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Topic : Taxus(contd.)
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Stem Anatomy of Taxus:

In transverse section the stem is irregular in outline and resembles Pinus in structure. It is surrounded by a thickly cuticularised single-layered epidermis. Inner to the epidermis is parenchymatous cortex having some tannin-filled cells. It is followed by endodermis and sclerenchymatous pericycle.

The young stem shows a ring of conjoint, collateral, open and endarch vascular bundles enclosing a distinct pith in the centre. The protoxylem consists of spiral tracheids, and the phloem contains sieve cells with sieve plates and phloem parenchyma. Companion cells are absent.

The cambium is persistent and develops a thick vascular cylinder due to secondary growth. The cambium cuts secondary phloem towards outer side and secondary xylem towards inner side. The secondary wood is devoid of resin canals and wood parenchyma. Its tracheids show uniseriate bordered pits only on their radial walls.

The tracheids also show spiral thickenings. The medullary rays are uniseriate and homogeneous but in *Taxus baccata* they are sometimes bi-seriate. The wood is strong and dense. Due to the presence of tertiary spirals the wood is elastic in

nature. Phellogen may develop in the older stems showing extrastelar secondary growth.

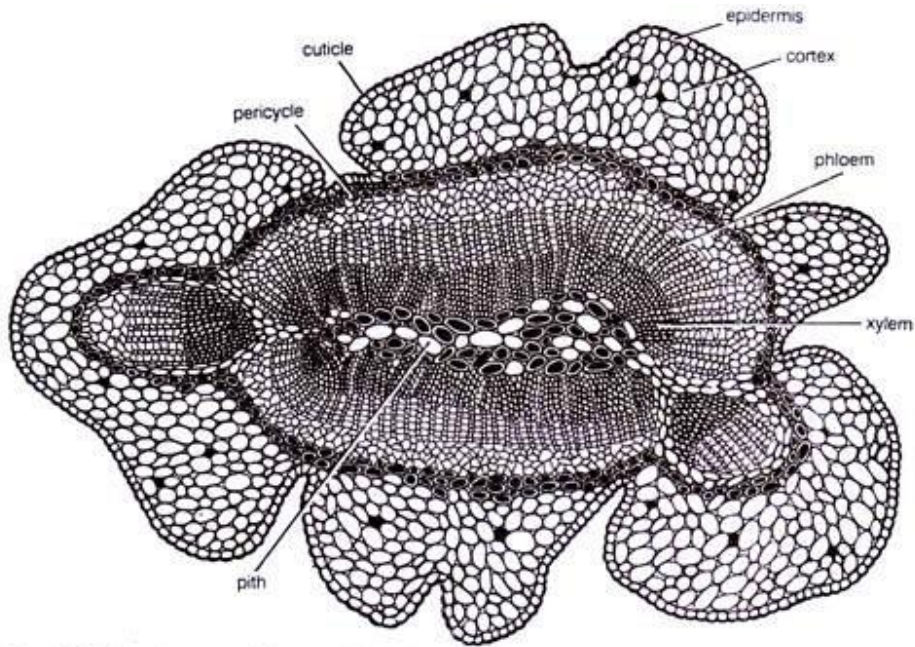


Fig. 12.2. *Taxus baccata*. T.S. stem (Young).