Terminologie Morphologique utilisée pour identifier les fourmis

Lamto, Vendredi 13 septembre

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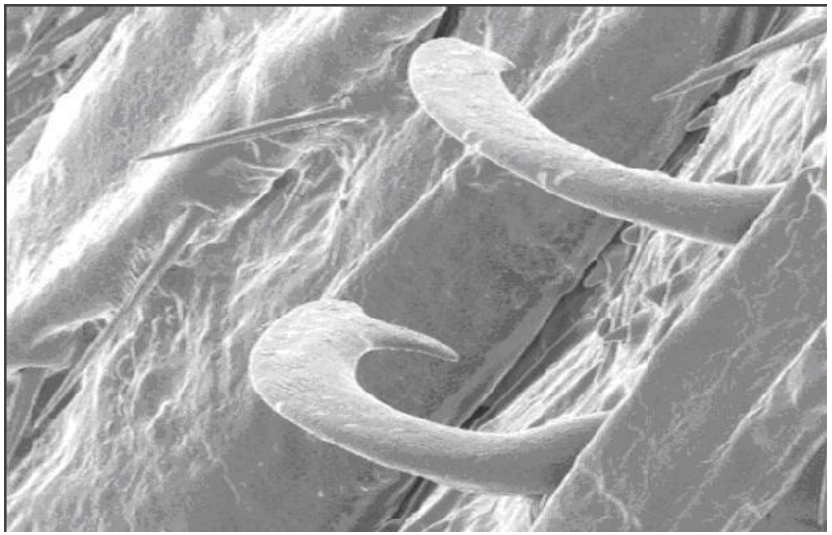
Morphology Hymenoptera

- **Hymenoptera** is one of the largest orders of insects, comprising the sawflies, wasps, bees and ants.
- There are over 130,000 recognized species, with many more remaining to be described.
- According to some the name refers to the heavy wings of the insects, and is derived from the Ancient Greek υμήν (hymen): membrane and πτερόν (pteron): wing.

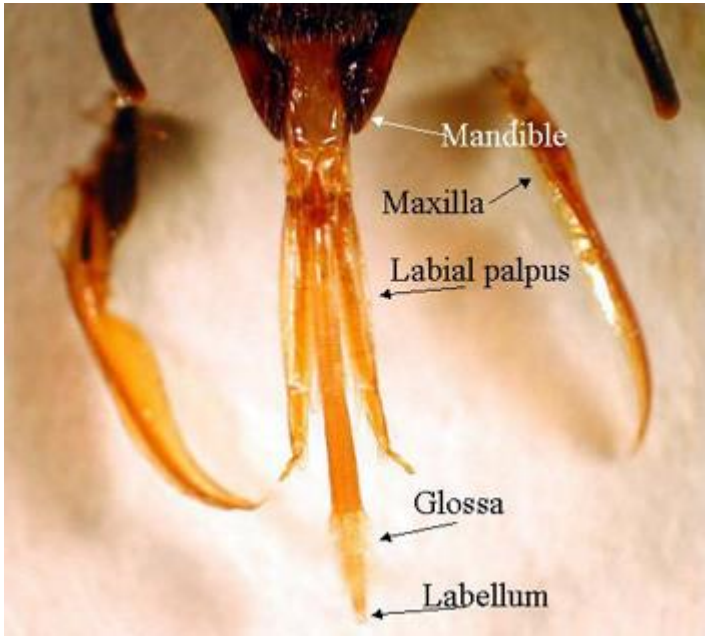
Morphology Hymenoptera
WINGS

- Hymenoptera usually have two pairs of wings. Their wings have relatively few veins compared with many other insects, especially in the smaller species.
- The hindwings are connected to the forewings (when flying) by a series of hooks called hamuli.



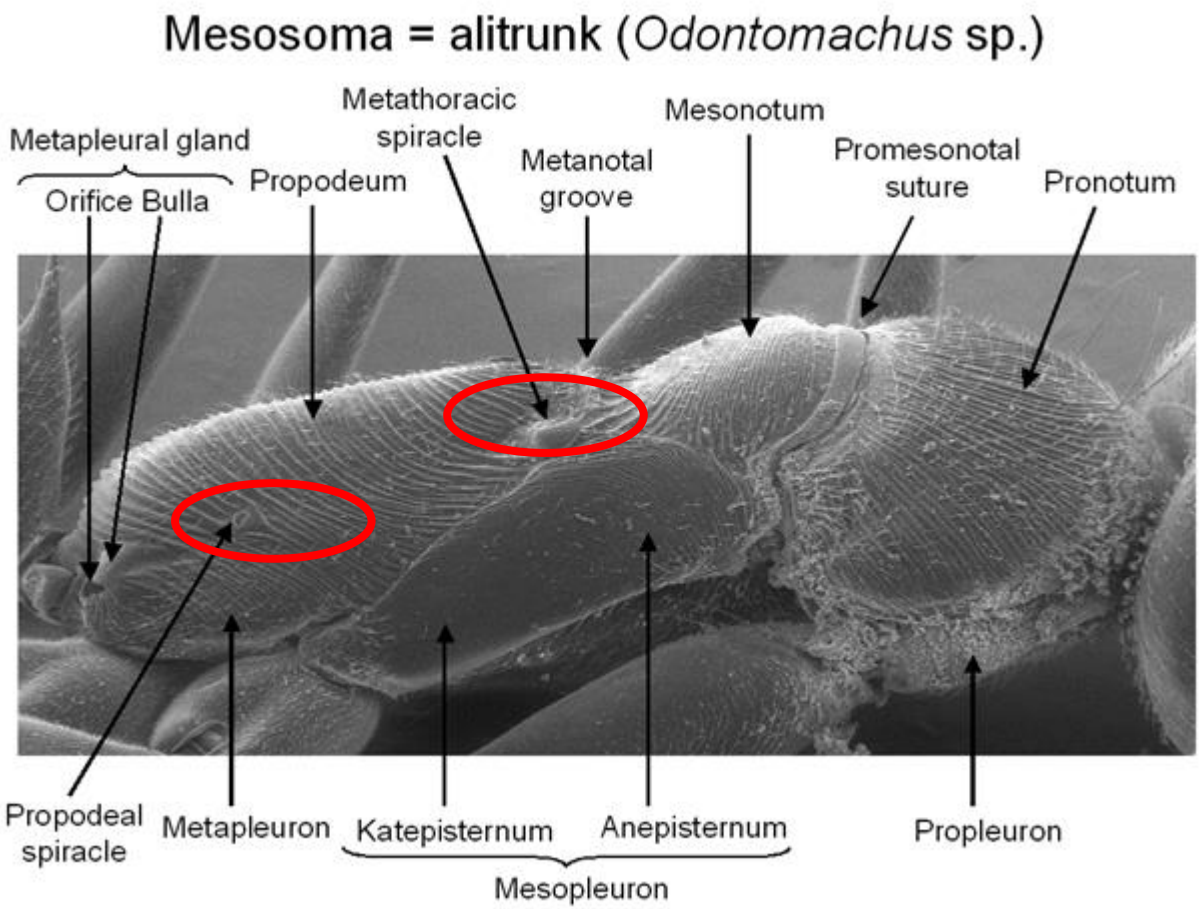
Morphology Hymenoptera mouthparts

- Their mouthparts are adapted for chewing, with well-developed mandibles (wasps).
- Many species have further developed the mouthparts into a lengthy proboscis, with which they can drink liquids, such as nectar (bees).



