

**To investigate the
distribution of
mosses on different
parts of plants by
measuring density**

Background

- * find out the **distribution of moss**
- * find out the **plants that the mosses parasite on**
- * For each plant, find the **density of mosses on the root, upper trunk (160cm or above) and the lower trunk by using Quadrat**

Collecting data

- * **Sampling:**
(for roots, upper trunk, lower trunk)
- find the parts with similar
**temperature, light intensity, wind
speed**
- * **Calculating density:**
no of grid covered by mosses
Total no of grid in quadrat

Variables

- * **Independent variable: Different parts of the plant**
- * **Dependent variable : density of mosses**
- * **Controlled variable : Temperature
Light Intensity
Wind speed**

Statistics

Controlled Variables/ Samples	Tree 1	Tree 2	Tree 3	Tree 4	Tree 5
Light intensity (LUX)	886	875	883	878	880
Air temperature (Degree Celcius)	28.4	28	27.8	28.2	28.2
Wind Speed (m/s)	0	0.1	0	0	0

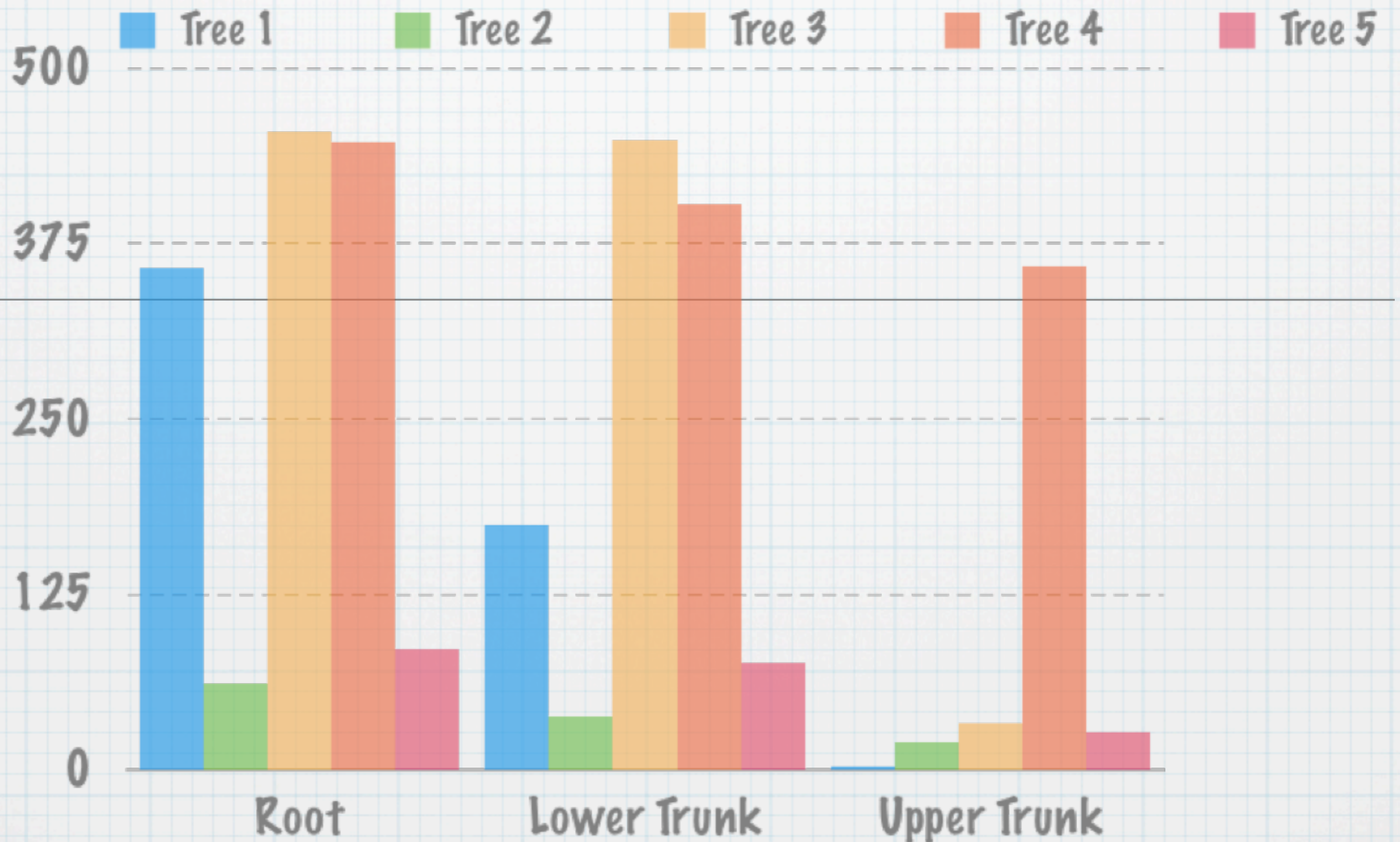
Statistics (Area Of Mosses)

	Area Of Mosses (cm ³)				
Different part of tree/ Samples	Tree 1	Tree 2	Tree 3	Tree 4	Tree 5
Lower trunk	174	38	449	403	76
root	357	61	454	447	86
upper trunk	3	20	33	359	27

Statistics (Density Of Mosses In Different Trees)

