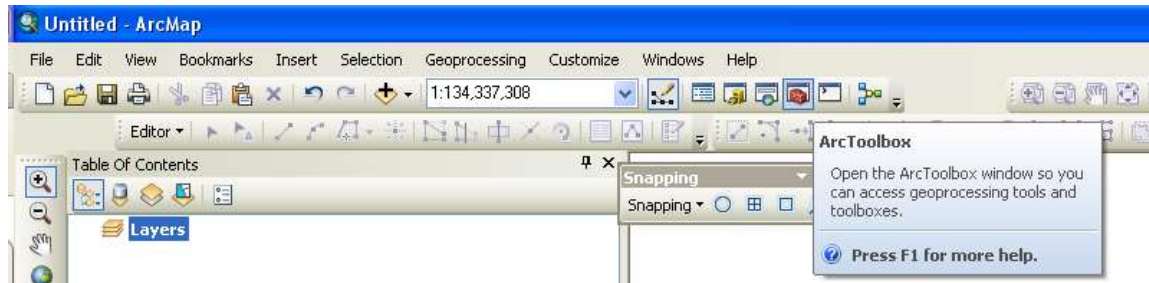


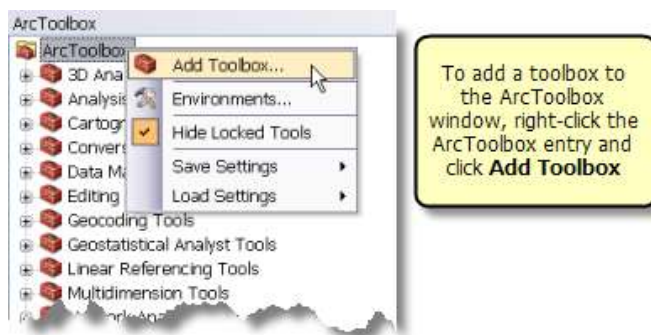
Toolbox Instructions

Adding a Toolbox

In any ArcGIS Desktop application, you open the ArcToolbox window with the Show/Hide ArcToolbox Window button  found on the menu bar or by clicking Geoprocessing > ArcToolbox.



To add a toolbox to the ArcToolbox window, right-click the ArcToolbox entry and click Add Toolbox as illustrated below. Browse to the location containing the toolbox you want to add and select the toolbox.



You can add any custom or system toolbox by browsing and selecting the toolbox and clicking Open.

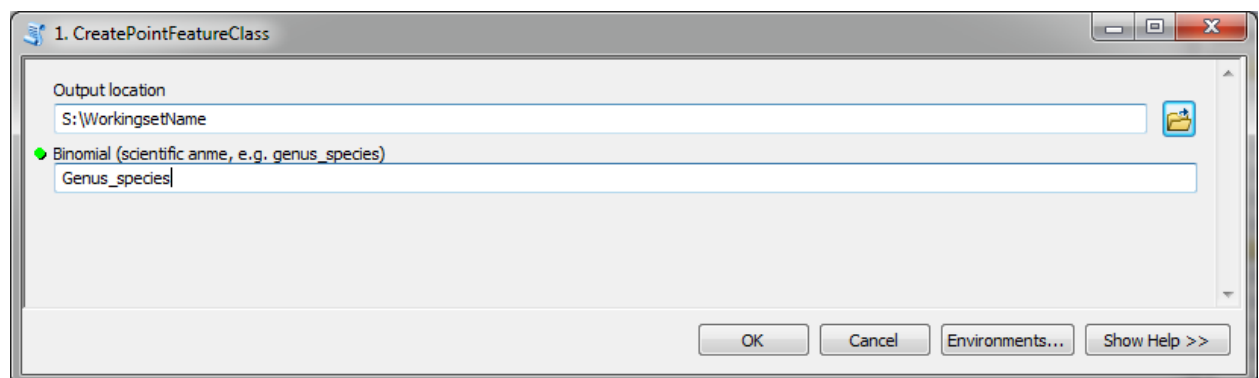
Contents of the Red List Toolbox

1. Create Point Feature Class
- 1a. Add Point Attribute Fields
1. Create Species Polygon
- 2a. Add Polygon Attribute Fields
3. Create Polygon Shapefile via Text file
4. Fill Binomial Field with shapefile name
5. Check Fields
6. Split Layer By Species Name
7. Fill Legend Field
8. Species Richness Count
9. Refine Species to Altitude
- 9a. Refine Species to Bathymetry

Tool Descriptions

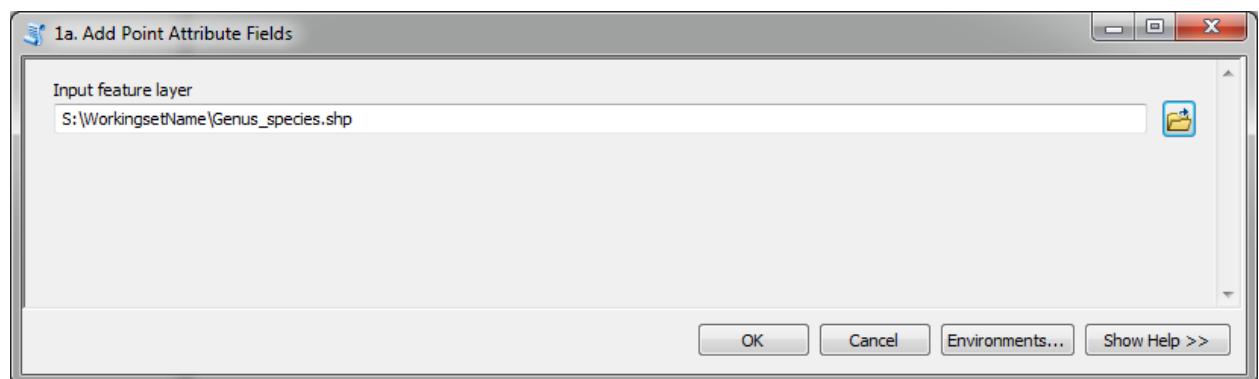
1. Create Species Shapefile

Create empty species point shapefile/feature class with all required attributes.