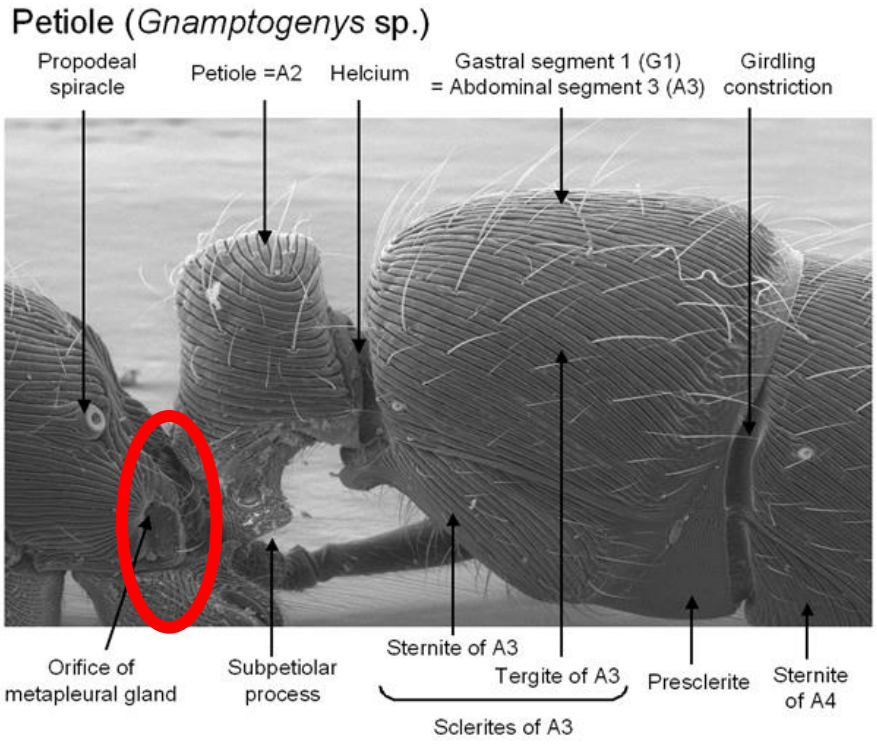
Morphology Hymenoptera

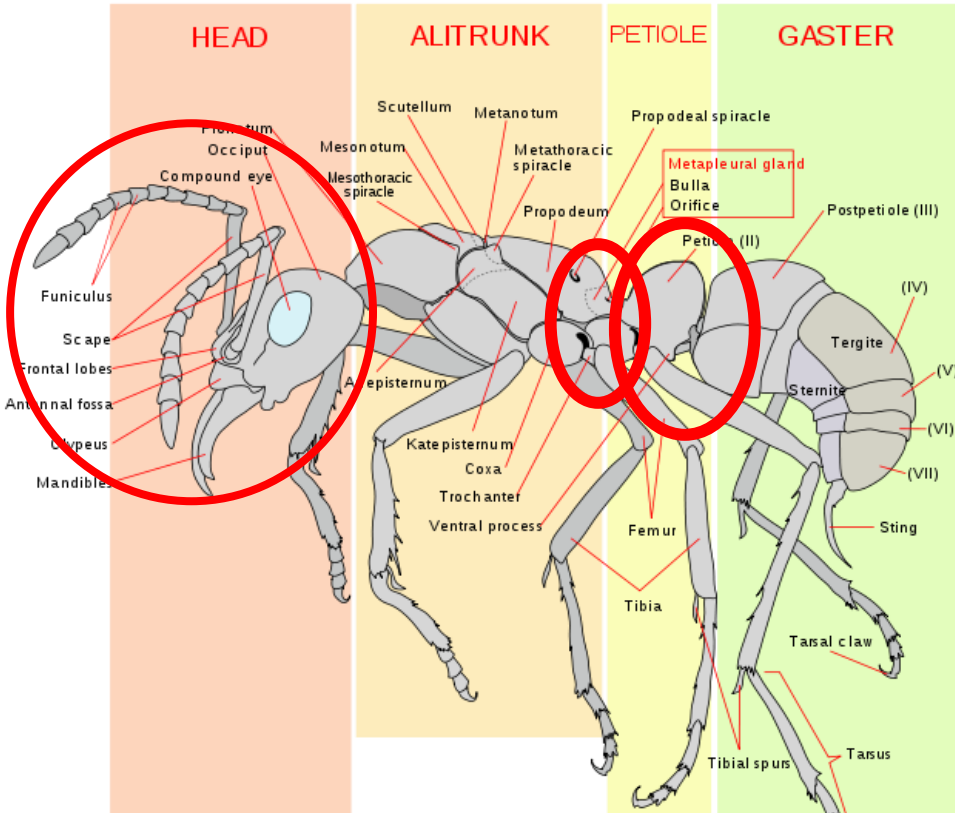
- Insects do <u>not have lungs</u>; oxygen and other gases like carbon dioxide pass through their exoskeleton through tiny valves called <u>spiracles</u>.



Morphology Formicidae

- Ants are distinct in their morphology from other insects
  1) elbowed antennae,
  2) metapleural glands, an exocrine gland
  3) a strong constriction of their second abdominal segment into a node-like petiole (thirds abd segm postpetiole).

