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Department of Botany
class : Deg II (Hons.)

Paper : III (Gymnosperms)

Topic : Gnetum (Contd.)

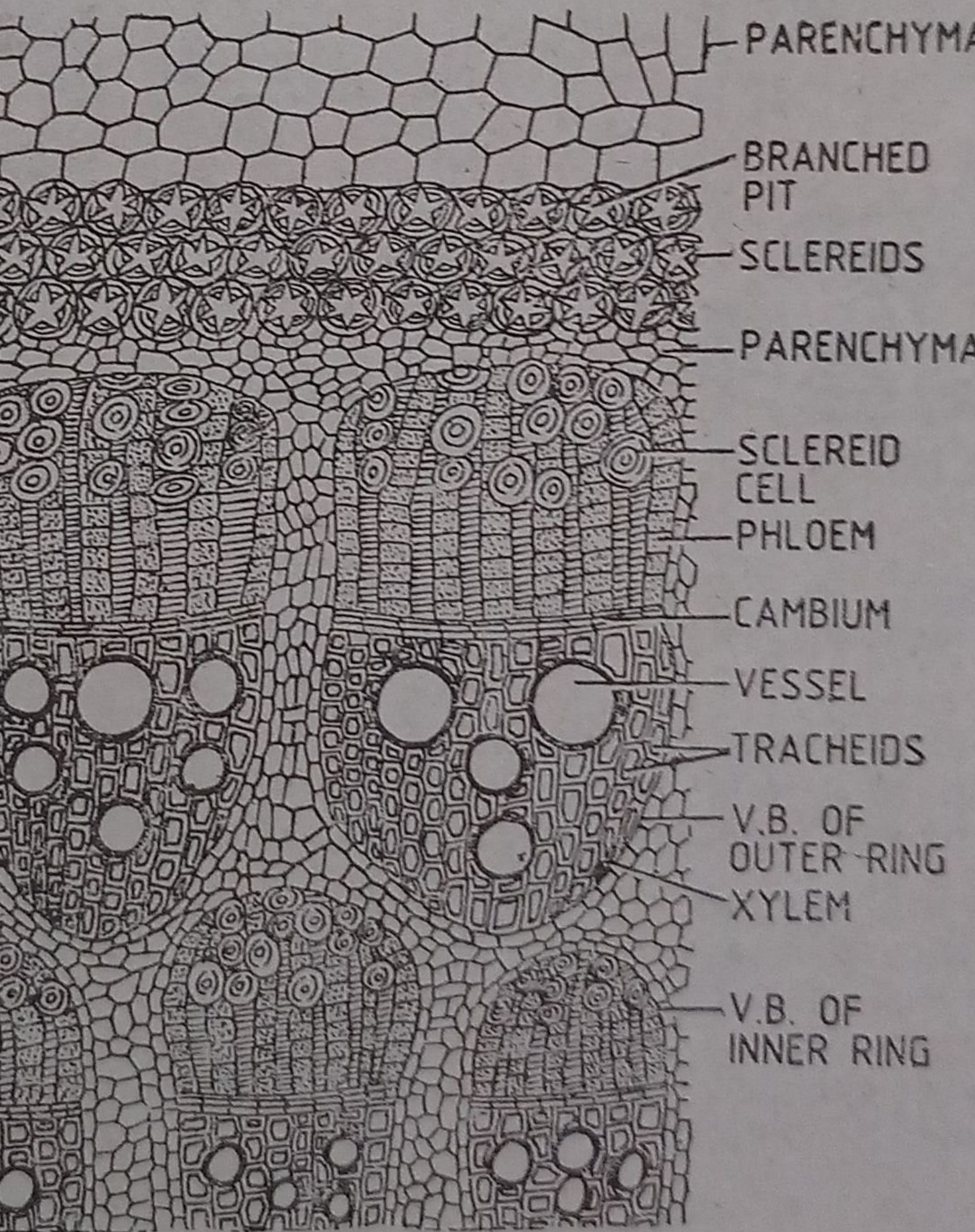
Lecture No. - 108

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• Anomalous Secondary Growth in Gnetum (Contd.) :

• In the Extrastelar region:

- In Gnetum africanum, the cork-cambium arises in the epidermis, which does not form a complete ring. This causes in the formation of a multilayered cork at certain places while the other places are devoid of it.
 - The cork-cambium, sometimes, develops irregularly at various depths, i.e., the strip of phallogen may develop in the epidermal layer, sub-epidermal layer and in the cortical layer.
 - All these strips unite laterally to form an irregular layer of cork-cambium.
- This specific condition results in the formation of islands of sclerenchymatous cells and thin-walled cells embedded in the cork-layers.
- A few laticiferous cells present in the cortex may also be embedded in the deeper layers of cork.
 - The overall picture of secondary growth in the extrastelar region is also anomalous.



ula : Details of sclerotic ring and a few bundles of out
T. S. of stem

Angiospermic characters :

- Presence of polyfasciculate ectophloic eustele.
- Vessels are associated with the tracheids of xylem.
- Presence of fibrous cells and companion cells in the secondary phloem of some species.
- Normal activity of Cambium in most of the species is similar to dicot stem.
- Anomalous secondary growth in the stelar region of climbing stem is due to unusual activity of secondary cambial strips.

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