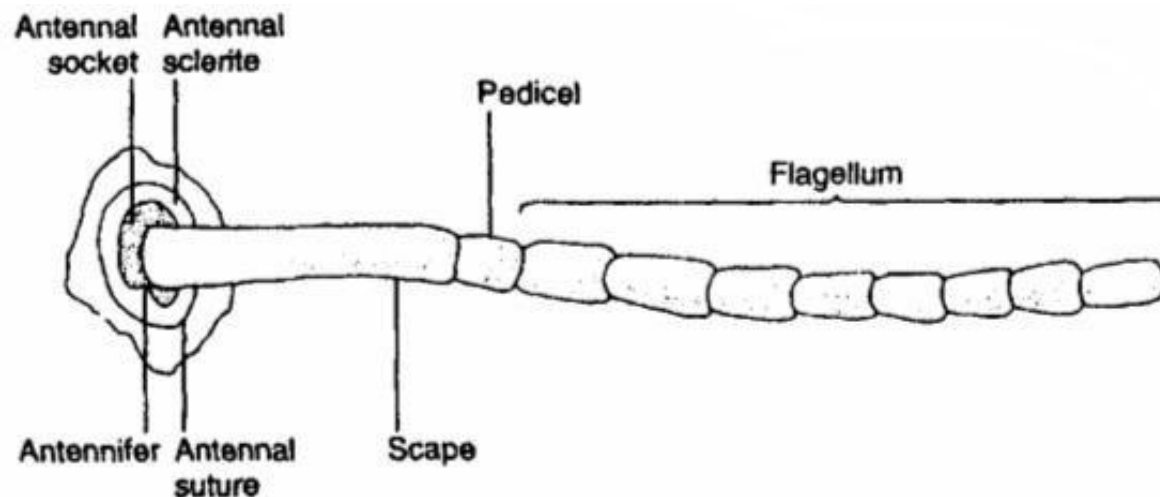# Insect Antennae

Dr. Akshay Kumar (Guest Faculty)

