

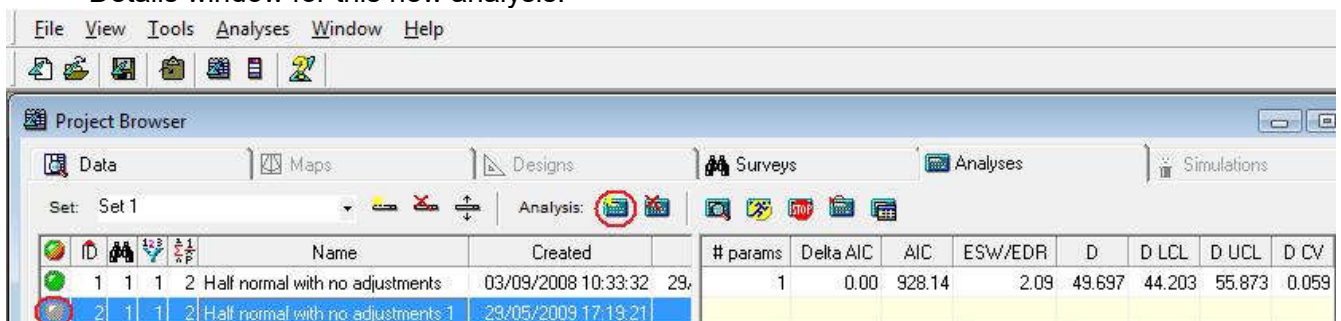
## Introduction to Distance Sampling

### Line transect estimation using Distance: Ducknests

#### MODEL SELECTION WITH DUCKNESTS DATA

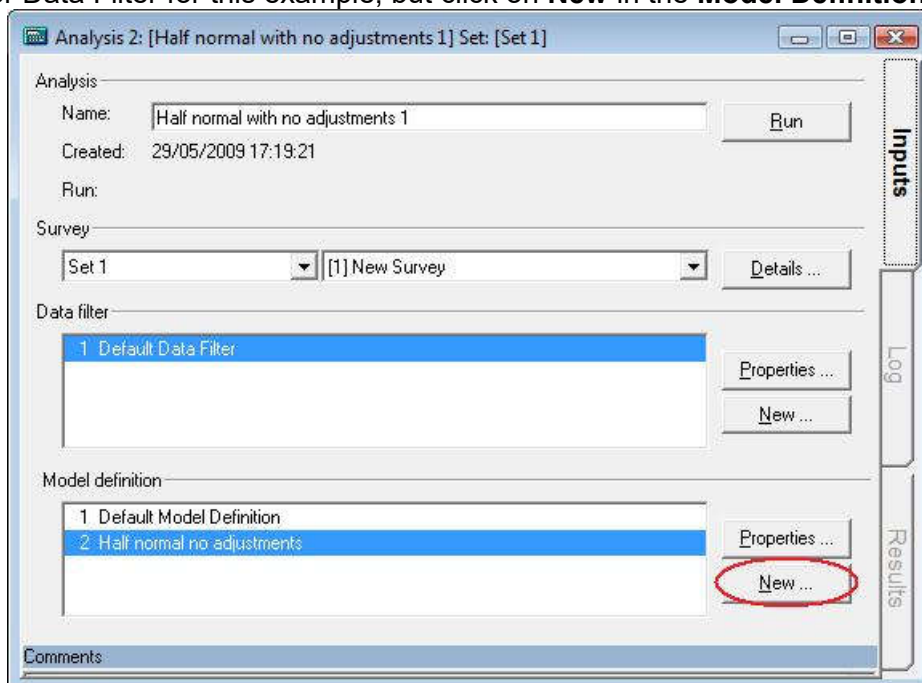
##### *Creating a new analysis*

- In Distance, open the Ducknest exercise project that you worked on in Chapter 1 of this workshop.
- Go to the Analysis Browser, and click on the first button after “Analysis:” on the Analysis Browser menu bar (“New Analysis”). Double-click on the status button to go to the Analysis Details window for this new analysis.



Set: Set 1				Analysis:		# params	Delta AIC	AIC	ESW/EDR	D	D LCL	D UCL	D CV
1	1	1	2	Half normal with no adjustments	03/09/2008 10:33:32	29							
2	1	1	2	Half normal with no adjustments 1	29/05/2009 17:19:21								

- Because the analysis is not run, you are taken to the **Inputs** tab. You will not need to edit the Survey or Data Filter for this example, but click on **New** in the **Model Definition** section.



Analysis 2: [Half normal with no adjustments 1] Set: [Set 1]

Analysis

Name: Half normal with no adjustments 1 Run

Created: 29/05/2009 17:19:21

Run:

Survey

Set 1 [1] New Survey Details ...