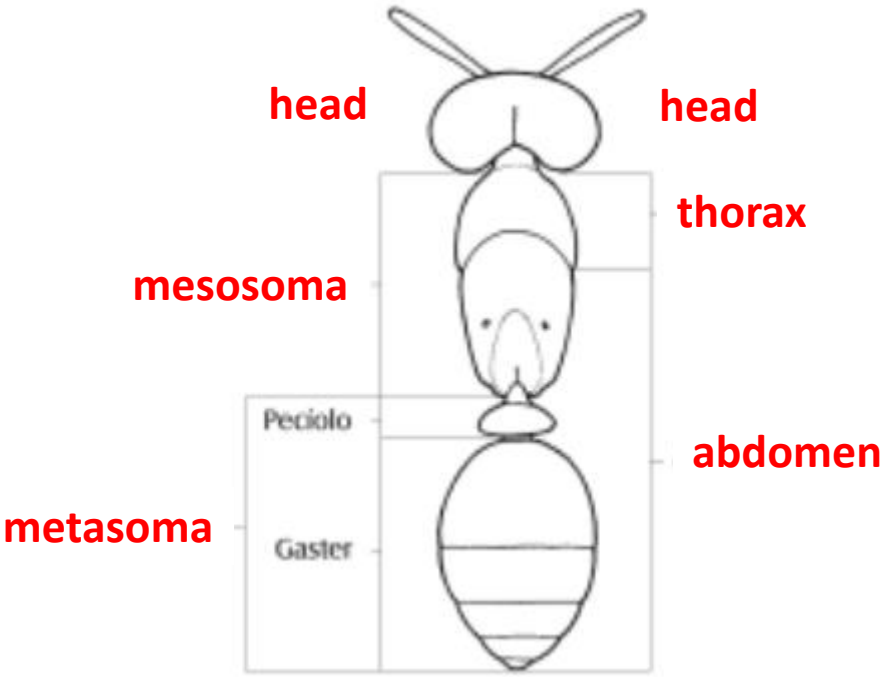


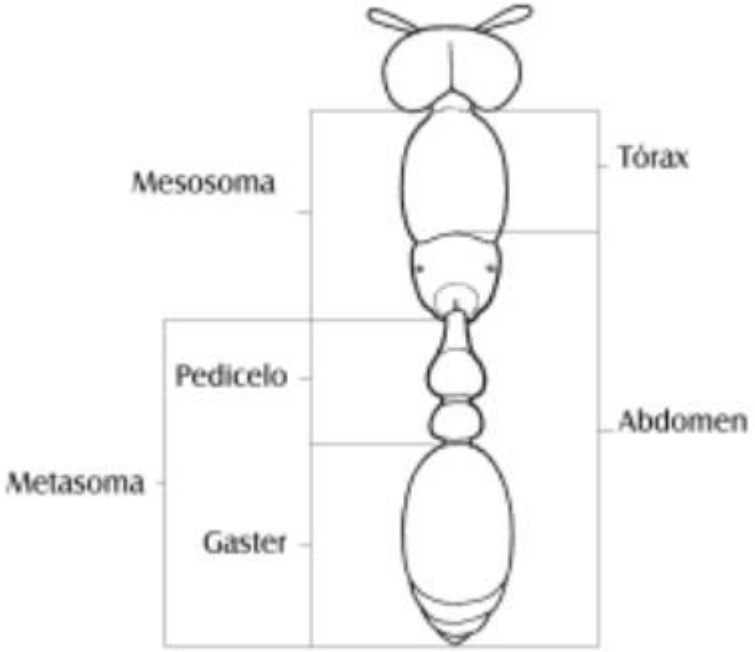


Morphology Formicidae

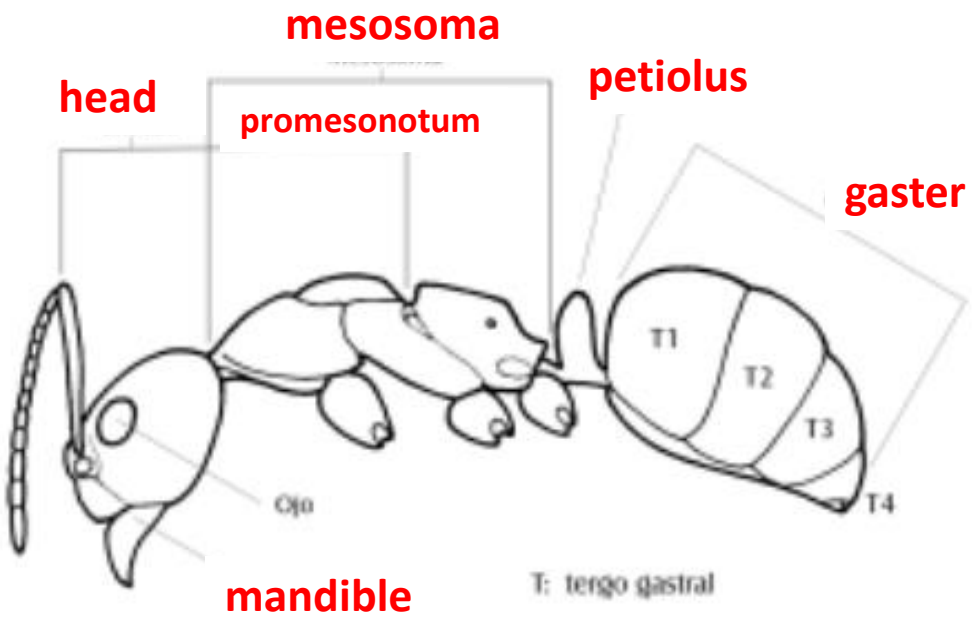
ANTS : head; mesosoma; metasoma (INSECTS head, thorax, abdomen)

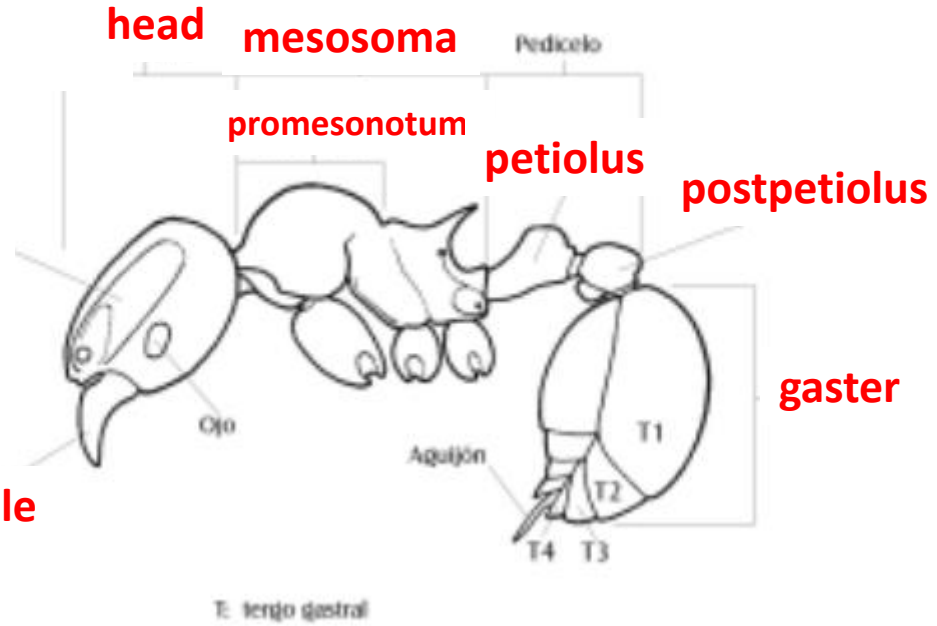
PETIOLUS can be formed by one or two nodes (the second alone, or the second and third abdominal segments).