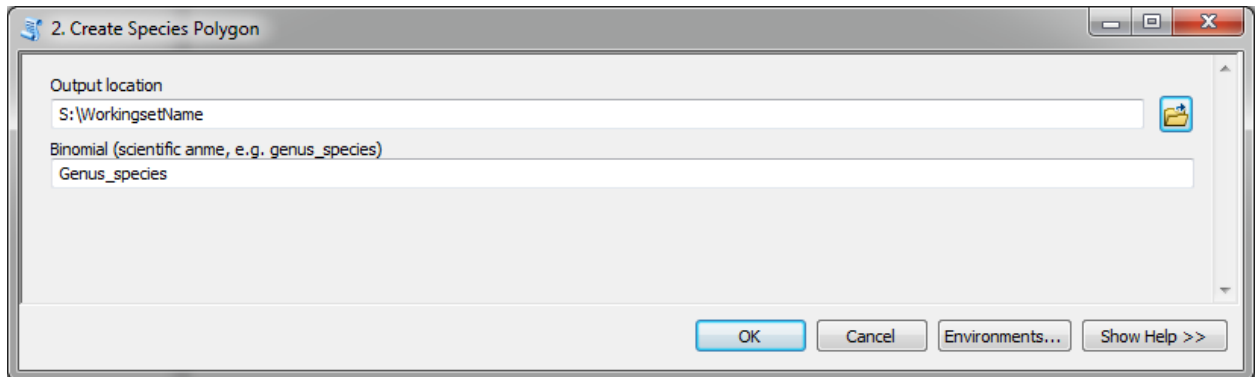
1a. Add Point Attribute Fields

Checks an attributes of the point shapefile/feature class being used and adds any missing attribute fields. This tool can be used on pre-existing data from other sources.



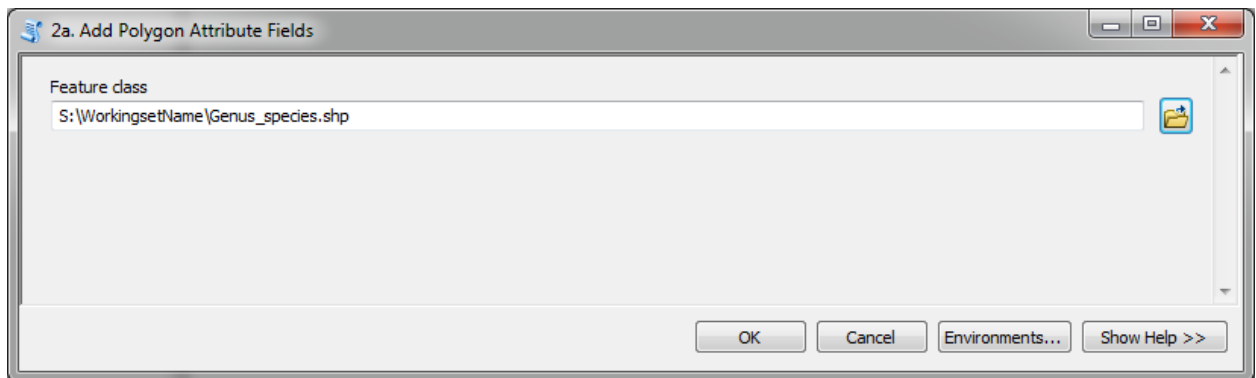
2. Create Species Polygon

Create empty species polygon shapefile/feature class with all required attributes.



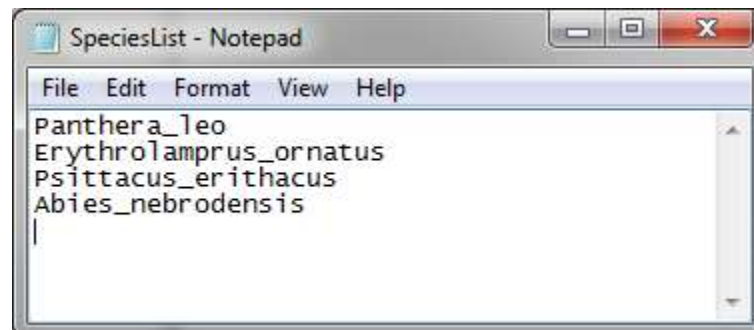
2a. Add Polygon Attribute Fields

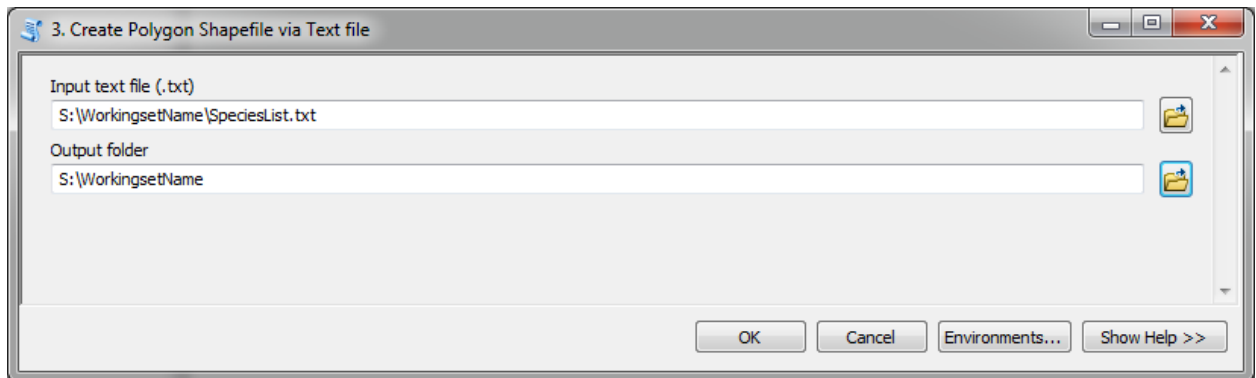
Checks an attributes of the point shapefile/feature class being used and adds any missing attribute fields. This tool can be used on pre-existing data from other sources.