Data filter

1 Default Data Filter Properties ... New ...

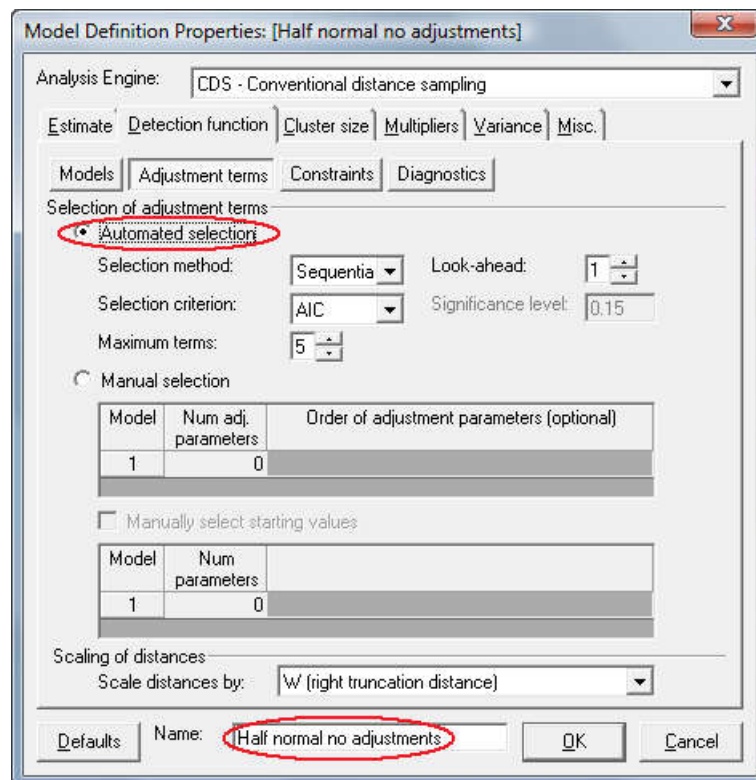
Model definition

1 Default Model Definition Properties ...

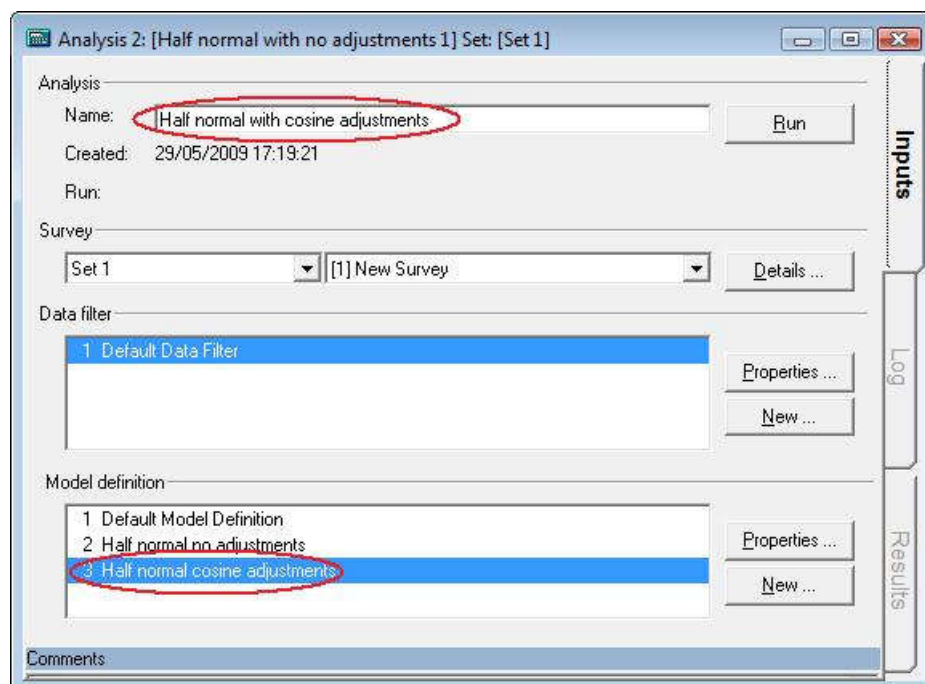
2 Half normal no adjustments New ...

Comments

- Specify a half-normal key function with a cosine series adjustment, allowing selection of adjustment terms. When you have defined your new model, give it a suitable name (one that reflects the options you have set) and select **OK**.