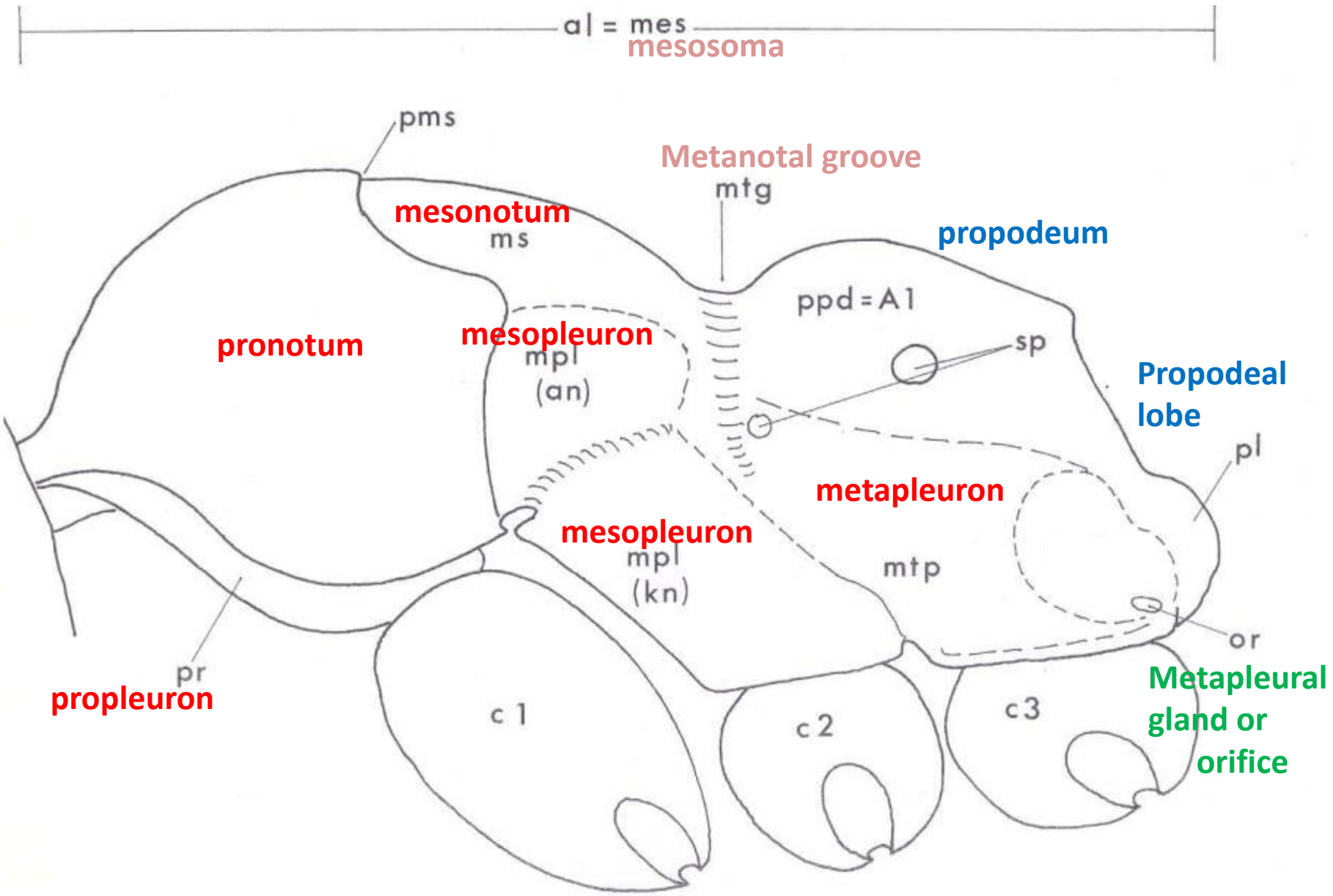
Morphology Formicidae





groove, impression or excavation

Morphology Formicidae

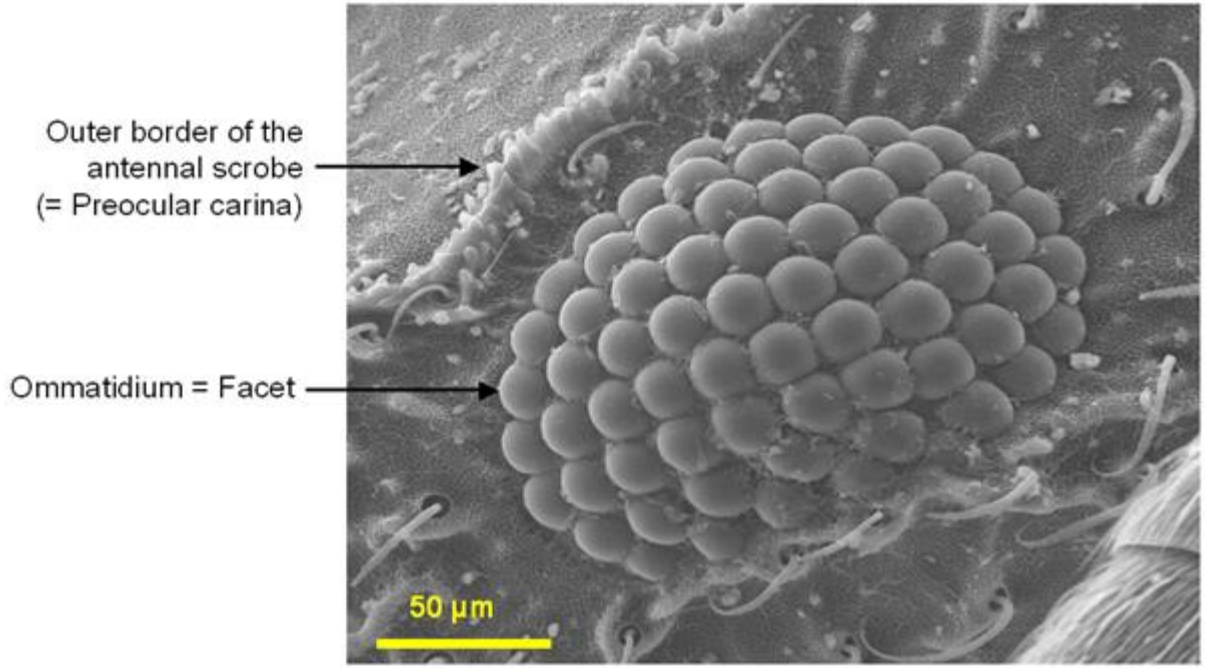


Morphology Formicidae

Ant's head contains many sensory organs. Like most insects, ants have compound eyes made from numerous tiny lenses attached together.