3. Create Polygon Shapefile via Text file

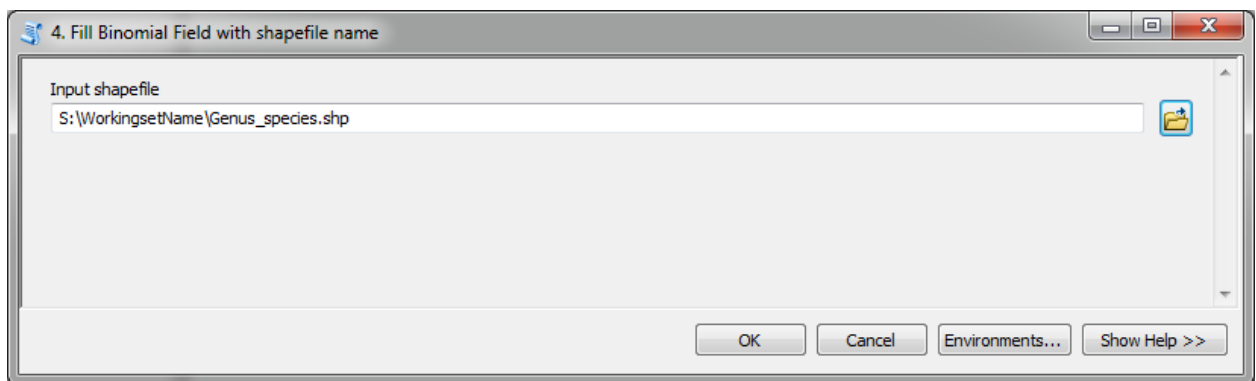
This tool creates a new folder with the shapefile from a text file. The text file should be in the format as seen below.





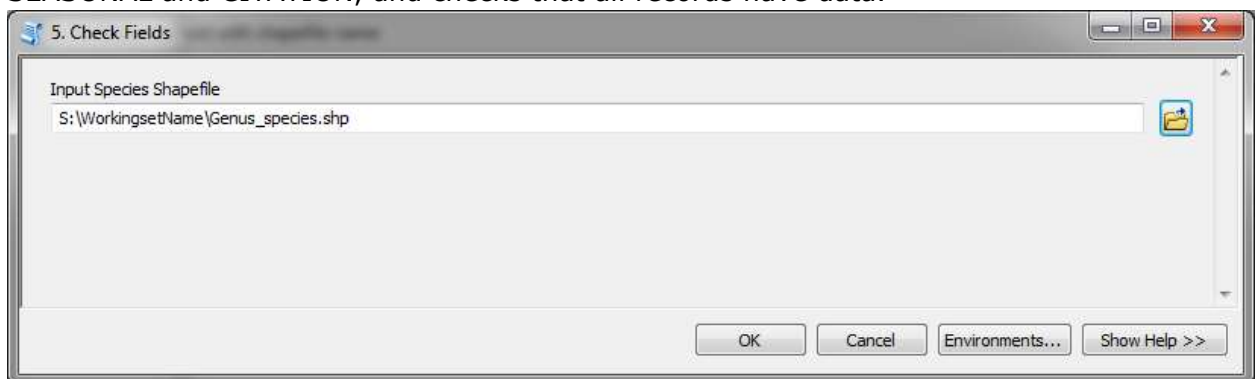
4. Fill Binomial Field with shapefile name

Takes the name of the shapefile (e.g. genus_species.shp) and automatically fills in the "binomial" attribute with the name, e.g. "Genus species". To prevent errors make sure there are no spaces after the name in the shapefile.



5. Check Fields

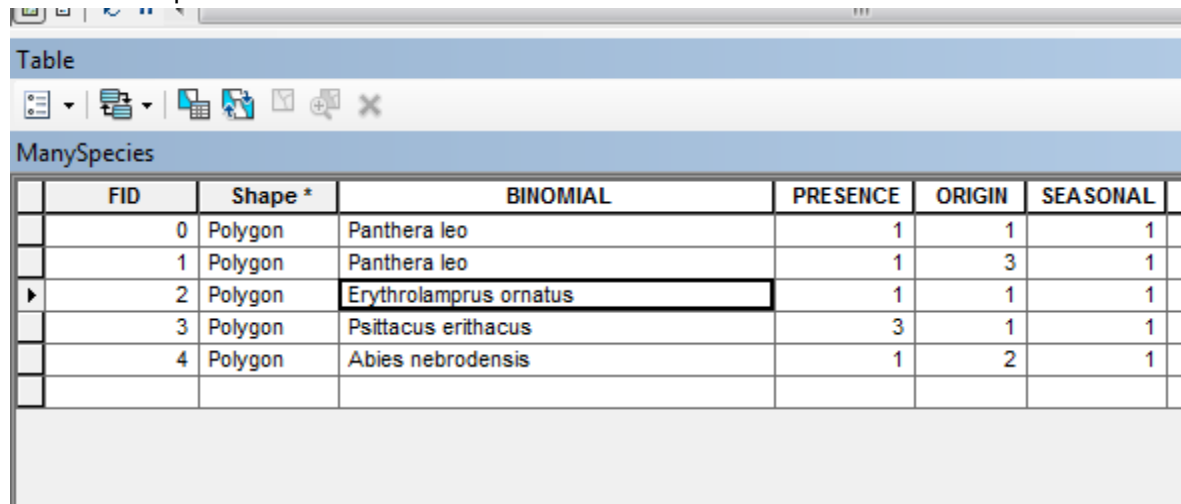
Checks for the presence of the required fields BINOMIAL, PRESENCE, ORIGIN, SEASONAL and CITATION, and checks that all records have data.



6. Split Shapefile by Species Name Species

This tool splits a shapefile of multiple species into multiple single shapefiles. For example, a shapefile containing multiple species can be split by Binomial to have individual shapefile for each species.

