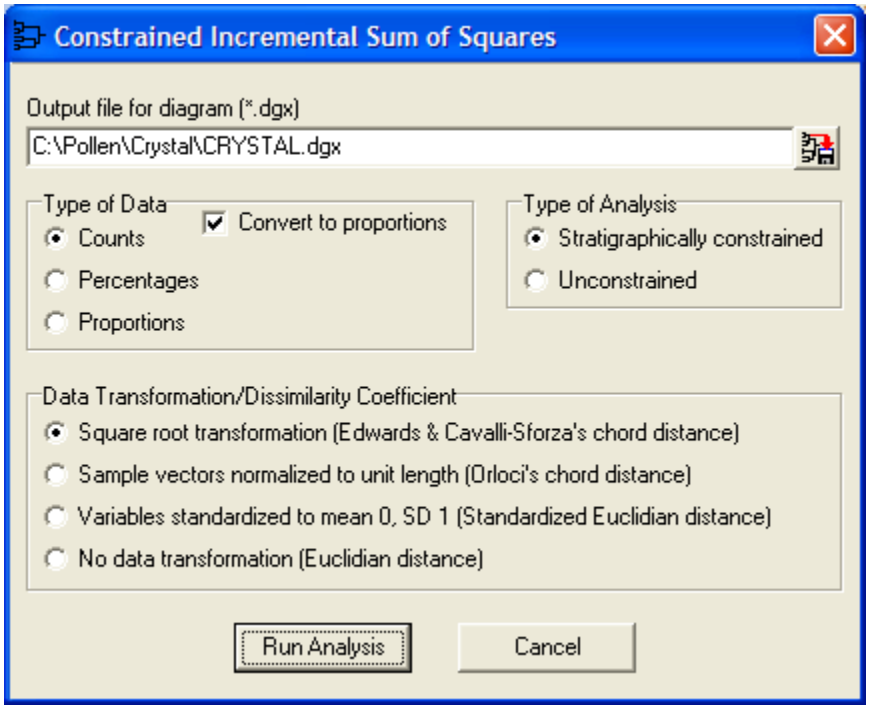
2. Run CONISS

Click the CONISS tab to make the CONISS worksheet active.



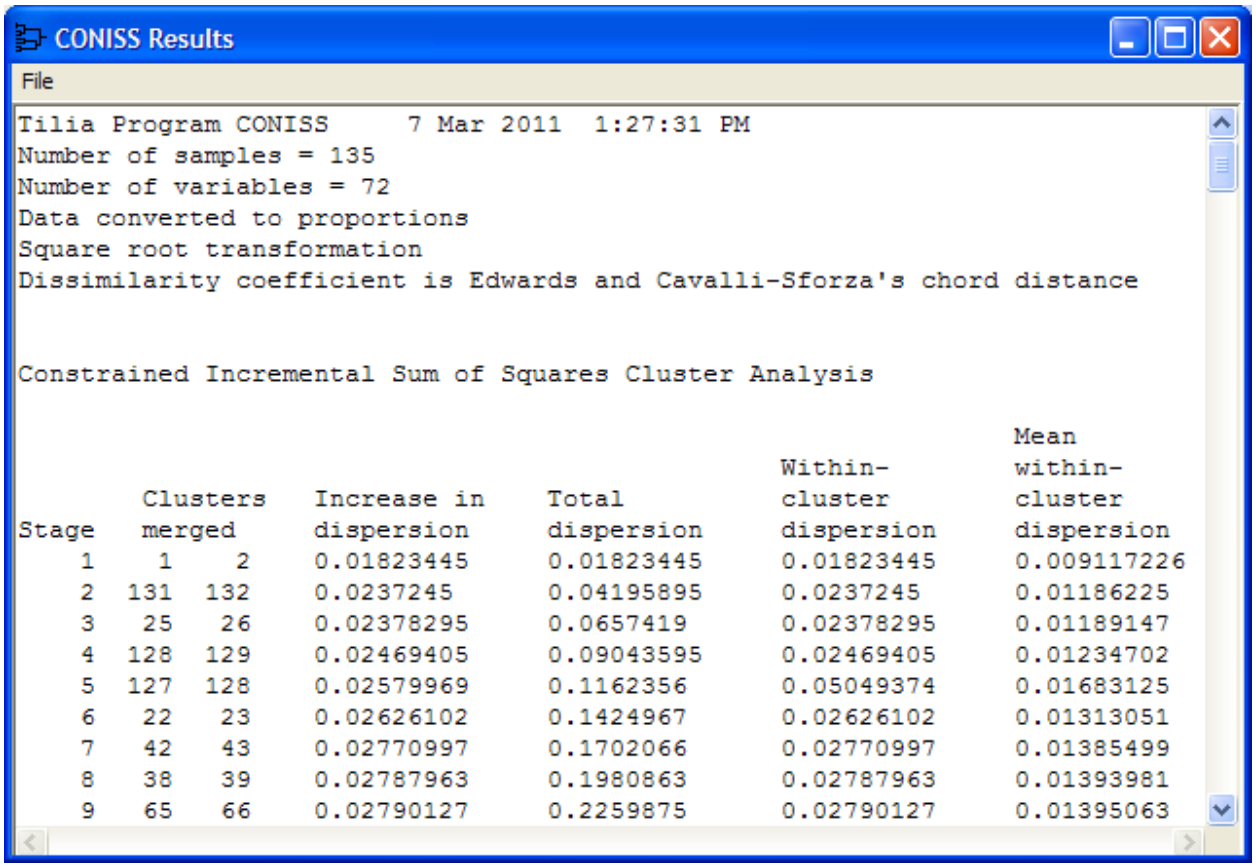
Click **Tools→Cluster Analysis**. If any of the other worksheets are active, the **Cluster Analysis** selection will be inactive (grayed out).