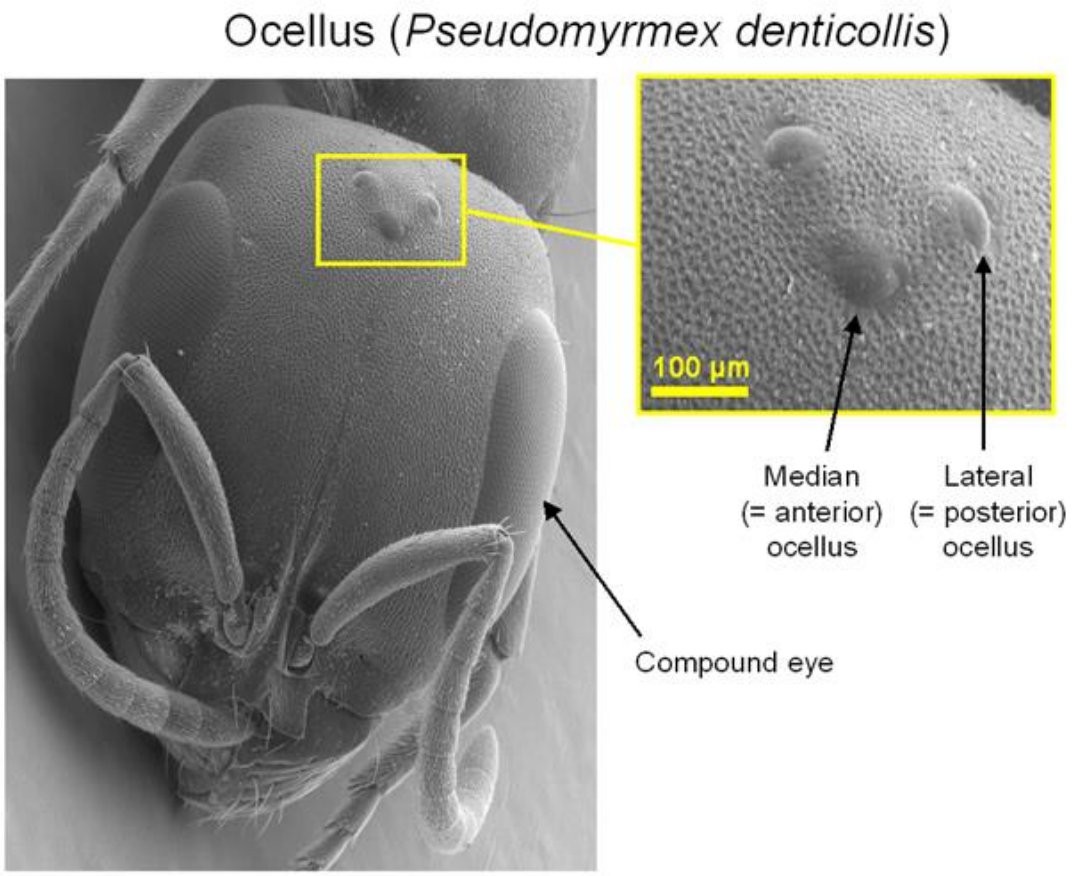
Eye (*Trachymyrmex* sp.)

- Ants' eyes are good for acute movement detection but do not give a high resolution.



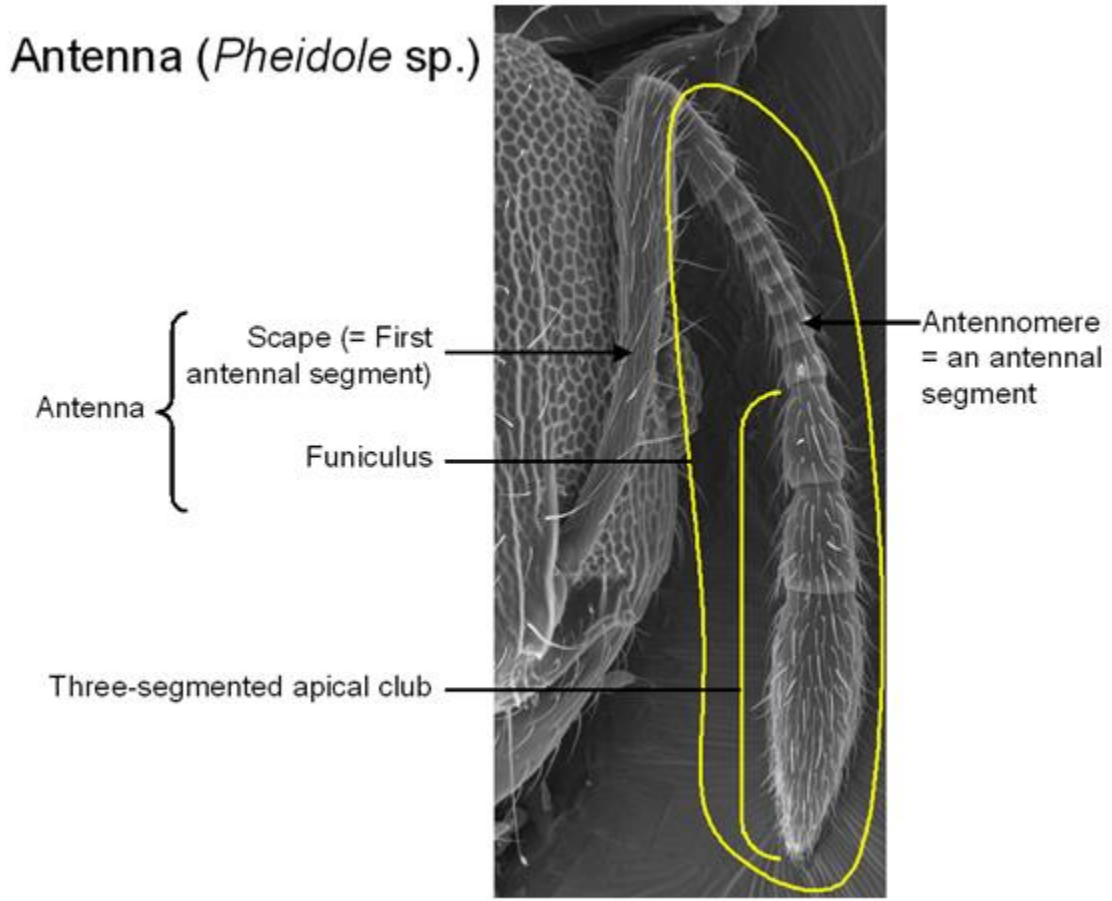
Morphology Formicidae

- They also have three small ocelli (simple eyes) on the top of the head that detect light levels and polarization.