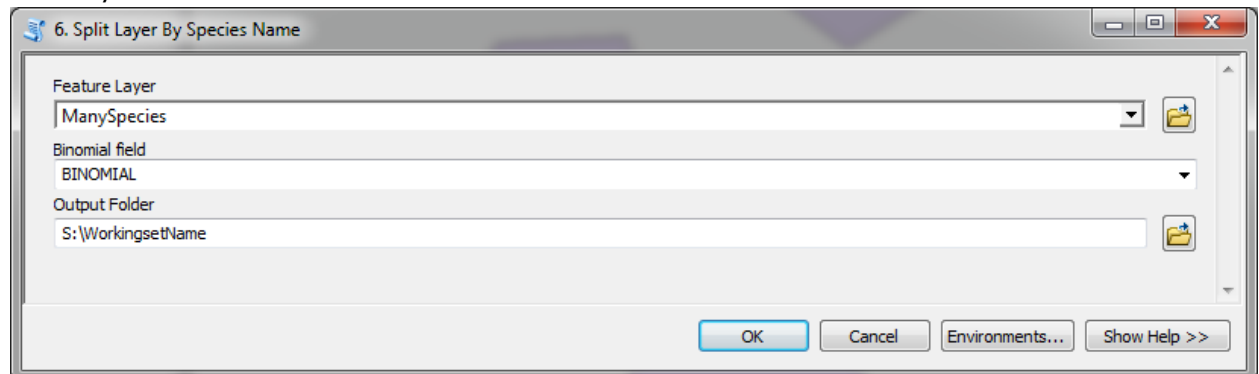
Table of shapefile attributes:



The screenshot shows a table window with the title 'Table'. Below the title is a toolbar with icons for various table operations. The table itself has a header row with the following columns: FID, Shape *, BINOMIAL, PRESENCE, ORIGIN, and SEASONAL. The data rows are as follows:

	FID	Shape *	BINOMIAL	PRESENCE	ORIGIN	SEASONAL
	0	Polygon	Panthera leo	1	1	1
	1	Polygon	Panthera leo	1	3	1
▶	2	Polygon	Erythrolamprus ornatus	1	1	1
	3	Polygon	Psittacus erithacus	3	1	1
	4	Polygon	Abies nebrodensis	1	2	1

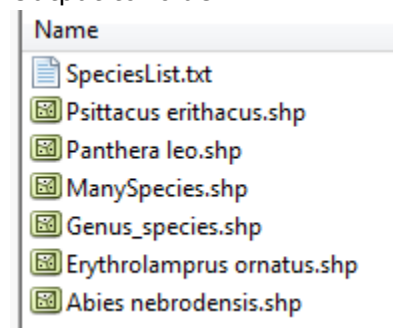
Tool layout:



The screenshot shows the '6. Split Layer By Species Name' tool dialog box. It has the following fields and controls:

- Feature Layer:** A dropdown menu showing 'ManySpecies'.
- Binomial field:** A dropdown menu showing 'BINOMIAL'.
- Output Folder:** A text field showing 'S:\WorkingsetName'.
- Buttons:** 'OK', 'Cancel', 'Environments...', and 'Show Help >>'.

Output to folder:

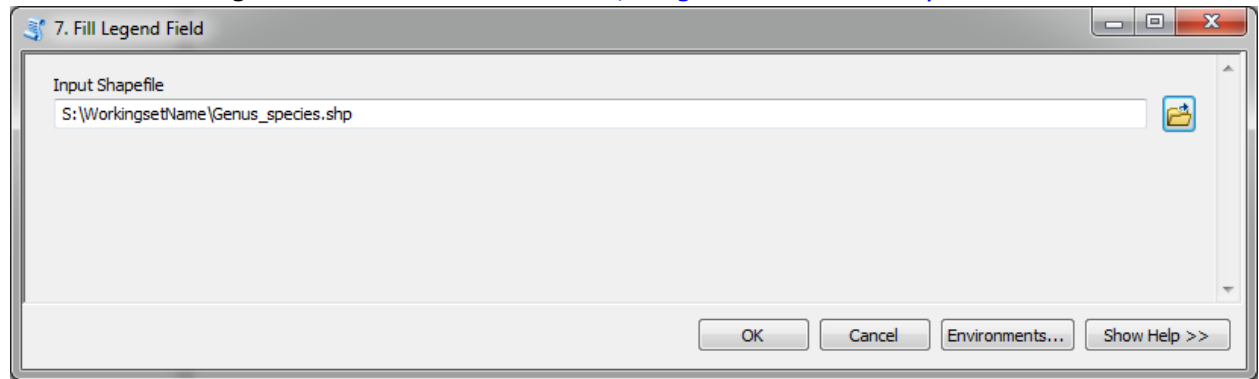


The screenshot shows a file explorer window with the following files and folders:

Name
SpeciesList.txt
Psittacus erithacus.shp
Panthera leo.shp
ManySpecies.shp
Genus_species.shp
Erythrolamprus ornatus.shp
Abies nebrodensis.shp

7. Fill Legend Field

Calculates the legend field from the [Presence, Origin and Seasonality codes](#).

