

DEPARTMENT OF BOTANY
D.B. COLLEGE, JAYNAGAR
L.N.M.V. DBG.

Date

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(GUEST)

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B.Sc. PART I PAPER II

CORE CONCEPT OF PTERIDOPHYTE

ANATOMY OF INTERNODE OF STERILE

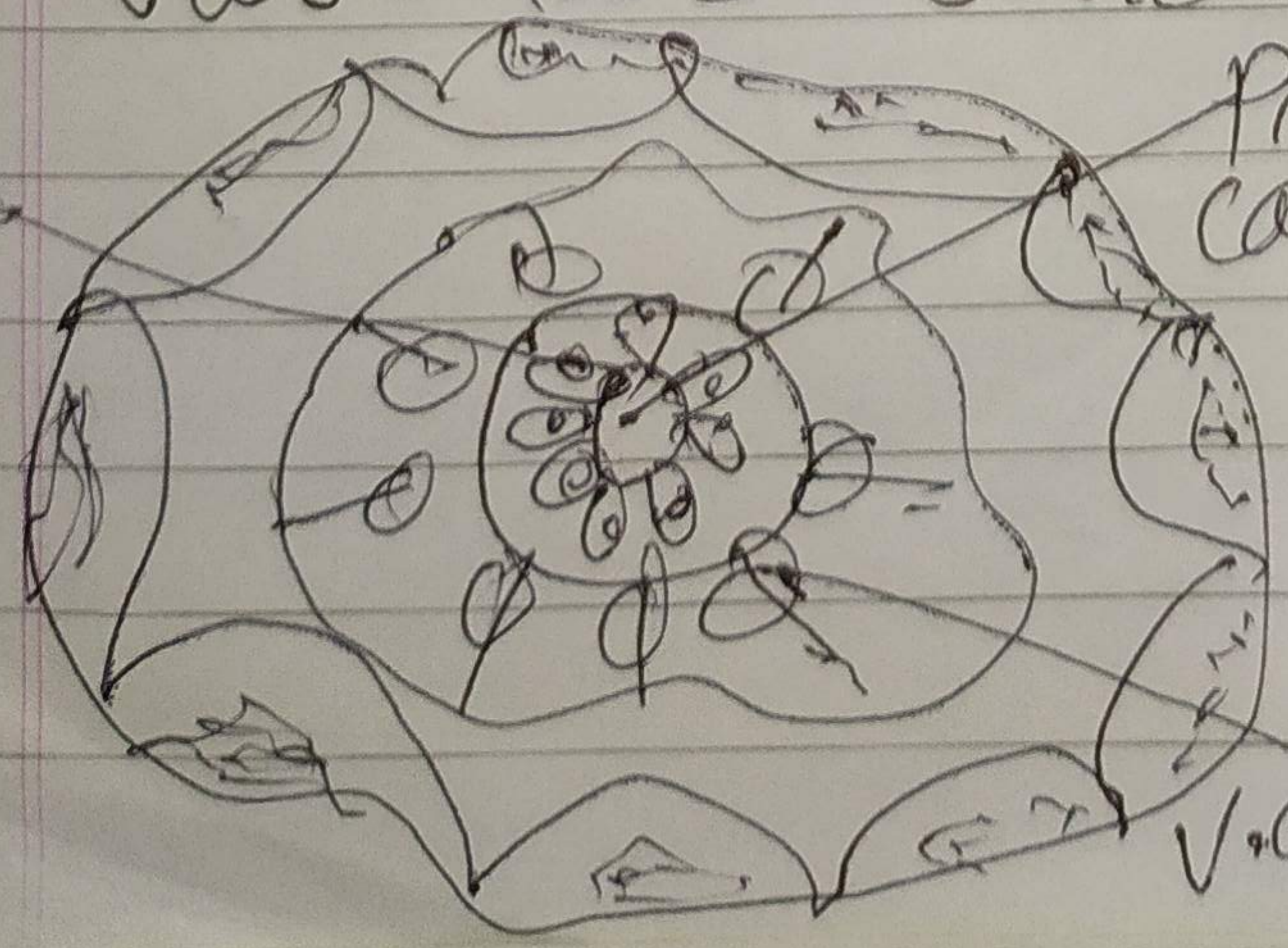
BRANCH: The sterile branches of equisetum are green and have whorls of lateral branches at each node which may branch again.

