

## Task: Comparing proportions of attended burrows between transmitter and non-transmitter groups

In this task we compare proportions of attended burrows between two populations, a group with a transmitter and those without. We first calculate sampled proportions in each group and plot them according to Days. Next we calculate the difference in the proportions between the groups and plot them according to Days.

- (1) Insert a new worksheet, and name it as “Transmitter Group”.
- (2) Copy and paste data of transmitter group from “Titi data” worksheet to the “Transmitter Group” worksheet.

(It is a good idea to keep the original data intact and instead handle only a copy of the data. In this way, if we made a mess with the copy, we can still go back to the original, create a new copy and start our work again.)

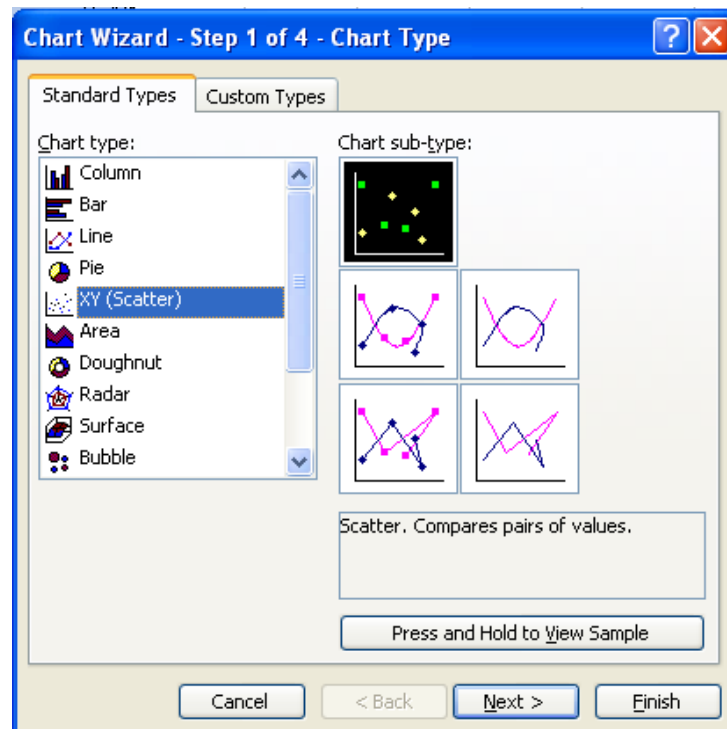
- (3) In column D on the “Transmitter Group” worksheet, calculate proportions of attended burrows using the formula: Attended Number/Burrows, as follows.

	A	B	C	D
1	Day	Burrows	Attended Number	Attended Proportions
2	1	3	0	=C2/B2
3	2	4	2	

- (4) Insert a new column between the calculated proportions (column D) and “Attended Number” (column C), then copy and paste the “Day” values from column A into this new column.
- (5) Select the pasted “Day” values and calculated proportions, then click on the **Chart Wizard** icon on the Tool bar.

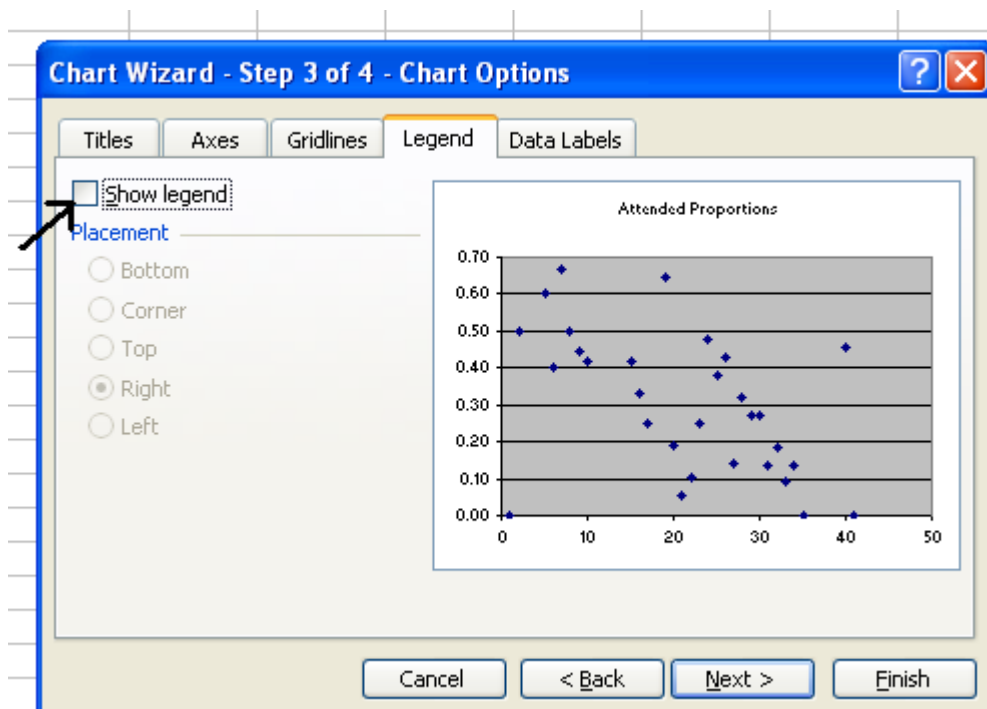
	A	B	C	D	E
1	Day	Burrows	Attended Number	Day	Attended Proportions
2	1	3	0	1	0.00
3	2	4	2	2	0.50