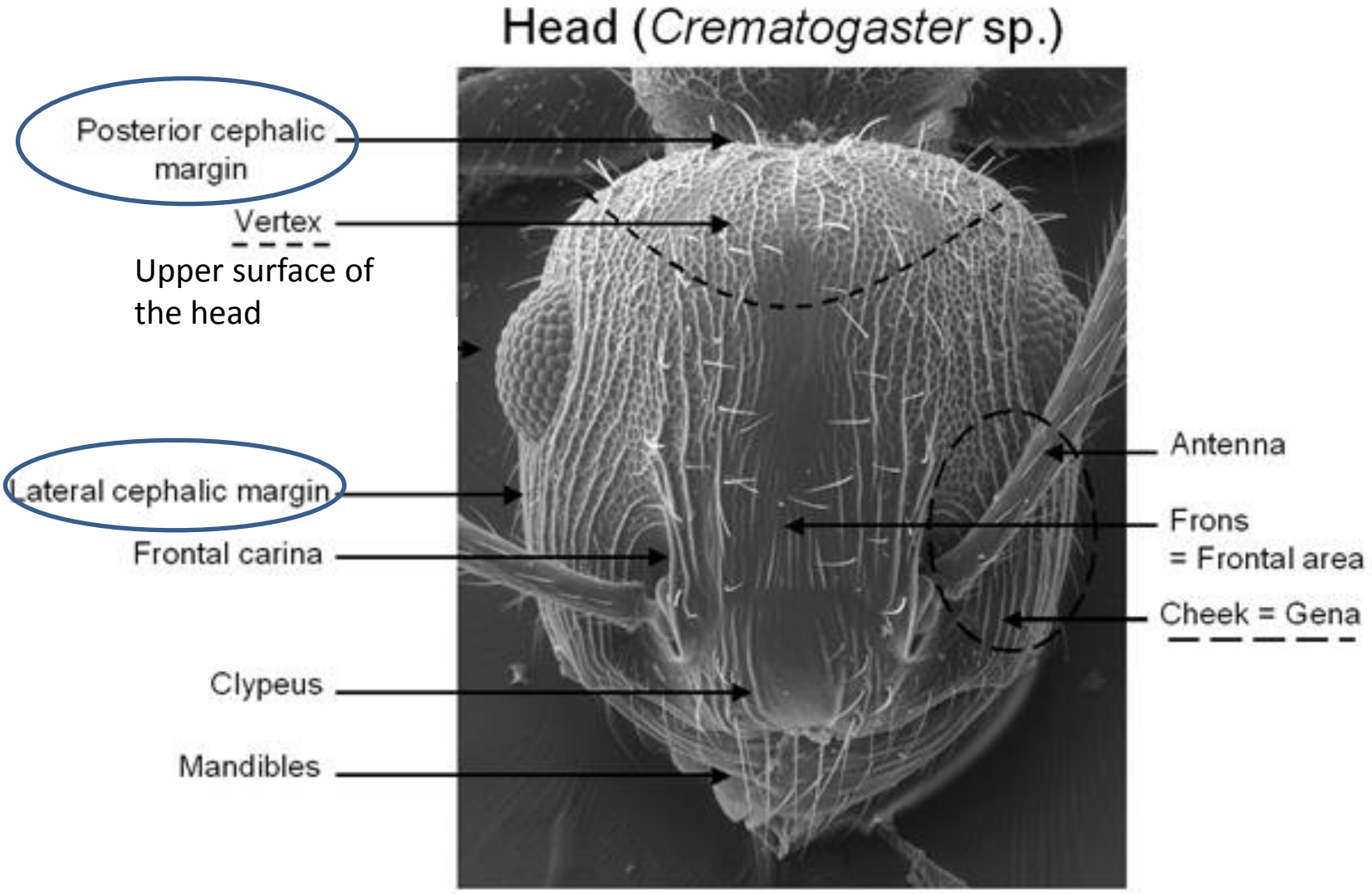


Morphology Formicidae

- Two antennae ("feelers") are attached to the head; these organs detect chemicals, air currents and vibrations; they are also used to transmit and receive signals through touch.