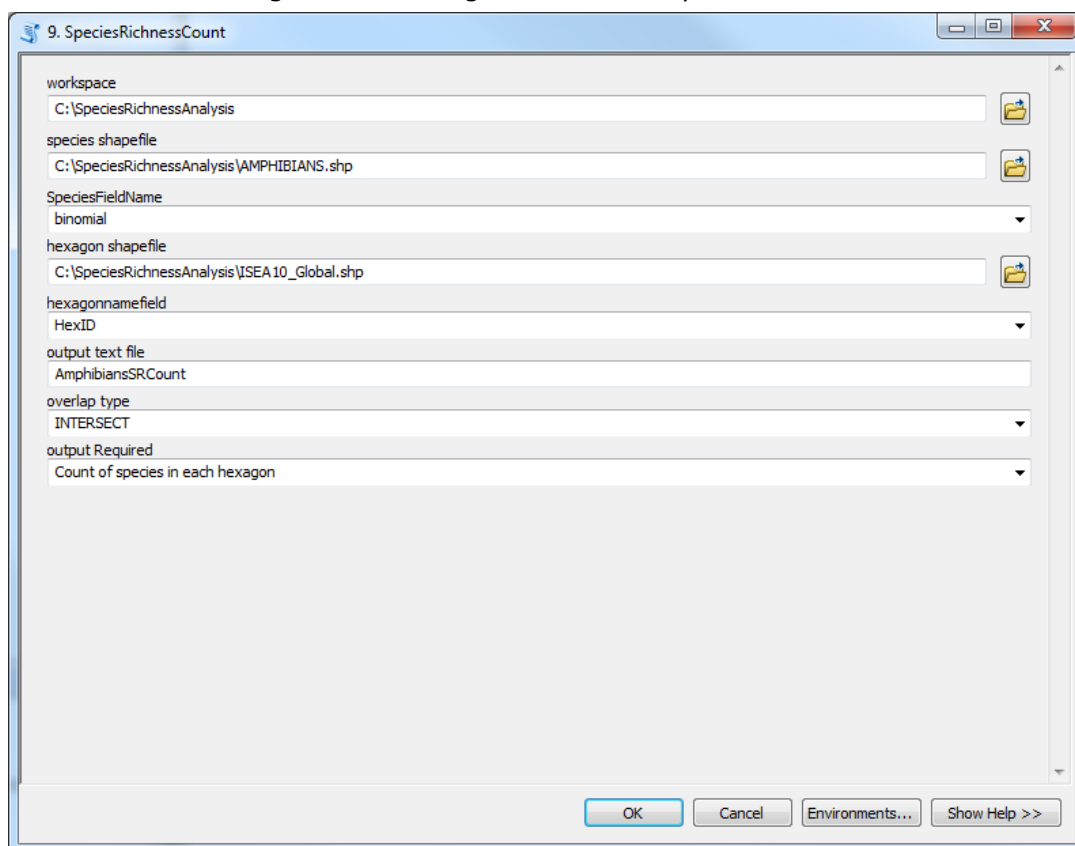


8. Species Richness Count

Creates a species richness count for a grid based shapefile/feature class. Within the tool download folder is a folder named SpeciesRichnessData. This folder contains a shapefile called ISEA10_Global; this layer is split up into Marine and Terrestrial, see the SYSTEM field in the attribute table.

If you wish to use your own gridded shapefile/feature class it does require a field with a unique identifier.

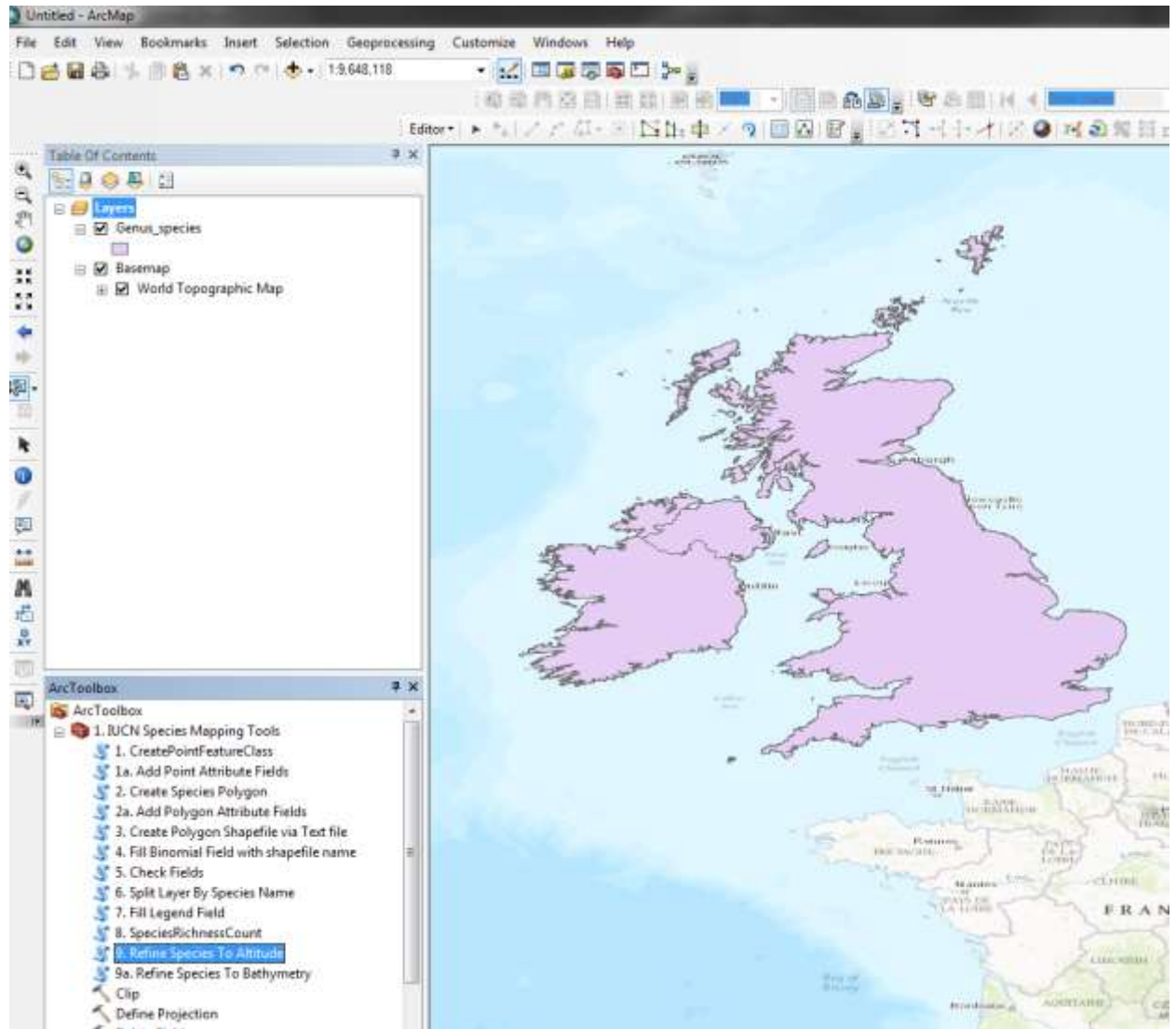
A recommendation is to clip the ISEA10_Global shapefile or your own gridded shapefile to the area you require for the species richness as the tool can take a long time to run for large areas or large numbers of species.