- (6) Select **XY(Scatter)** in the **Chart type** option and choose the first **Chart sub-type** option. Then, click on **Next >**.

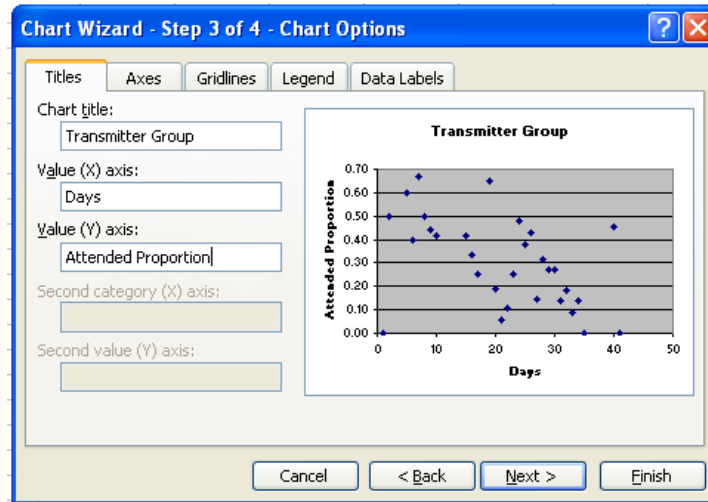


- (7) In the following “Chart Wizard – Step 2 of 4 – Chart Source Data” window, click on **Next >** again.

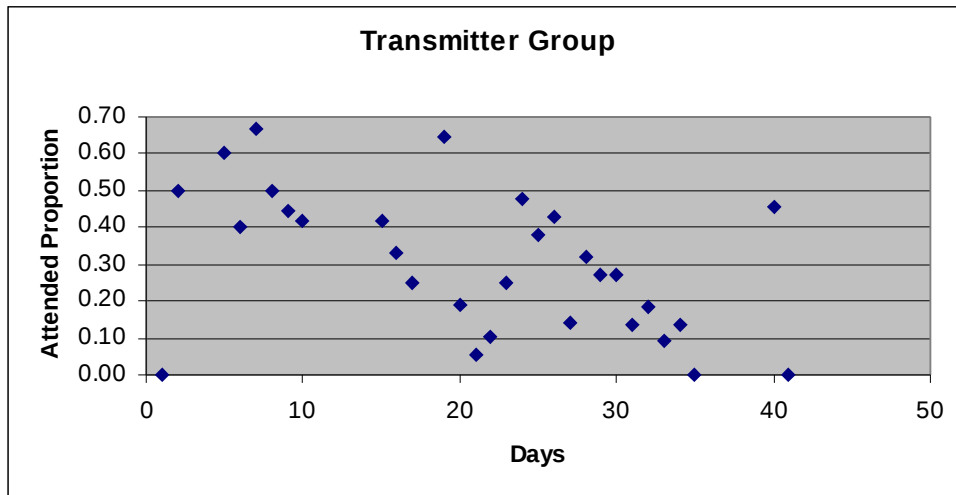
- (8) In the following “Chart Wizard – Step 3 of 4 – Chart Options” window, click on the **Legend** tab and uncheck the **Show legend** check box by clicking it.



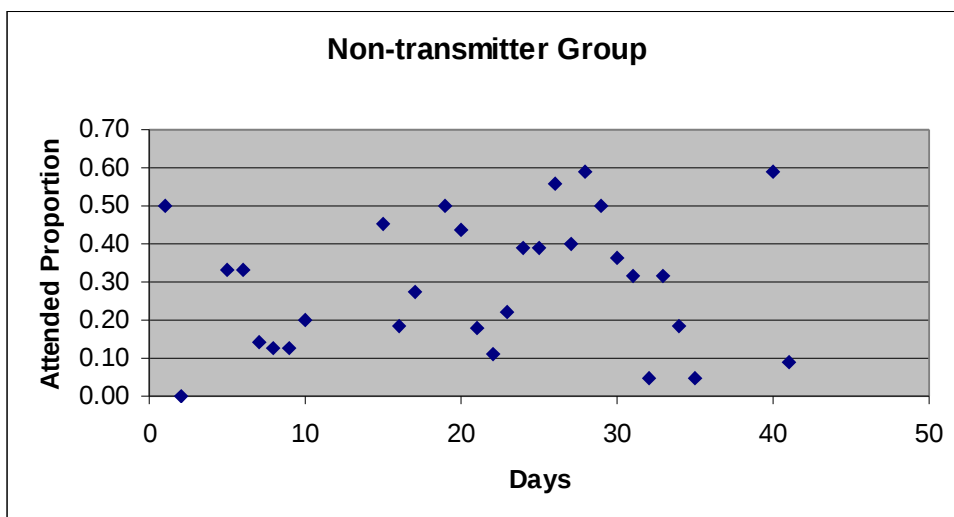
(9) Click on the **Titles** tab and enter an appropriate title and axis labels. Then, click **Finish**.



