

**LECTURES IN GENERAL BIOLOGY -
PRACTICAL FACULTY OF
BIOTECHNOLOGY**

ASIS. LECTURE

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Lecture 4

Pits

○ Pits

- Grow in the form of slumps in the primary pits fields in a primary walls, can be discrimination several types of pits , including :

○ 1-primary pits fields

- It's appear in the primary walls in the form of slumps. they can see in the side view as a rosary form , the thick part represent the primary wall and from accumulation of this slumps the primary pits fields will form . A cytoplasm Flosses passing through the primary pits fields called protoplasm Bonds.

○ 2- Simple Pits

- The secondary walls discrimination by it. Can be study in the transfer elements in wood , it's Made up from the basic Constituents which composed from Standard pits . it including :

- **A- Pit membrane**

- Represents the middle lamella and primary walls .

- **B- Pit cavity**

- Located between the Pit membrane and cell cavity.

- **c- pit bore**

- it's exist in the end of Pit cavity when they met the cell cavity.

- **3- Barbered pits**

- through it , the secondary wall will separated from the pit membrane. And extending inside cell with gradual in fineness to form border and the borders lip never meet in middle but stile divergent to form central pore called pit pore. And it can studying in Gymnospermae like Pinales .

○ 4- Branched Pits

- Appear when the wall thickness is increase A large increasing so the pits will be deep and take channel form connect between the cavity and surface of cell. It can studying in the stone cell that existing in the European Pear Fruits

○ * Pit Combination

- Mostly the pits existing on the side of the wall are combination with other similar pits or with differs pits on the other side. The two combinations pits called the pit pair .

- There are many collections are results from pits combinations , including :

○ 1- Simple pit pair

- In which the simple pit on the side of wall combine with other similar to it on the other side , like pits existing in the Parenchyma Cells with second walls.

○ 2- Bordered pit pair

- In which the Bordered pit on the side of wall combine with other similar to it on the other side , can be noted in the walls that sported between two carrier elements in wood elements .

○ 3- Half- Bordered pit pair or Semi-Bordered pit pair

- In which the Bordered pit on the side of wall combine with simple pit on the other side , can be noted in the walls that sported between carrier element in wood elements .

○ 4- Unilaterally compound pitting

- In which one pit on the side of wall combine with more than one pit on the other side.

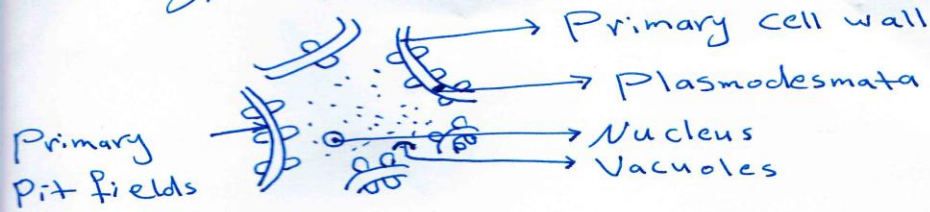


○ **Blind pit**

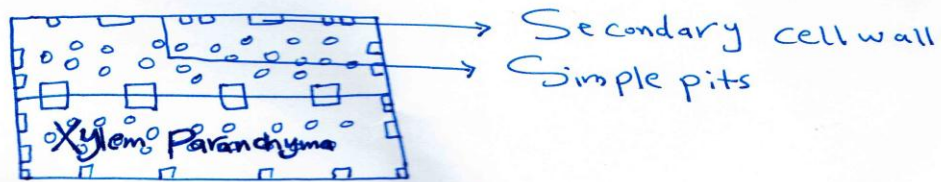
- The pit existing in the side of wall not combine with the pit on the other side , like in pits that opposite to it interfacial spacing or which form in the separated walls between Tracheids and fibers.



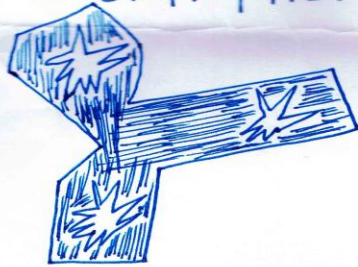
* "Types Pits"



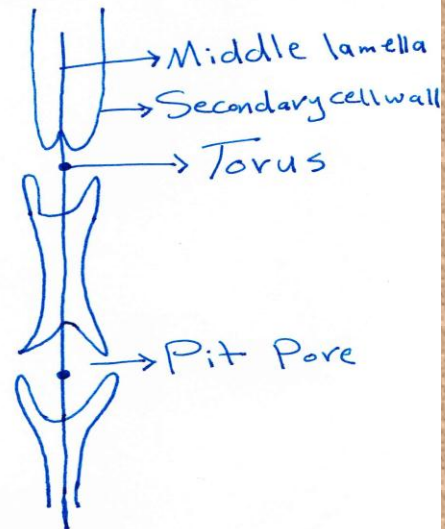
"Primary pit fields"



"Simple pits"



"Branched pits"



"Bordered pits"