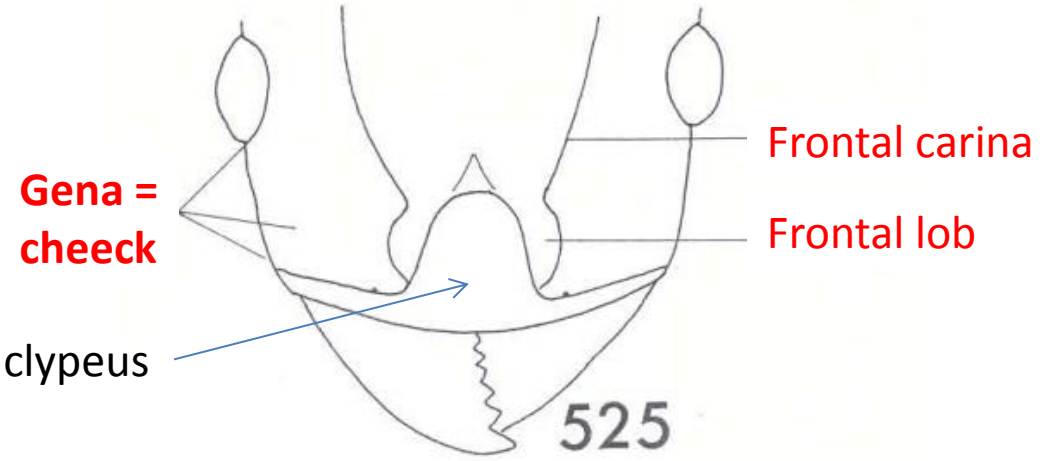


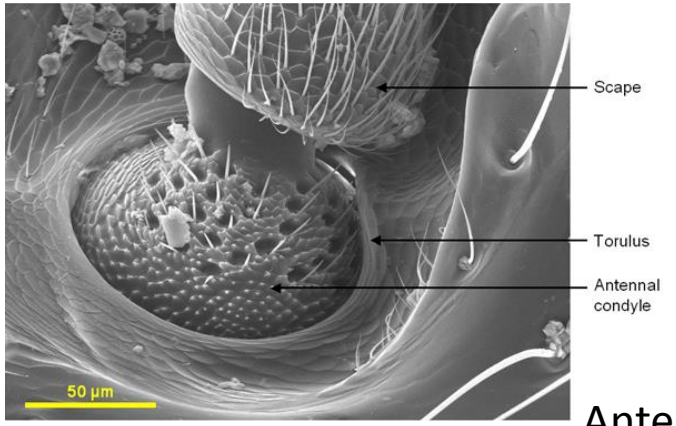
Morfología Formicidae

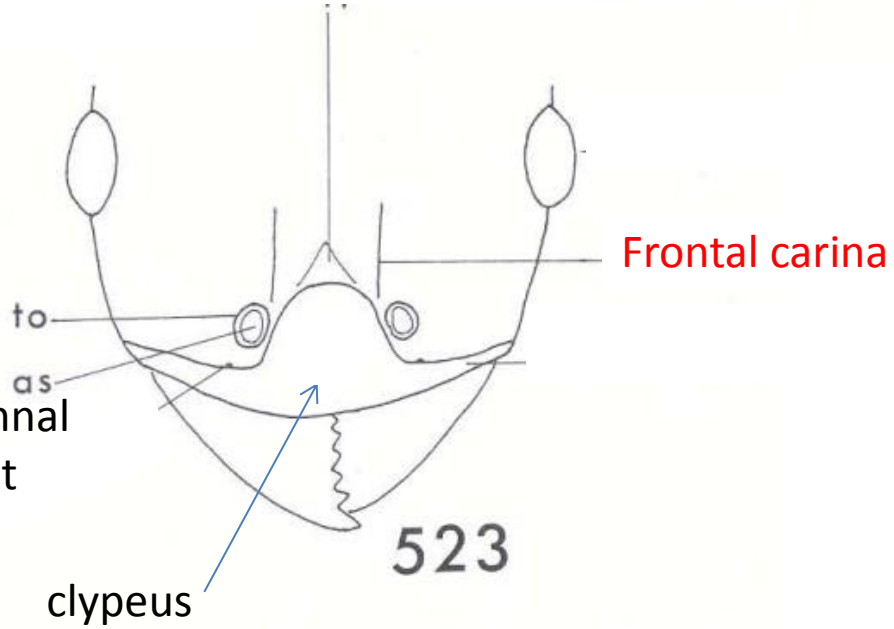


Morphology, Formicidae

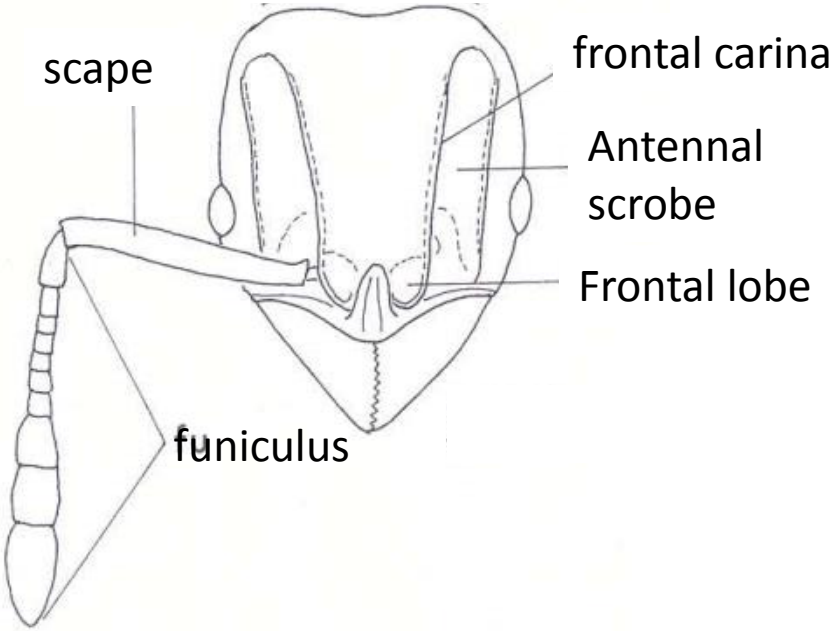
- HEAD



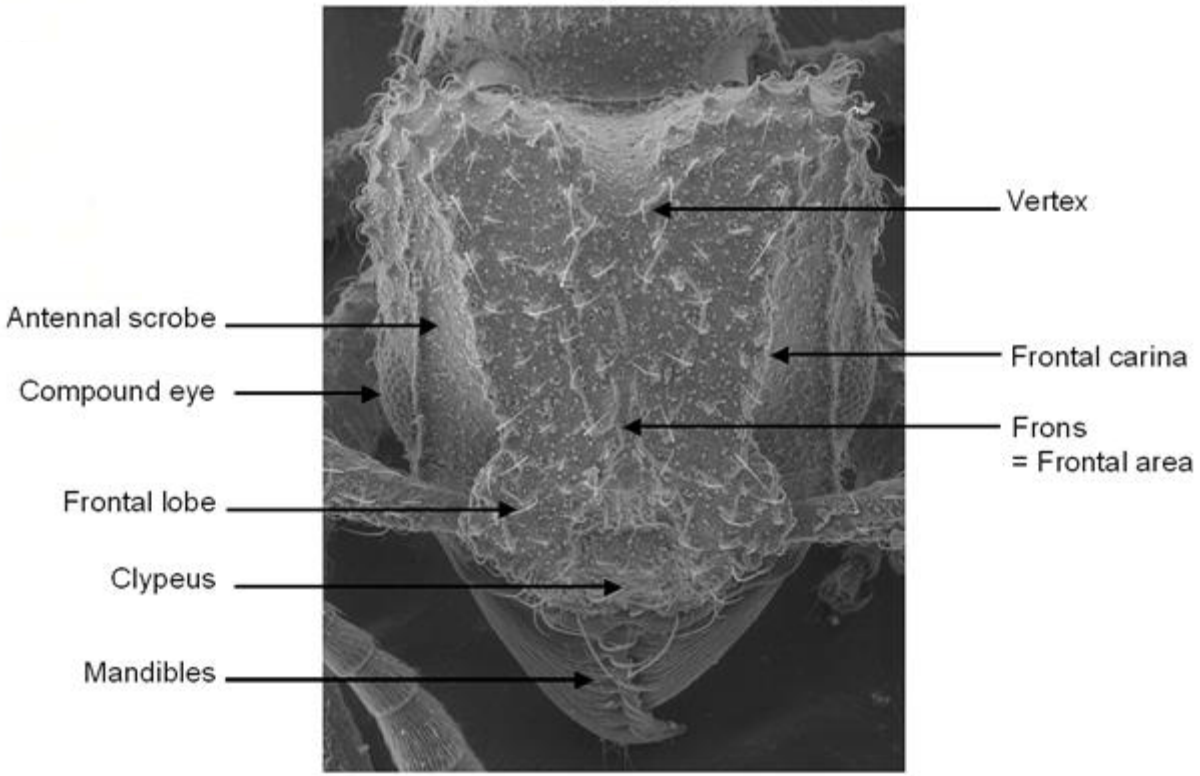




Morphology, Formicidae

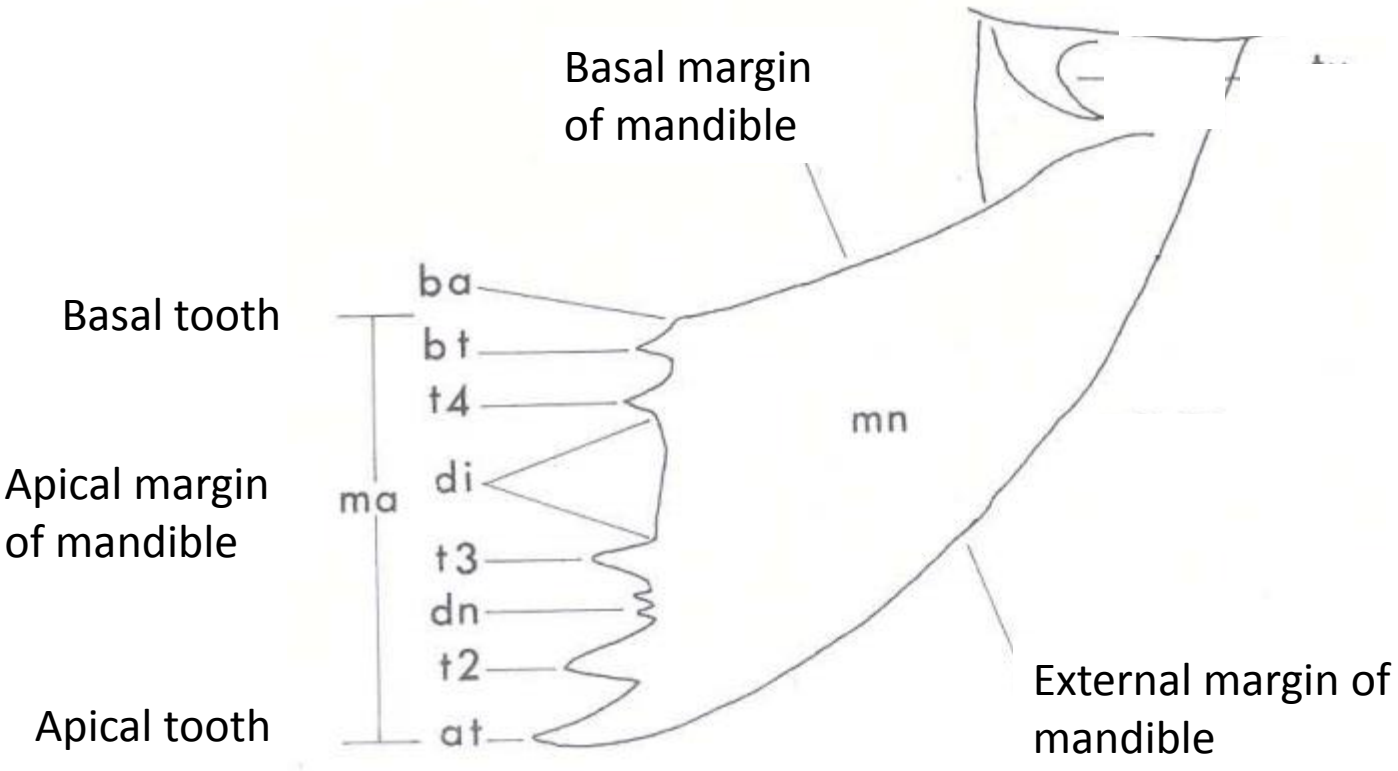