Department of Entomology

STRUCTURE OF INSECT ANTENNAE

- Antennae function almost exclusively in sensory perception. Some of the information that can be detected by insect antennae includes: **motion and orientation, odour, sound, humidity, and a variety of chemical cues.** Antennae vary greatly among insects, but all follow a basic plan: segments 1 and 2 are termed the scape and pedicel, respectively. The remaining antennal segments (flagellomeres) are jointly called the flagellum.
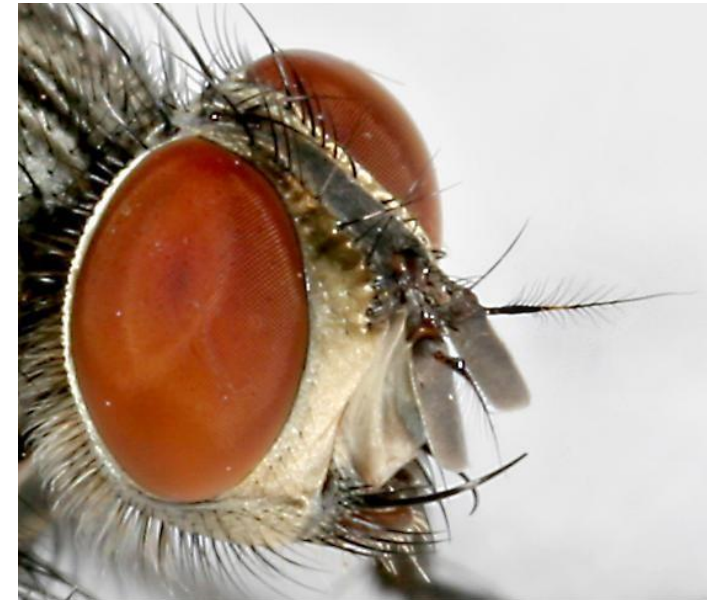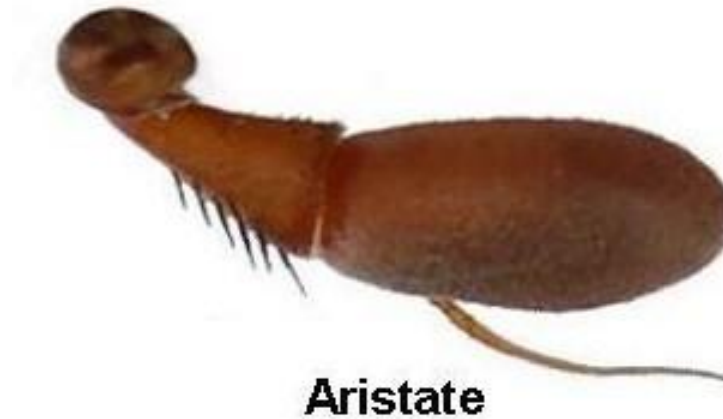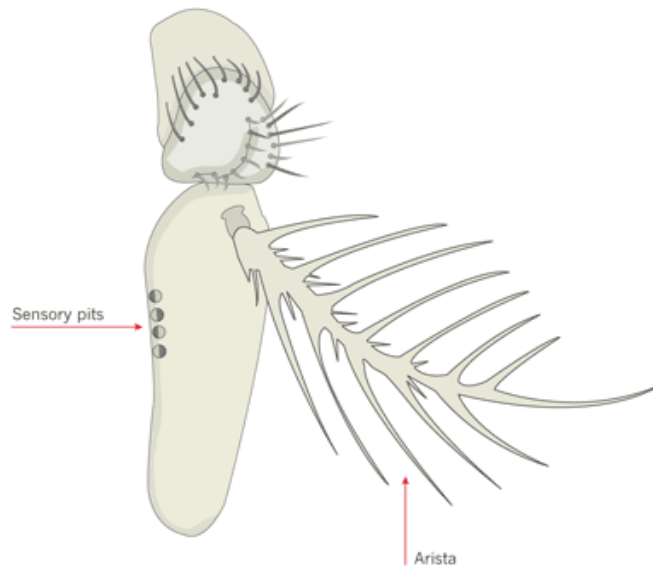
Antennal socket · Antennal sclerite · Pedicel · Flagellum · Antennifer · Antennal suture · Scape
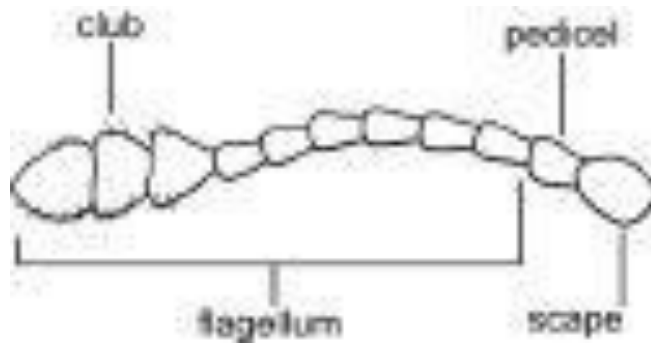
MODIFICATIONS OF INSECT ANTENNAE

1. Aristate:

Aristate antennae are pouch-like with a lateral bristle.

Examples: House and shore flies (order Diptera).

Sensory pits

Arista

Aristate

2. CAPITATE

❖ Capitate antennae are abruptly clubbed at the end. **Examples**: Butterflies (order Lepidoptera).

Capitate

3. CLAVATE

❖ Clavate antennae are gradually clubbed at the end. **Examples**: Carrion beetles (order Coleoptera). Adult carrion beetles feed on decaying animal matter or maggots.

