

## **Stomata Definition:**

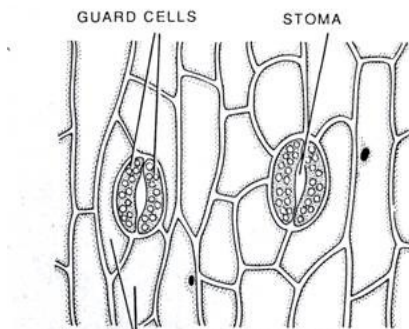
The stomata are minute pores which occur in the epidermis of the plants. Each stoma remains surrounded by two kidneys or bean shaped epidermal cells the guard cells. The epidermal cells bordering the guard cells are called accessory cells or subsidiary cells.

## **Types of Stomata:**

### **1. Ranunculaceous or Anomocytic:**

Type A — (Anomocytic = irregular celled).

1. Stomata are irregularly arranged.
2. In this type the stoma remains surrounded by a limited number of subsidiary cells which are quite alike the remaining epidermal cells.
3. The accessory or subsidiary cells are absent.

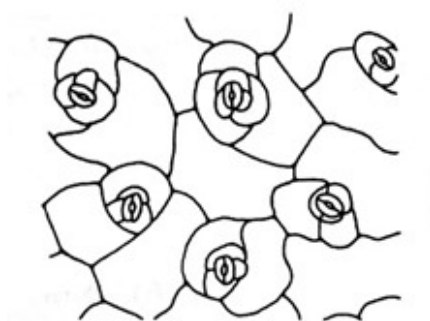


Anomocytic Stomata

### **2. Cruciferous or Anisocytic:**

Type B – (Anisocytic = unequal celled).

1. In this type stoma remains surrounded by three unequal accessory or subsidiary cells
2. Out of the three one is distinctly smaller than the other two.

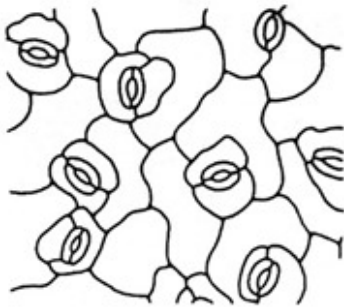


Anisocytic Stomata

### 3. Rubiaceae or Paracytic:

Type C – (Paracytic = parallel celled).

1. In this type, the stoma remains surrounded by two subsidiary or accessory cells which are parallel to the long axis of the pore and guard cells.
2. Epidermal cells are irregular in outline

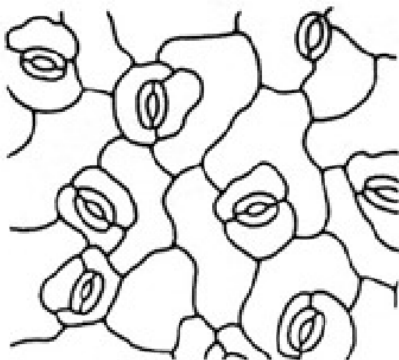


Paracytic Stomata

### 4. Caryophyllaceous or Diacytic:

Type D – (Diacytic = cross celled)

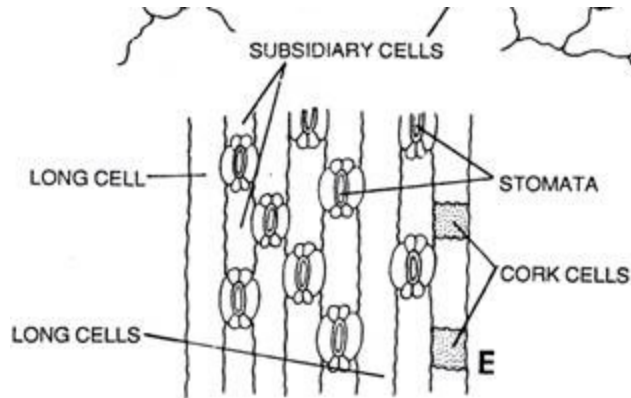
1. Stomata associated with epidermal cells.
2. The stoma remains surrounded by a pair of subsidiary or accessory cells and whose common wall is at right angles to the guard cells.



Diacytic Stomata

## 5. Gramineous:

1. The gramineous stoma possesses guard cells of which the middle portions are much narrower than the ends so that the cells appear in surface view like dumb-bells.
2. They are commonly found in Gramineae and Cyperaceae of monocotyledons.
3. Subsidiary cells lie parallel to the long axis of the guard cells



Gramineous Stomata