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Paper : II (Group-B ; Pteridophyta)
Topic : Stelar Organization in Pteridophyta (Continued)

## Types of stele :

### (2). Siphonostele (Siphon - hollow or tube)

With the appearance of the pith, the vascular tissues are pushed away from the centre. The xylem forms a cylinder around the pith and the phloem lies on ~~the~~ both sides of the xylem. In other word, the protostele with a parenchymatous pith represents a siphonostele. The term itself denotes a hollow or tubular vascular cylinder.
Depending on the position of phloem, it is of two types :

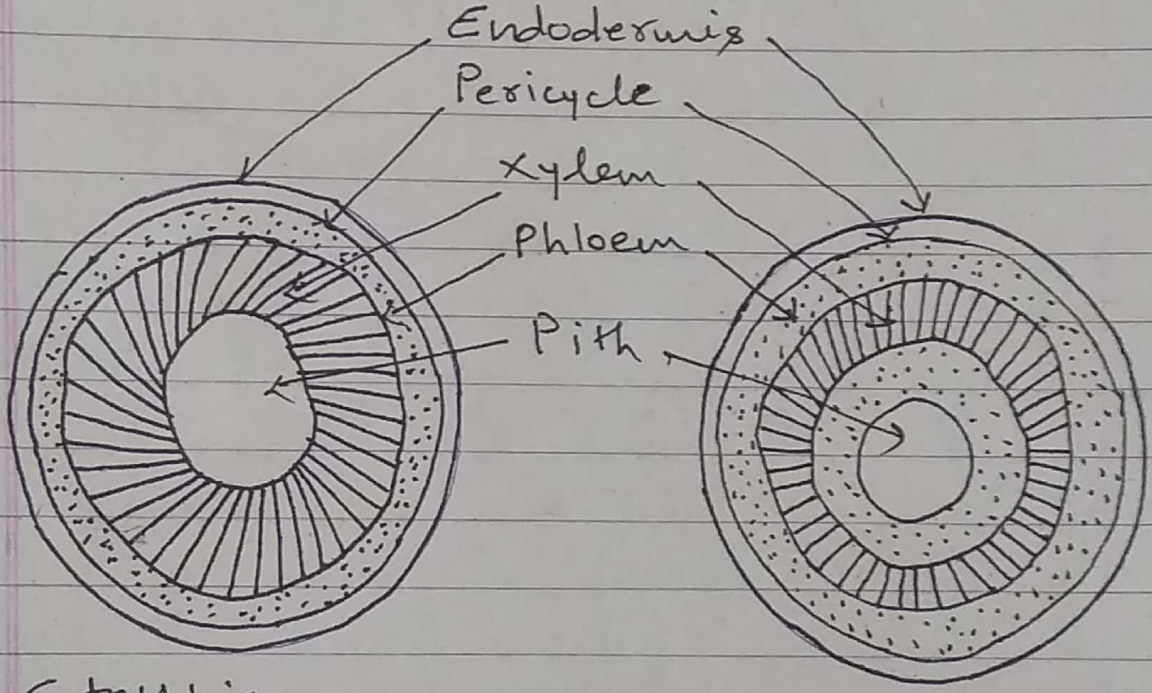
### (a) Ectophloic Siphonostele (Ecto = outside) :

The phloem lies external to a tubular xylem ~~cylinder~~ cylinder encircling the ~~central~~ central pith. Eg., Aerial stem of Psilotum.

### (b) Amphiphloic Siphonostele : (Amphi - on both sides)

In amphiphloic siphonostele, the xylem cylinder is completely surrounded by two sets of phloem lying external and

internal to it.
The inner set of phloem delimits the pith from the xylem cylinder.
Eg. Marsilea, Adiantum.




Ectophloic

Amphiphloic

(Fig: Ectophloic Siphonostele & Amphiphloic siphonostele)