

FACT SHEET#1: LINE TRANSECT

LINE TRANSECT

A line transect is an ecological sampling method. Scientists use a line transect to record data organisms living in an ecosystem. A line transect studies a small section of an ecosystem. It produces data that are representative sampling of the organisms found in the ecosystem. The data can also include abiotic factors such as water and temperature.

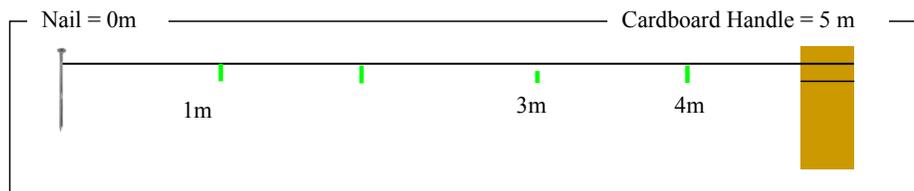


Scientists use a line transect to record data at a mangrove swamp.

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How do we construct a line transect? A line transect can be made with heavy string. A large nail can be used as an anchor on the ground, and a thick cardboard piece or scrap wood can be used as a handle. Below are steps to make a 5-meter (around 16 feet) line transect:

- Measure and cut 5 meter of heavy string
- Tie one end of string to the cardboard/scrap wood handle
- Tie the other end of string to the nail
- Mark the string at every meter with colored marker (see below)
- Unroll and lay string across the focused area for study
- Label each mark section with a number. E.g., 0-1 meter as quadrant #1, 1-2 meter as quadrant #2



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Observing and recording data on any quadrant:

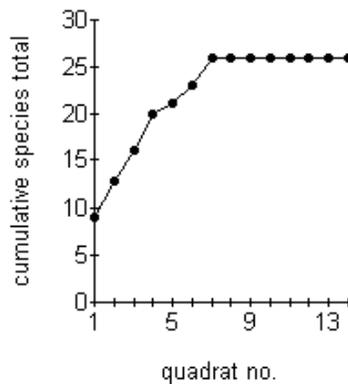
- Go to one end of the meter mark (e.g., 0 meter in the 0-1 meter quadrant). Stand on the line, and stretch arms out to both sides.
- Observe and record organisms found within arm’s length on either side of the line:



Names or symbols of plants & animals to the left of the string	M	Names or symbols of plants & animals to the right of the string
Mosquito, green bug, deer scat	0	2 kinds of grasses, 3 weeds
Grass, brown spider	1	Grass, a weed, 2 yellow flowers
spider, frog, thistle	3	worm, 2 weeds, 1 goldenrod.

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Scientists also use graphing as a way to share sampling data from a line transect. The graph below is an example graph of the sampling data. The X-axis represents the quadrat number, and the y-axis represents the number of organisms:



Retrieved from <http://www.countrysideinfo.co.uk/3howto.htm>

Based on the graph, what conclusion can you make about the organisms in the ecosystem under study?

REFERENCE

- <http://www.countrysideinfo.co.uk/3howto.htm>
- <http://gen.uga.edu/documents/biodiversity/activities/A%20Line%20Transect.pdf>