Polycyclic – When more than one concentric ring of vascular tissue is appears in stem, then this condition is Polycyclic. Poly = more

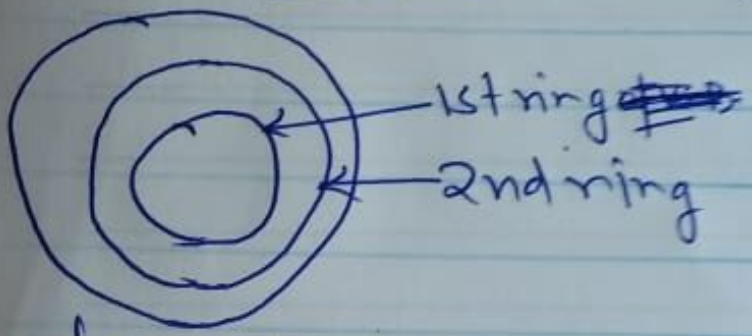

fig - Polycyclic condition.

(i) If the outer ring is solenostelic then the stele is called as Polycyclic solenostele.

(ii) If the outer ring is Dictyostelic then the stele is called as Polycyclic Dictyostele e.g. Peridiem etc.

Leaf Trace → Vascular supply of leaf is called as Leaf trace.

Branch Trace → Vascular supply of branch is Branch trace

In lower pteridophytes the vascular connection of branch and leaf is very simple. This is only for getting the food material not create any ~~dest~~ breakage in vascular ring of the branch.

But in Higher pteridophytes this relation is complex and create a breakage in vascular ring. Breaked vascular supply which enters into the leaf is Leaf trace. In other word leaf trace in higher pteridophytes ~~due to~~ formed due to breakage of vascular supply of the branch. This breakage forms a gap in vascular ring and is called as Leaf gap.

Modification in Siphonostele → Following are modified siphonostele.

I - Solenostele — soleno = one.

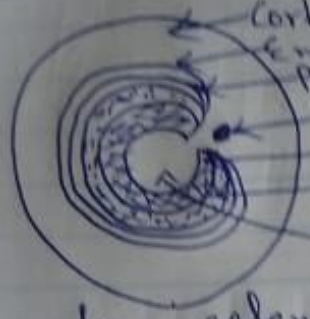

fig - solenostele

When leaf gap is absent in siphonostele if present then so small and non-overlapping thus does not make a breakage in vascular cylinder. Here vascular ring or cylinder is complete and continuous. This is solenostele.

II Dictyostele → In higher pteridophytes stem is covered with many leaves each with it's own leaf trace and leaf gap. This create many breakage in vascular ring to make so many pieces of vascular ring - each is called as meristele. When the stele is with many small meristele then the stele is called as Dictyostele.

fig - Dictyostele

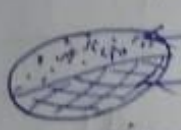

fig - single meristele

Polystelic → When more than one stele is appears in the stem then this condition is called as Polystelic.

B.sc. Part - Ist

14/7/20

Stelar system is continued

Trace = Vascular supply.

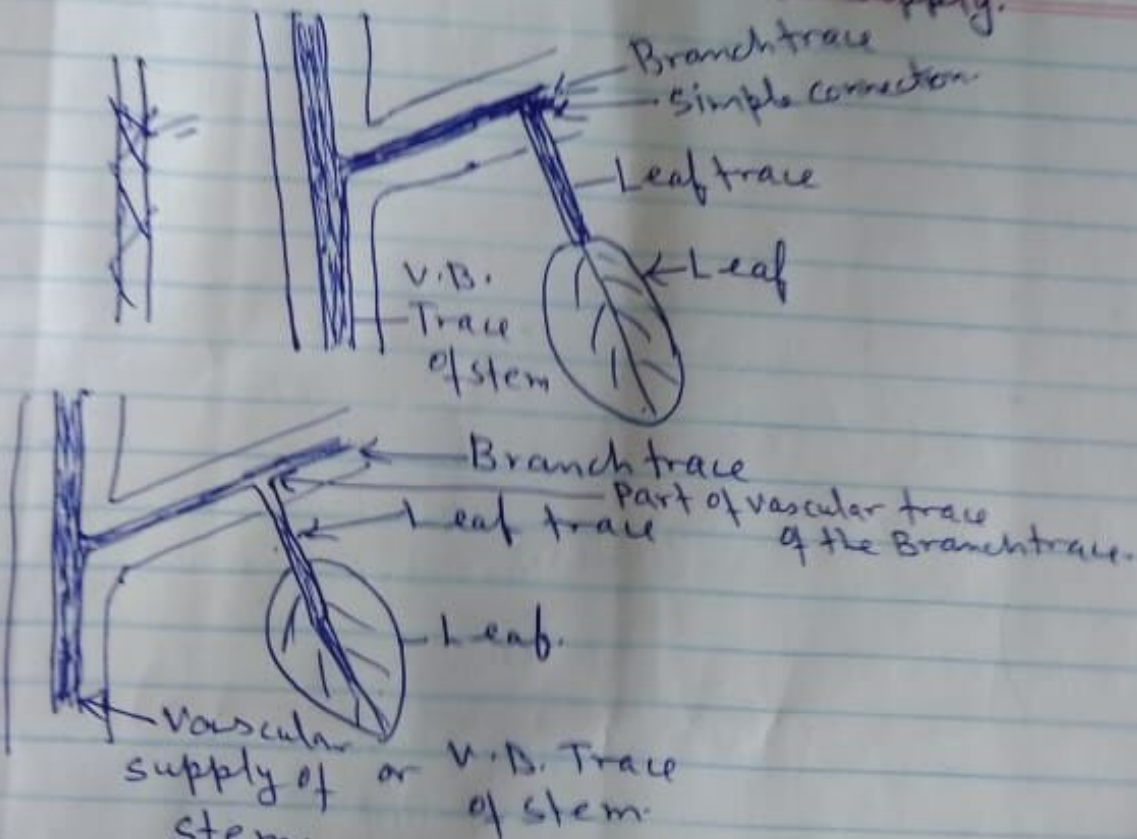

fig - Origin of leaf traces from the branches in case of Pteridophytes.