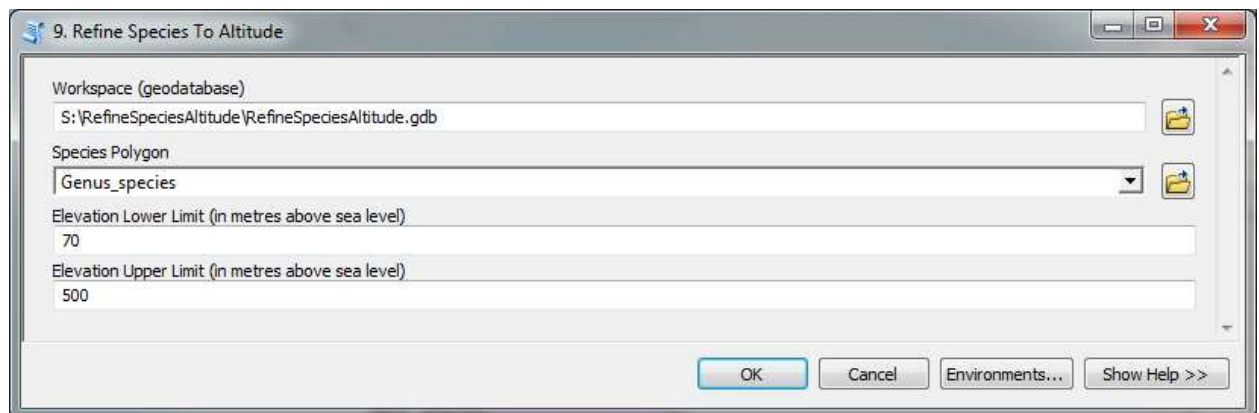
9. Refine Species to Altitude

Tool refines a species polygon to a described elevation.

Original species range:



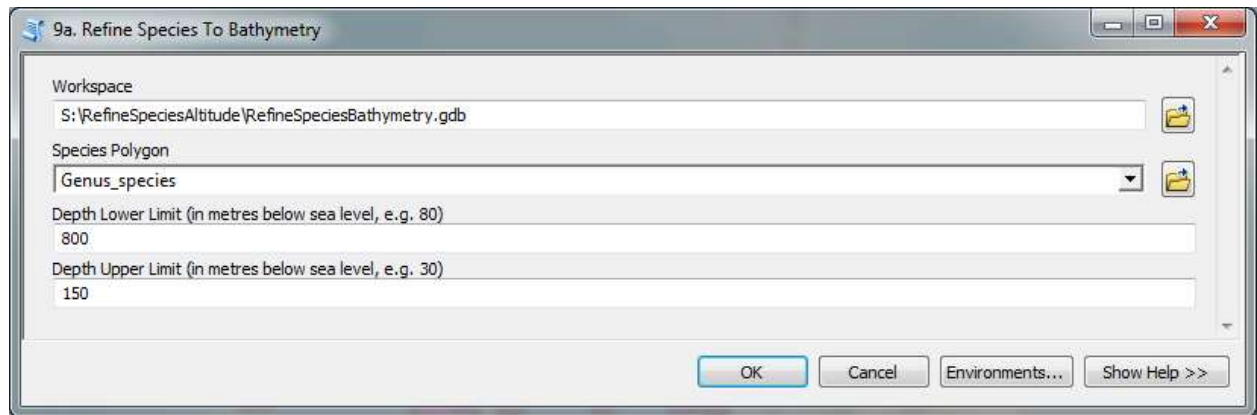
Elevation range from 70 meters to 500 meters using [geodatabase](#):