Now the following plot should appear.



(10) Repeat the steps (1) ~ (9) for non-transmitter group to obtain the following plot.

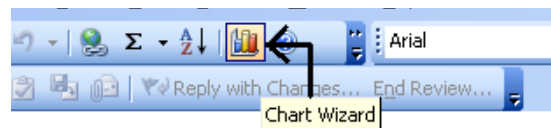


- (11) Insert a new worksheet and name it as “Difference by Day”.
- (12) Copy and paste the “Burrows”, “Attended Number” and the calculated proportion values of the transmitter group from the “Transmitter Group” worksheet into the “Difference by Day” worksheet. Also copy and paste those of the non-transmitter group from the “Non-Transmitter Group” worksheet into the “Difference by Day” worksheet.
- (13) Calculate differences in the proportions using the formula:  

$$\text{Proportion in Transmitter group} - \text{Proportion in Non-Transmitter group}$$

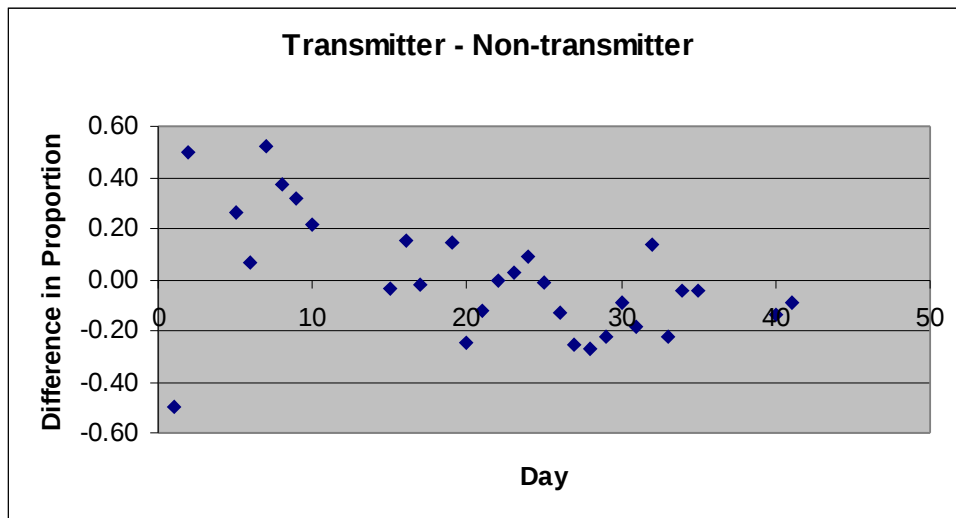
	A	B	C	D	E	F	G
1	Burrows	Attended Number	Attended Proportions	Burrows	Attended Number	Attended Proportion	Difference
2	3	0	0.00	2	1	0.50	=C2-F2
3	4	2	0.50	4	0	0.00	
4	5	3	0.60	6	2	0.33	

- (14) Insert a new column between the calculated differences (column G) and “Attended Proportion” (column F). Then copy and paste the “Day” values into the inserted new column G.
- (15) Select the “Day” and “Difference” columns and click the **Chart Wizard** icon on the Tool bar.



- (16) Select **XY(Scatter)** in the **Chart type** option and choose the first **Chart sub-type** option. Then, click on **Next >**.
- (17) In the following “Chart Wizard – Step 2 of 4 – Chart Source Data” window, click on **Next >** again.
- (18) In the following “Chart Wizard – Step 3 of 4 – Chart Options” window, click on the **Legend** tab and uncheck the **Show legend** check box by clicking it (similarly to step (8)).
- (19) Click on the **Titles** tab and enter an appropriate title and axis labels. Then, click on **Finish**.

The plot on the following page should appear.



Congratulations! You have successfully completed this task.

**Do not forget to save all the worksheets you created, so that we can use them later for further analysis.**

**Name your worksheets appropriately, so that you can recognise them later.**