Clavate

4. FILIFORM

❖Filiform antennae have a thread-like shape. **Examples**: Grasshopper, Ground and long-horned beetles (order Coleoptera), and cockroaches (order Blattaria).
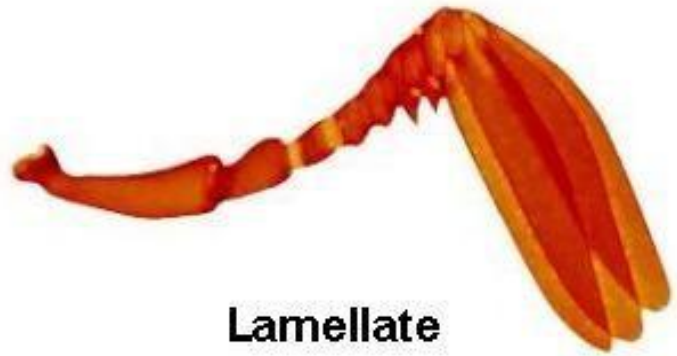

Filiform

5. GENICULATE

❖ Geniculate antennae are hinged or bent like an elbow. **Examples**: Bees and ants (order Hymenoptera).

6. LAMELLATE

❖Lamellate or clubbed antennae end in nested plates. Examples: Scarab beetles (order Coleoptera).

Lamellate

7. MONILIFORM

❖ Moniliform have a beadlike shape. Examples: Termites (order Isoptera).
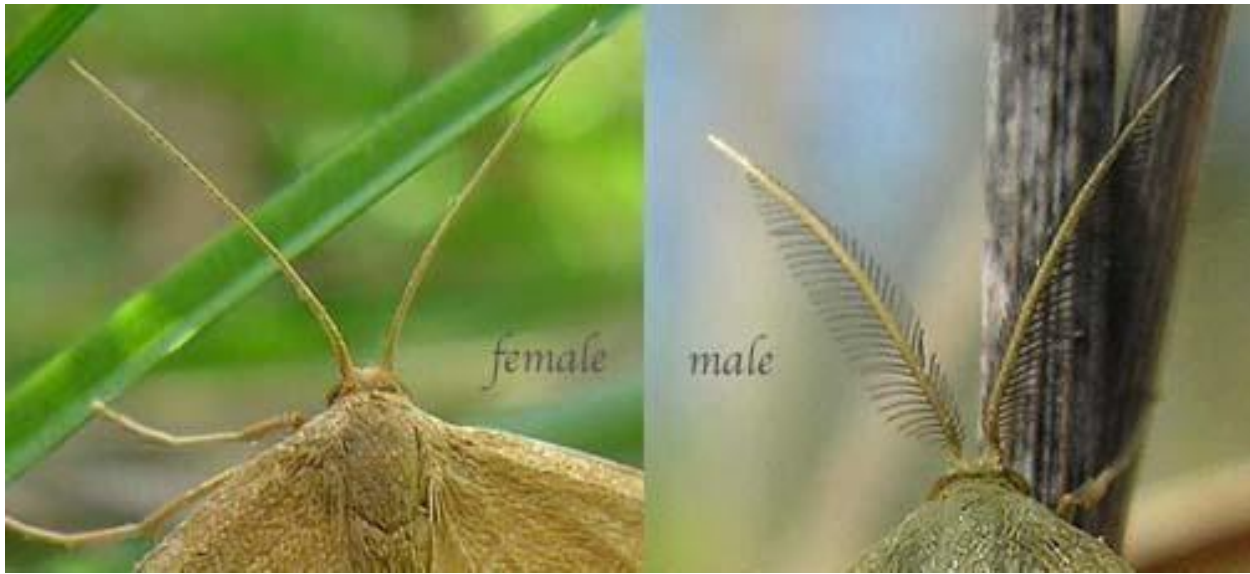

Moniliform

8. PECTINATE

❖ Pectinate antennae have a comb-like shape. **Examples**: Fire-colored beetles and fireflies (order- coleoptera)

9. PLUMOSE

❖ **Plumose** antennae have a feather-like shape. **Examples**: Moths (order Lepidoptera) and mosquitoes (order Diptera).

Plumose

10. SERRATE

❖ **Serrate** antennae have a saw-toothed shape. Examples: Click beetles (order Coleoptera).

Serrate

©PCoin 2005

© Stephen Cresswell

11. SETACEOUS

❖ Setaceous antennae have a bristle-like shape. **Examples**: Dragonflies and damselflies (order Odonata).

Setaceous

THANKYOU