The terminal growth of rhizomes and branches is initiated by a pyramidal apical cell with three cutting faces. A T.S of the internode of sterile branch shows a clear epidermis of which the outer walls are cuticularised and impregnated with silica to give the characteristic rough feeling. Below each ridge there is a patch of hypodermal sclerenchyma which in *E. giganteum* extends to the stele. There is also another smaller patch of sclerenchyma below each furrow. The outer

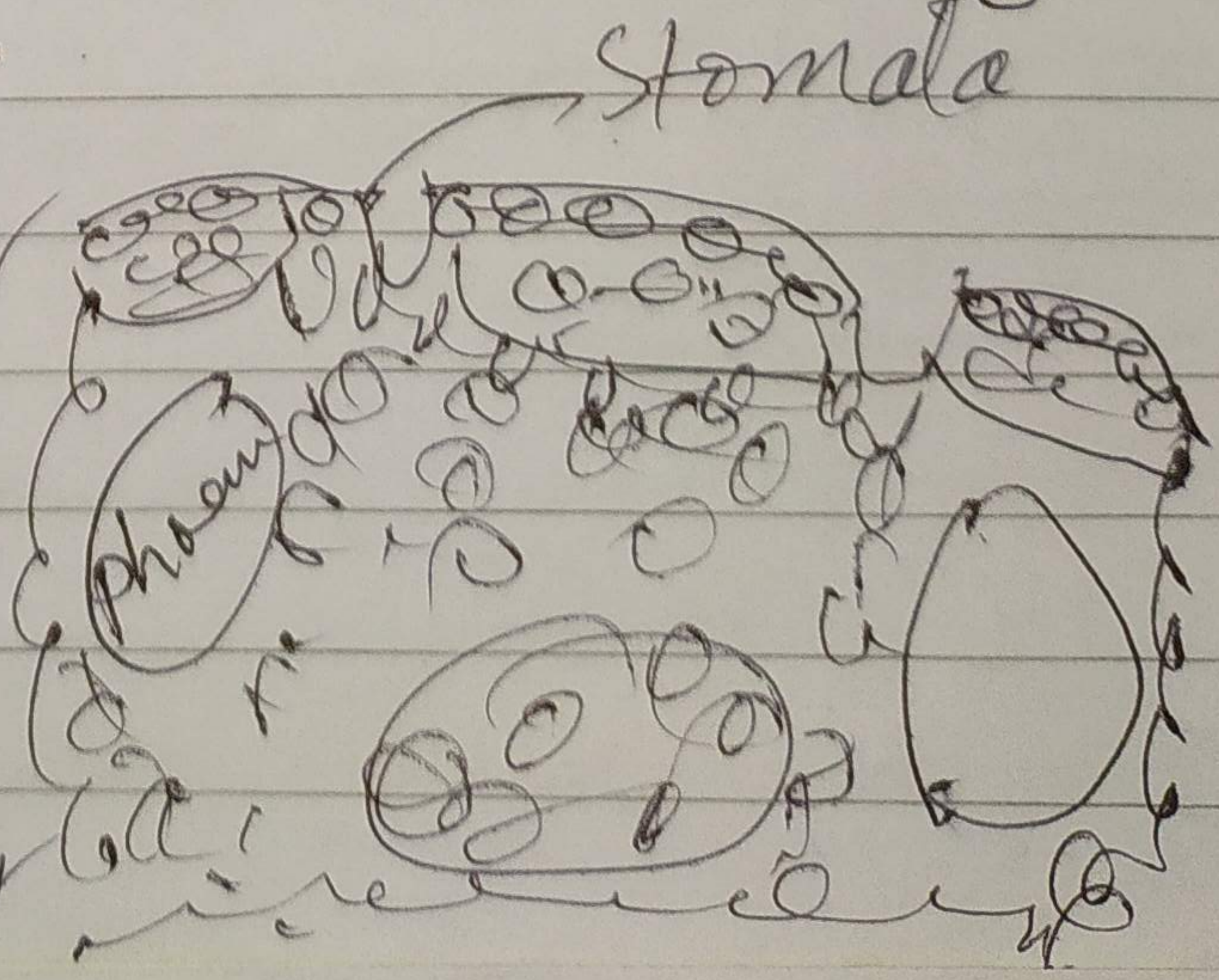
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Cortex is chlorenchymatous and is placed in a semicircle below each ridge sclerenchyma patch. The stomata are sunken in the Hippochaete subgenus and on level with the epidermis in the Equisetum subgenus. These are arranged in two vertical rows on the two sides of each ridge. The inner cortex below the chlorenchyma is formed of thin walled parenchymatous cells. There is one large longitudinal air cavity in it below each furrow forming a ring of vascular canals. Below this endodermis showing Casparyan strips there is a pericycle of one layer. The stele is remarkably reduced and feebly developed. There are as many vascular bundles.