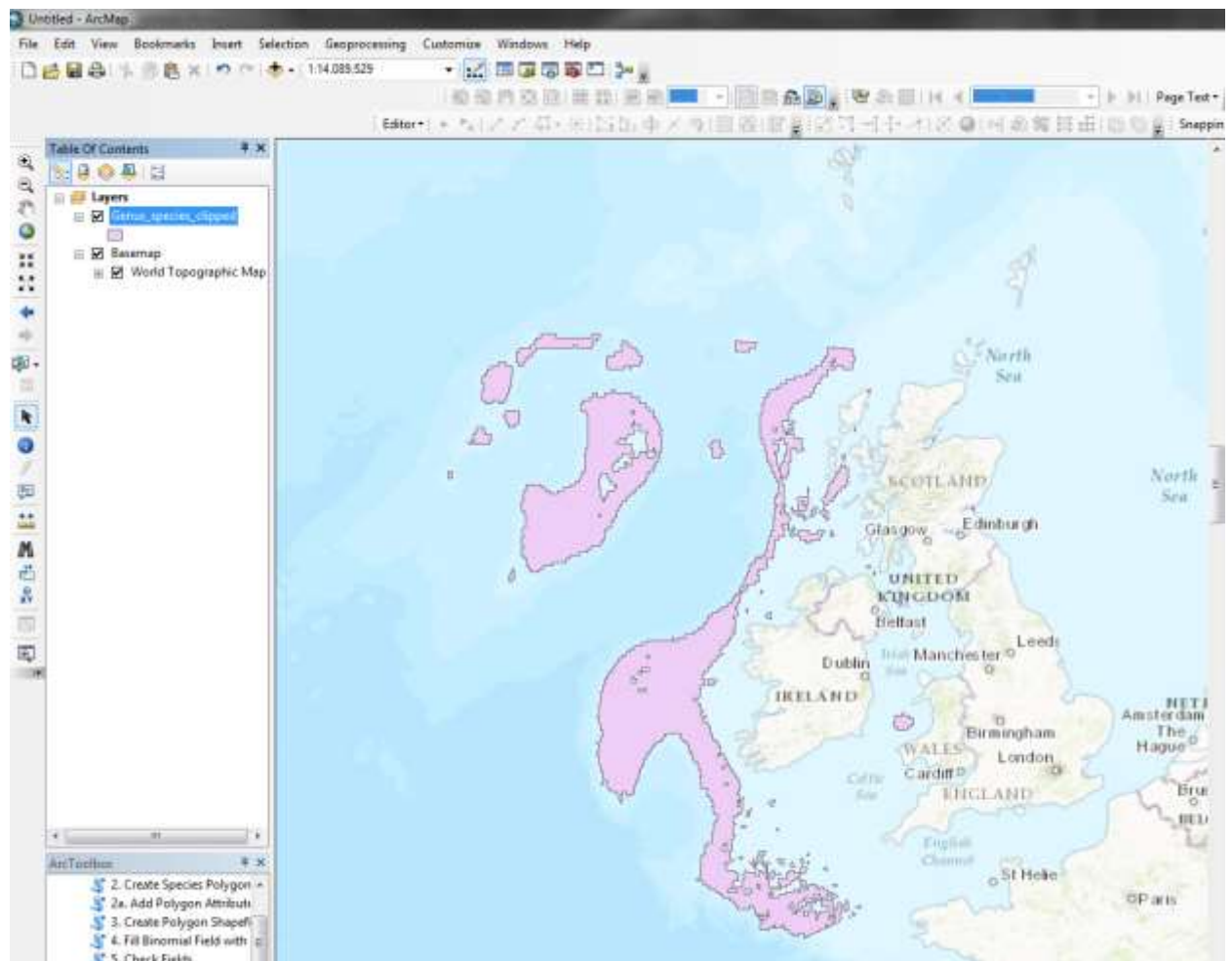
Tool refines a species polygon to a described bathymetry. Original species range:

[illegible]

Elevation range from 800 meters to 150 meters using [geodatabase](#):



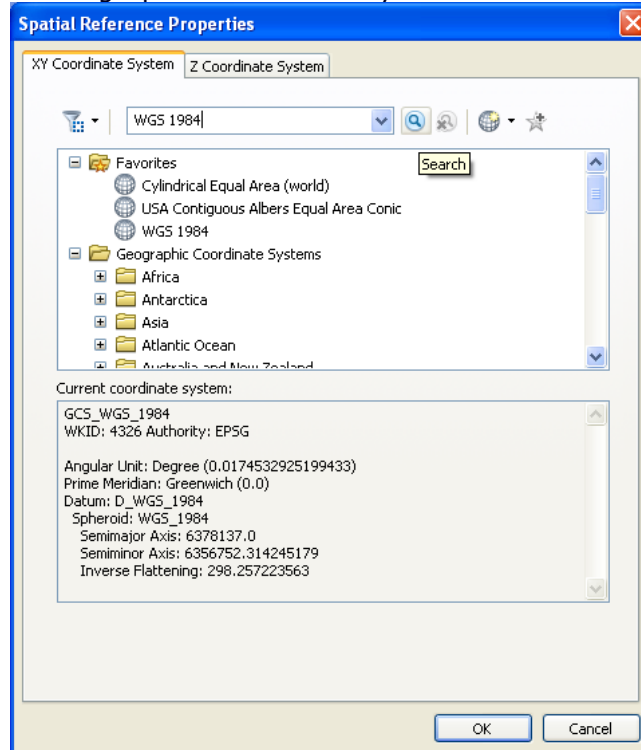
New species range:



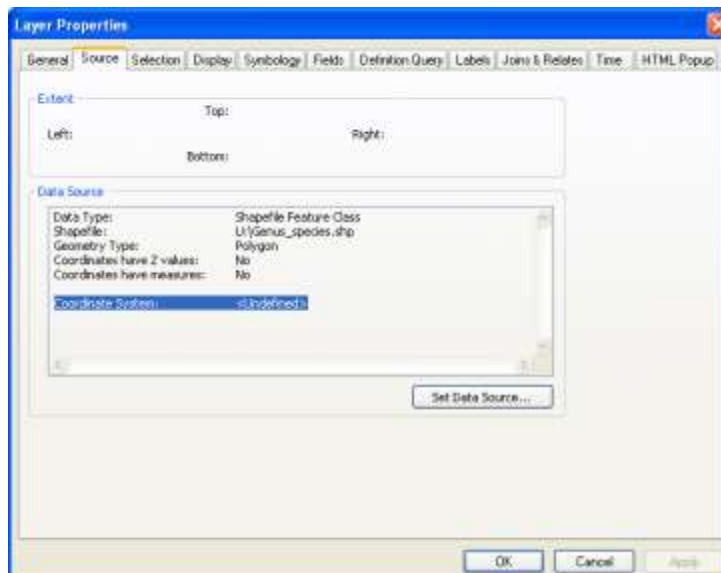
10. Built-in ArcMap Tools

These tools all have descriptions and usage information online and in the tool itself. 'Help' can be found on the Menu Bar.

- **Clip**
Extracts input features that overlay the clip features. Use this tool to cut out a piece of one feature class using one or more of the features in another feature class as a cookie cutter.
- **Define projection**
This tool updates a undefined coordinate system information (map projection and datum) stored with a dataset. The only use for this tool is for data that have an unknown or incorrect coordinate system defined. The Projection required by IUCN is the WGS 1984 under Geographic Coordinate Systems > World.



