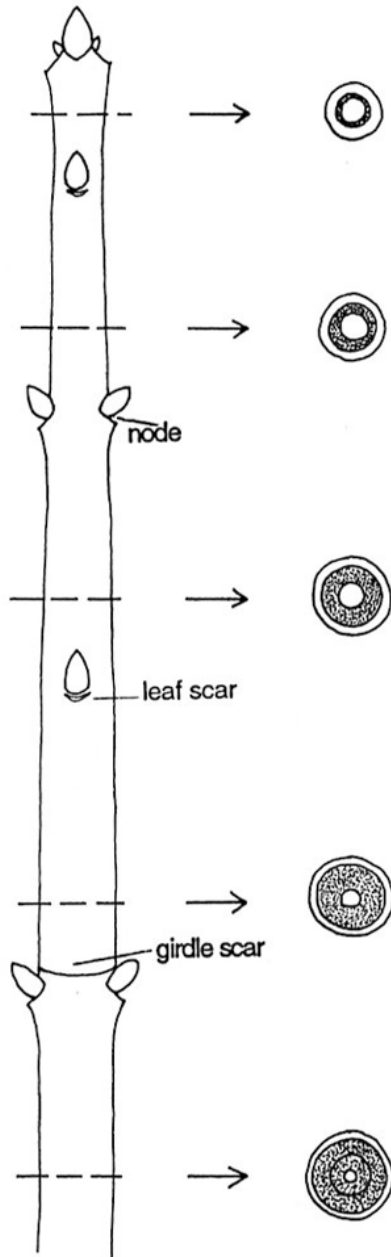


Fig. 1 Sections



What is wood?

1. Make a sketch of a shoot, recording internodes, leaves and/or leaf scars and girdle scars. (Fig 1)

2. Cut thinnish sections from successive internodes of the shoot, working back from the tip. These do not have to be of microscopical quality, and can be cut with a Stanley knife or scalpel, so long as a radius, or preferably a diameter is relatively thin.

3. Keep each group of sections separate, and stain them with acidified phloroglucinol. Phloroglucinol stains lignin red.

SAFETY ! - Phloroglucinol is harmful and corrosive. Work cleanly and avoid inhaling the fumes. Gloves should be worn to protect your hands.

4. Measure the diameter of the whole stem (y) and of the stained tissue ($a + b$). (Fig. 2) Use a microscope if necessary.

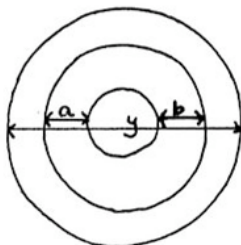
5. Calculate the lignification index of the stem sections at each point using the following calculation:

$$\text{Lignification Index} = \frac{(a + b)}{y} \times 100$$

6. Use this technique to find out where lignin is deposited in other tissues.

See page 7 for some questions.

Fig. 2



Acknowledgements to Dr Barry Meatyard, Institute of Education, University of Warwick.
Artwork by Linda Gray.