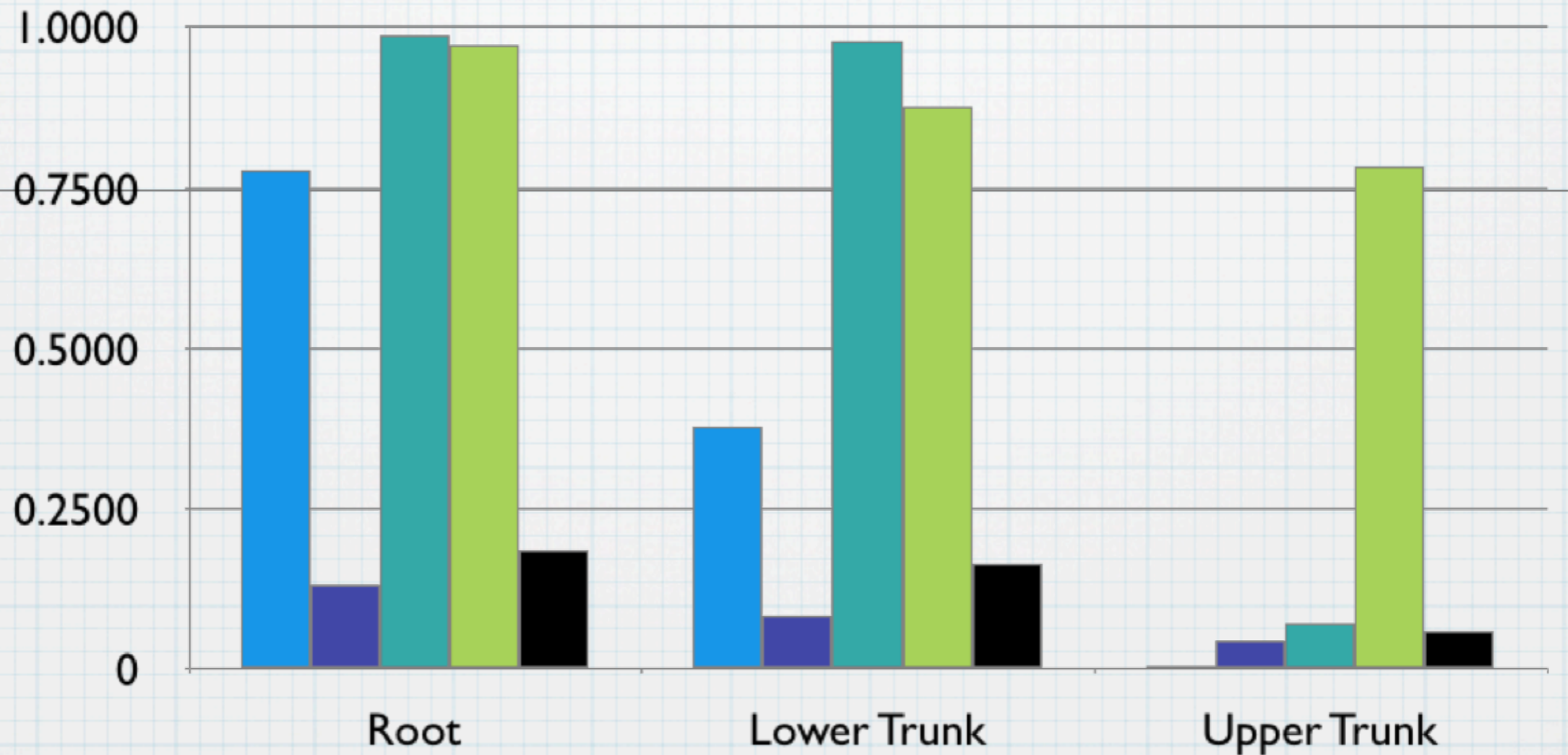
Different parts of trees/ Density of mosses	Tree 1	Tree 2	Tree 3	Tree 4	Tree 5
Upper Trunk	0.00654	0.04357	0.07190	0.78214	0.05882
Lower Trunk	0.37908	0.08279	0.97821	0.87800	0.16558
Root	0.77778	0.13290	0.98911	0.97386	0.18736

Area Of Mosses



Density Of Mosses

Tree 1 Tree 2 Tree 3 Tree 4 Tree 5



Analysis

More mosses can be found on root than the upper part of a plant

*** Characteristics of mosses:**

*** Non-vascular plants**

NO vascular bundle

*** Features**

NO cuticle

More mosses can be found on root than the upper part of a

* **NO** vascular bundle

-The plant does not have a **efficient**
transport system

* **NO** cuticle

-water evaporate from plant surface
more easily

-the plant can only store a **small**
amount of water

Therefore, it **need to grow in damp**
place

* -

More mosses can be found on root than the upper part of a plant

*** If mosses grow on the upper part of a plant:**

sunlight illustrate on mosses more directly

-speed up the evaporation of water from mosses

→ die form dehydration

More mosses can be found on root than the upper part of a plant

*** If mosses grow on lower part of a plant:**

sunlight illustrate on mosses **less directly** (sheltered by upper part)


-rate of evaporation is **lower**

-the lower part is **near to soil** and is **damp**

Favour the growth of mosses

Limitation

- * Counting the grid
 - mosses cover over half of the grid-
->> 1
 - not over a half->> 0.5
 - Not accurate

- *  Sampling:
 - can't measure the density of the trunk that is too high
 - density of mosses in different species of trees

CONCLUSION

distribution of mosses on plants:

root > lower trunk > upper trunk

THE END