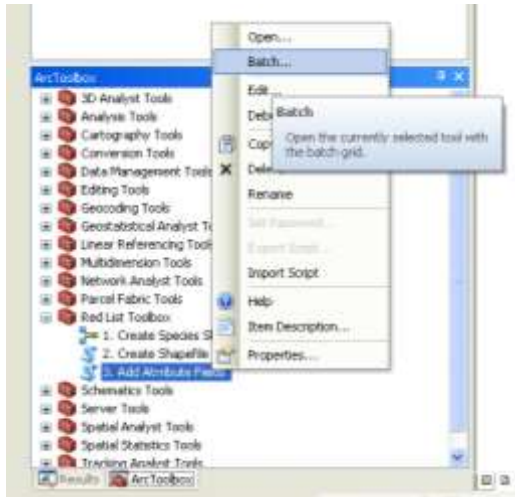
To find out whether your shapefile has a coordinate system, right click the file > Properties > Source Tab.



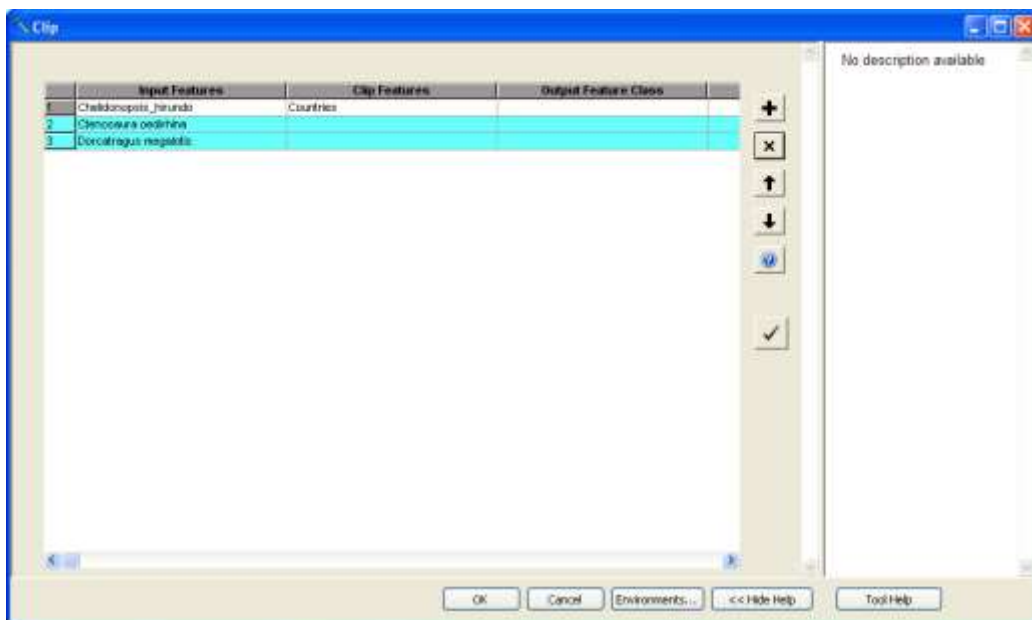
- **Delete Field**
This tool deletes one or more fields from a table, feature class, feature layer, or raster dataset.
- **Dissolve**
Aggregates features based on specified attributes.
- **Merge**
Combines multiple input datasets of the same data type into a single, new output dataset. This tool can combine point, line, or polygon feature classes or tables.
- **Erase**
Creates a feature class by overlaying the Input Features with the polygons of the Erase Features. Only those portions of the input features falling outside the erase features outside boundaries are copied to the output feature class.
- **Project / Batch Project**
If a shapefile has a different projection to the WGS 1984 then it will need to be changed. This tool produces a new shapefile when it is run.
- **Smooth Polygon**
Smooths sharp angles in polygon outlines to improve aesthetic or cartographic quality.

Tips

Batching Tools: To process many shapefiles using a tool which only processes a single shapefile you can right click any tool and select Batch...

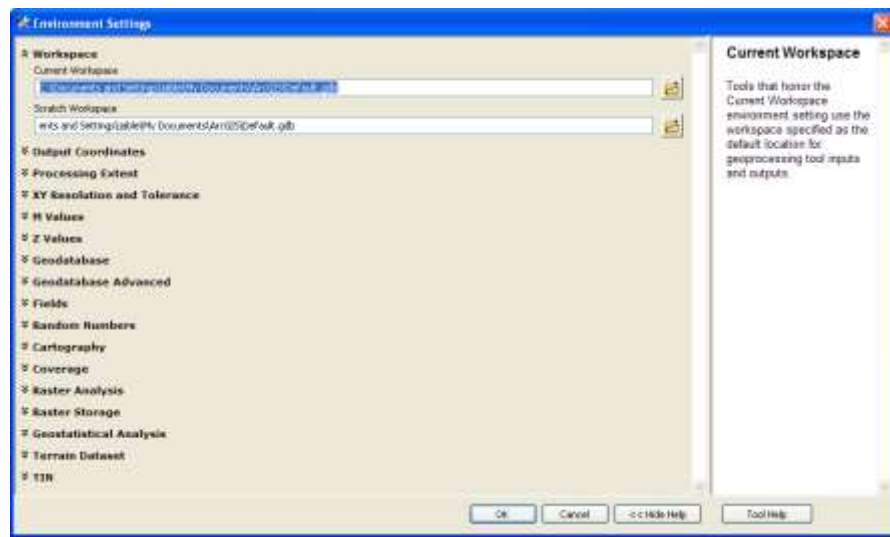


You can now drag and drop the shapefiles from the 'Table of Contents' or 'Catalogue' windows into the space below the 'Input Features'.



If multiple outputs are required for a single folder, select the "Environments..." button, click "Workspace" and enter the pathway (e.g. "C:/MyMaps/Marine/Fish") into the 'Current Workspace' and 'Scratch Workspace' and select OK (you may need return to the Environments... window and click OK again to activate the changes).

This option is also available in the ArcMap document, on the Menu bar » Geoprocessing » Environments...



If the same value is required for multiple rows right click the already filled in value and select 'Fill'. This will enter the same value for all the below rows (not above).

