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# **Adaptive and Protective Systems: Trichomes**

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**The epidermal hairs may be subdivided into**

(i) Unicellular; and

(ii) Multicellular.

- The unicellular hairs may be un-branched or branched
- Multicellular hairs may consist of a single row of cells or several layers
- Some multicellular hairs are branched in dendroid (tree-like) manner; others have branches oriented largely in one plane (stellate hairs.)



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## **Types of Trichomes: Three types**

### **i. Stinging Hairs**

- It contains a poisonous liquid and consists of a basal bulb and slender and tapering structure is given out that ends in a small knob like or a sharp point.
- The tip is usually oblique, when it comes in its contact with some force, the tip is broken off, and the sharp pointed end readily penetrates the skin of the animal, and fluid is being transferred from the basal knob of the hair to the body of the animal.



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## ii. Glandular Hairs

- Glandular hairs may secrete oil, resin or mucilage
- Possesses a stalk and an enlarged terminal portion, which may be referred to as gland
- May be uni- or multicellular
- Active secretory cells of glandular trichomes have dense protoplasts and other substances, such as volatile oils, resins and mucilage's, and gums
- These substances are excreted and accumulate between the walls and cuticle.

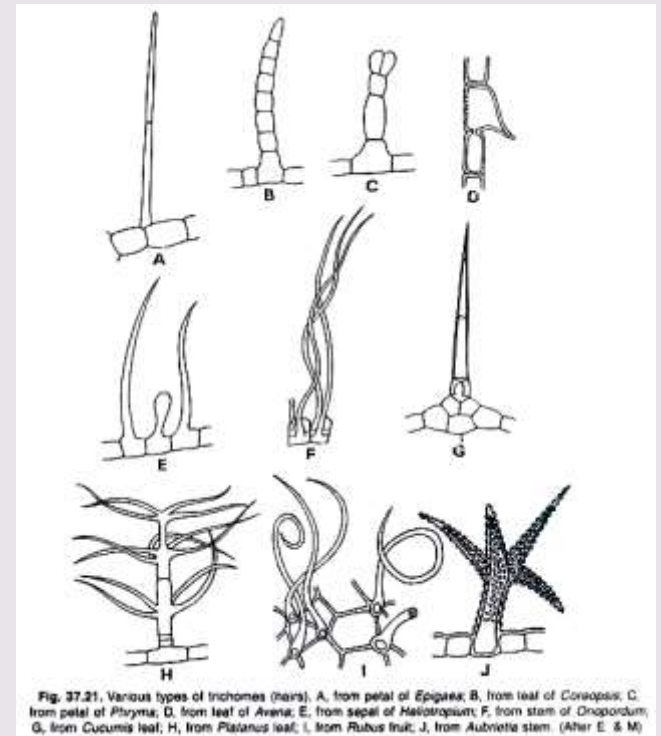


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### iii. Scale or Peltate Hair

- A common type of trichome is the scale, also called peltate hair
- A scale consists of a discoid plate of cells
- Borne on a stalk or attached directly to the foot





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***Thank You***