

Measuring Lichen Abundance

Biology

In order to measure lichen abundance, you will be looking at the individual lichen species along one stick. The stick needs to have at least a 30-cm (about 1 foot) section that is mostly covered with lichens. It is easiest to do this with a partner; one of you can identify species and take measurements while the other records data. However, each partner should always make an individual copy of the data table.



Follow these steps to measure and record lichen abundance along a stick:

1. Find a stick that has at least a 30-cm section that is mostly covered with lichens.
2. Place the stick on a desk so it doesn't roll (prop it up if necessary).
3. Hold a ruler up to the stick, with centimeters up.
4. Identify the length (in centimeters) of each patch of lichens along the stick. If there is more than one lichen in a spot, only count the lichen that is most on top. Ignore bald areas, moss, and unknown lichens (just look for the lichens we know). The end result should be something like the data table on the left below.
5. Find the total length of each lichen species, then divide each length by 30 (and multiply by 100) to get the percentage of the 30-cm stretch that was covered with each type of lichen. The final table will look like the data table on the right below. The percentages tell you the relative abundance of each lichen species on the branch you found.

Raw Data

<i>Lichen</i>	<i>Length</i>
Evernia	4.9 cm
Parmelia	1.5 cm
Evernia	1.2 cm
Evernia	1.2 cm
Ramalina f.	2.3 cm
Parmelia	1.5 cm
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Final Data

<i>Lichen</i>	<i>Total Length</i>	<i>Percentage</i>
Evernia	7.3 cm	24%
Ramalina f.	2.3 cm	7.7%
Parmelia	3 cm	10%
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