This selection will pop up the CONISS dialog box.



For explanation of the selections in this dialog box, see **CONISS Dialog Box** in Tilia Help.

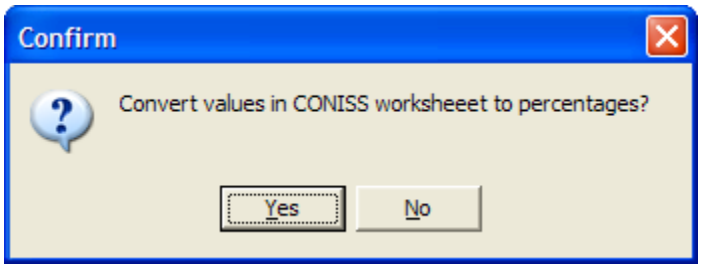
After all selections are made, click the Run Analysis button to run CONISS. The results will appear in a new window.



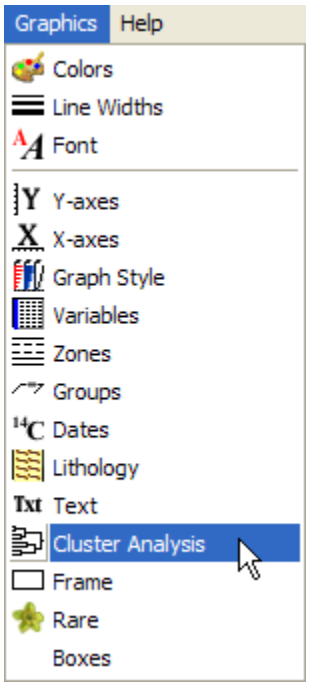
Stage	Clusters merged		Increase in dispersion	Total dispersion	Within-cluster dispersion	Mean within-cluster dispersion
1	1	2	0.01823445	0.01823445	0.01823445	0.009117226
2	131	132	0.0237245	0.04195895	0.0237245	0.01186225
3	25	26	0.02378295	0.0657419	0.02378295	0.01189147
4	128	129	0.02469405	0.09043595	0.02469405	0.01234702
5	127	128	0.02579969	0.1162356	0.05049374	0.01683125
6	22	23	0.02626102	0.1424967	0.02626102	0.01313051
7	42	43	0.02770997	0.1702066	0.02770997	0.01385499
8	38	39	0.02787963	0.1980863	0.02787963	0.01393981
9	65	66	0.02790127	0.2259875	0.02790127	0.01395063

Click the **File** menu selection to print or save the results. The results were also automatically saved to the .dgx file named in the previous dialog box. The .dgx file is XML format. The data from the **CONISS Results** window are saved optionally to an .rtf file. The results do not need to be saved or printed from the **CONISS Results** window in order to plot the dendrogram on the diagram.