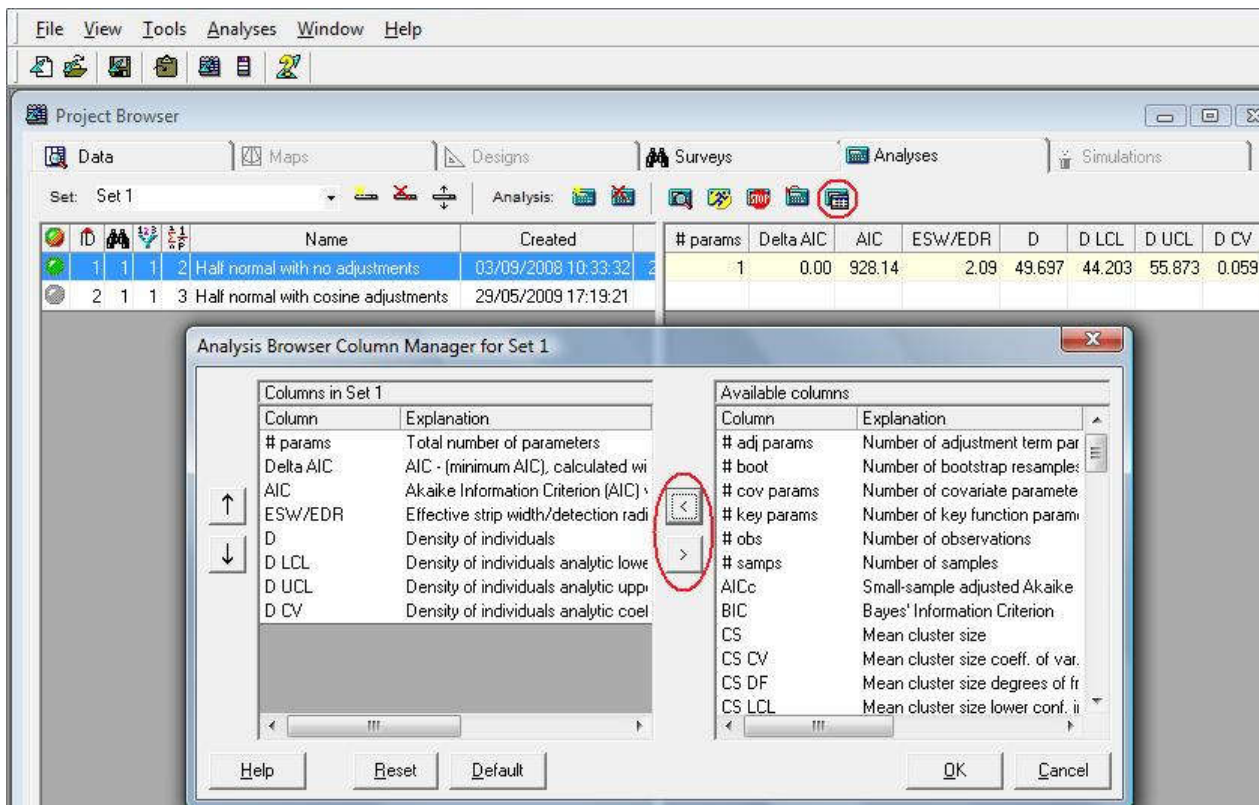
- Now give your analysis a suitable name, and click the run button. When the analysis finishes, it will automatically take you to the log tab if there were problems, or the results tab if the analysis ran without errors or warnings. From the results tab, you can investigate the result of your analysis.



- Create one more detection function model, this time specifying the hazard rate as key

function, and Hermite polynomial as the adjustment. Compare the performance of the 3 models you fitted to this dataset. **Note:** when you create a new analysis (or model definition or data filter), Distance copies the settings from whichever analysis (or model definition or data filter) was highlighted at the time (the name is also copied). The default settings are not restored automatically.

- It is easiest to compare results from different analyses using the Analysis Browser. You can change the default columns in the browser using the **Column Manager** (furthest button on the right of the Analysis Browser menu bar).



- As you create more Data Filters and Model Definitions, you may find that you want to change their order, rename or delete them. A convenient way to do this is using the **Analysis Components** window – click the 6<sup>th</sup> button from the right on the main menu bar (“View Analysis Components”). In the Analysis Components window, clicking the first button lists the Data Filters and clicking the second button lists the Model Definitions.

File View Tools Analysis Components Window Help

Project Browser

Data Maps Designs Surveys Analyses Simulations

Set: Set 1

ID	Name	Created	# params	Delta AIC	AIC	ESW/EDR	D	D LCL	D UCL	D CV
1	Half normal with no adjustments	03/09/2008 10:33:32	1	0.00	928.14	2.09	49.697	44.203	55.873	0.059
2	Half normal with cosine adjustments	29/05/2009 17:19:21								

Analysis Components

ID	Model Definitions	Used
1	Default Model Definition	N
2	Half normal no adjustments	Y
3	Half normal cosine adjustments	Y