Scatterplot Matrix
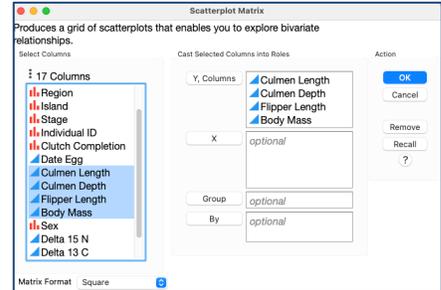
Use to explore the bivariate relationships between three or more numeric variables.

Scatterplot Matrix

Penguins.jmp (under Help > Sample Data Folder)

1. Select **Graph > Scatterplot Matrix.**
2. Select a set of continuous variables from the **Columns list**, and add to **Y, Columns**. Choose **Matrix Format**. Click **OK**.
    *   A matrix of scatterplots will be shown for ever possible pair of variables. In this example using 4 variables, there are 6 pairs.
    *   The scatterplots in the lower left triangle region of the matrix plot are the same as those in the upper right region with the axes simply switches.
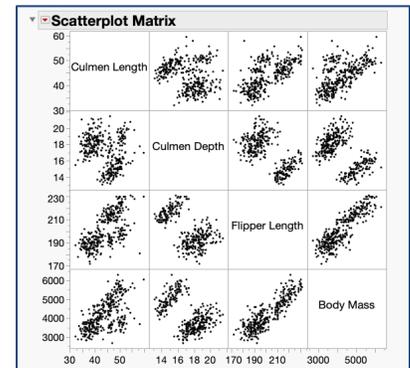
Note: A Matrix Plot can also be made using **Analyze > Multivariate Methods > Multivariate**.
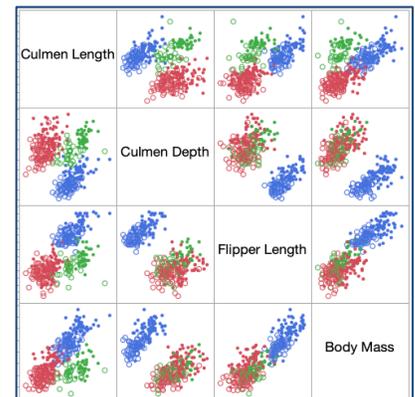

Incorporating Categorial Variables

*   Categorical variables can be incorporated into a Matrix Plot by utilizing **row states**.
*   Here we used different colors for the three penguin species and used open circles or closed circles to represent female and male penguins.

To add **row states** to the data table:

1. Select **Rows > Color or Mark by Columns**. Choose the variable you with to use for the different colors. Here we chose the variable 'Species'. Click **OK**.
    Note: the default colors can be changed by right-clicking on the colors in the dialog box and choosing desired ones.
2. To incorporate a second categorial variable, as was done here, select all the rows that correspond to one of the sexes.
    One way to do this is to open up the Column Header. Go to the column for 'Sex'. Select one of the sexes and go to **Rows > Markers** and choose the desired marker. Repeat for the other sex.
    Any graph already made or will be made will incorporate these rows states.
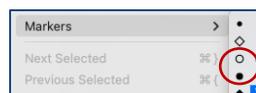
Visit **Discovering JMP > Visualize Your Data > Compare Multiple Variables**, and **Essential Graphing > Scatterplot Matrix** in **JMP Help** to to learn more.