After closing the **CONISS Results** window, you will be asked if you want to convert the values in the CONISS worksheet to percentages, which you should do if you want to plot a diagram from the CONISS worksheet rather than from the Percents worksheet.



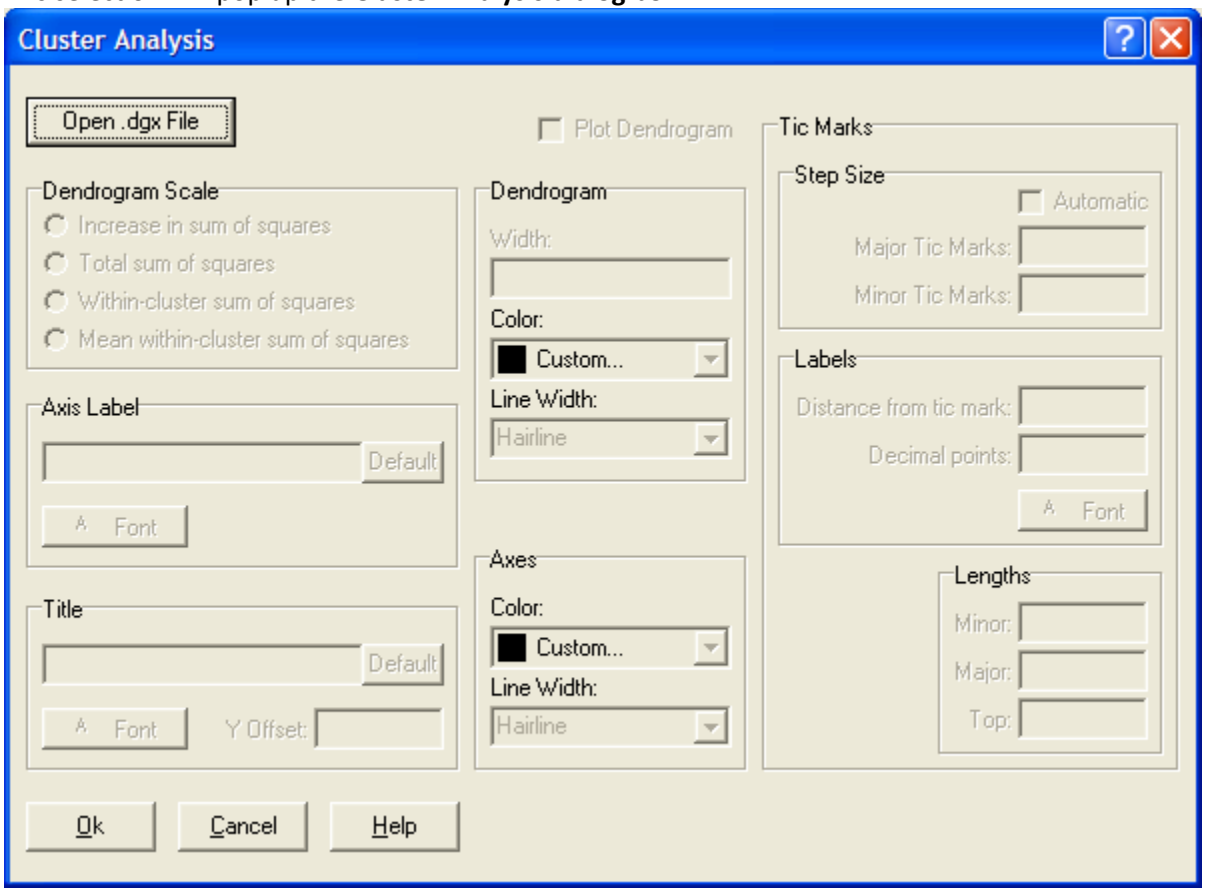
3. Plot a Dendrogram



After creating a diagram, select **Graphics→Cluster Analysis.**

Or click the **Cluster Analysis** button.

This selection will pop up the **Cluster Analysis dialog box**.



Click the **Open .dgx File** button to open the file saved in step 2. For explanation of controls in this dialog box, see **Cluster Analysis Dialog Box** in Tilia Help.