terminal canal



pith cavity

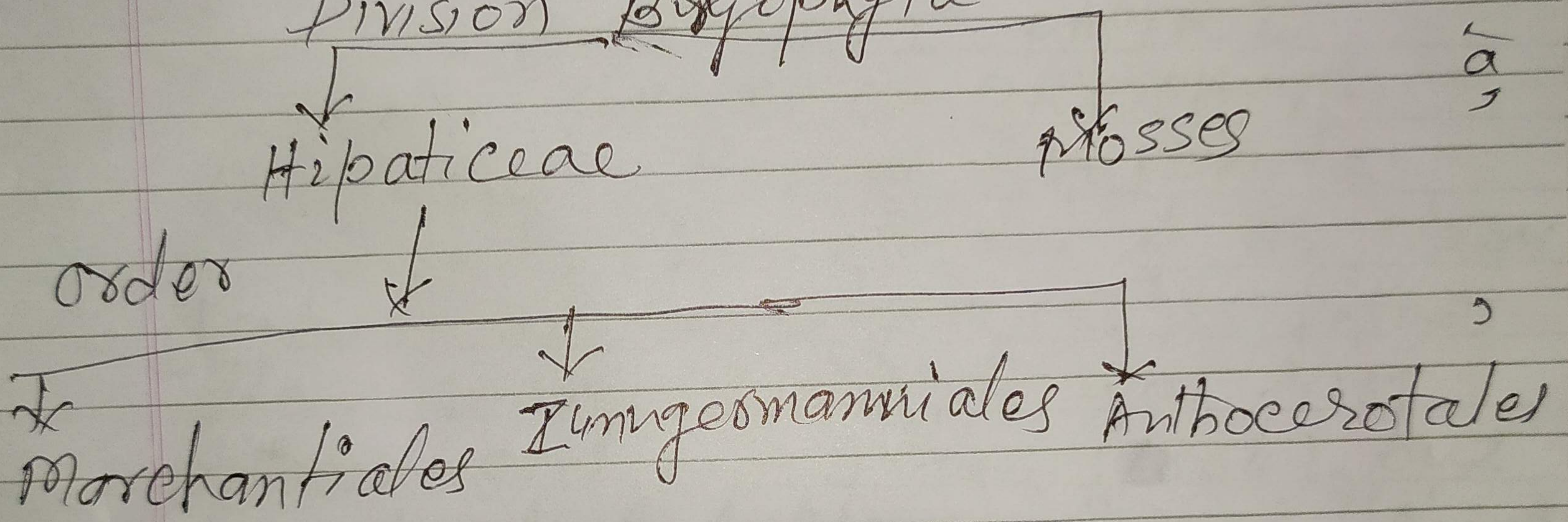


stomata

Kristensen (1957) Bryophytes adjusts in chlorophyta.

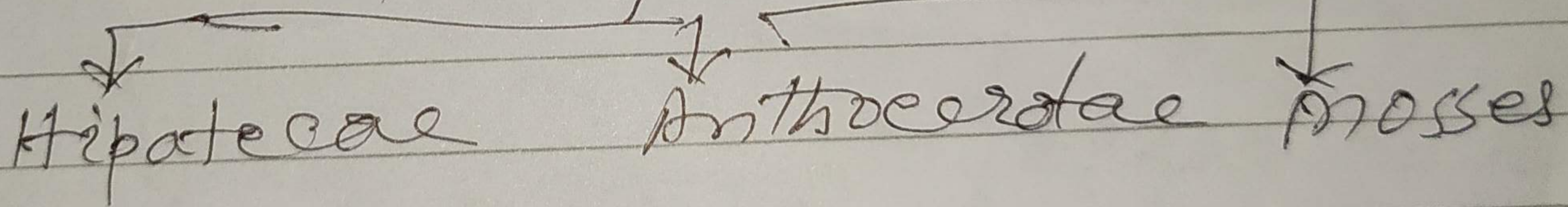
Bassy, Pritch, Wetstain, Wordoon and Evans (1938)

Division Bryophyta



Shoote (1958)

Bryophytes



Rodhmella

Bryophyta

Hepatopsida Anthocerotopsida Bryopsida

these name is confirmed by ICBN. International Code of Botanical Nomenclature.