Head (*Trachymyrmex* sp.)



Morphology, Formicidae

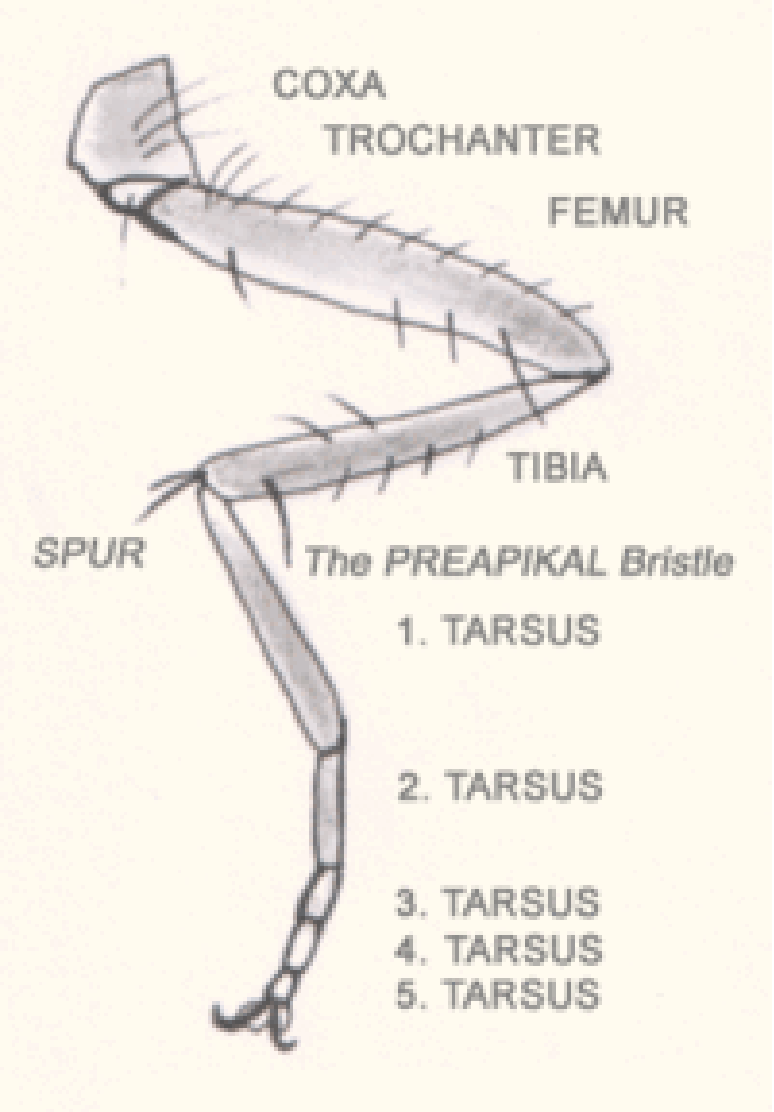
- Mandible



Morphology Formicidae

LEGS

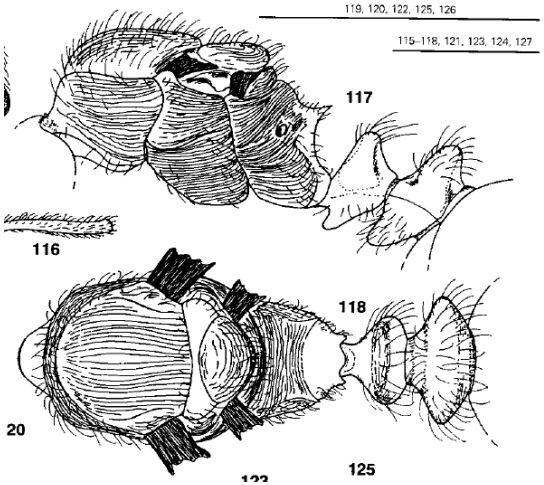
- All six legs are attached to the mesosoma.
- A hooked claw at the end of each leg helps ants to climb and hang onto surfaces.



Morphology Formicidae

WINGS

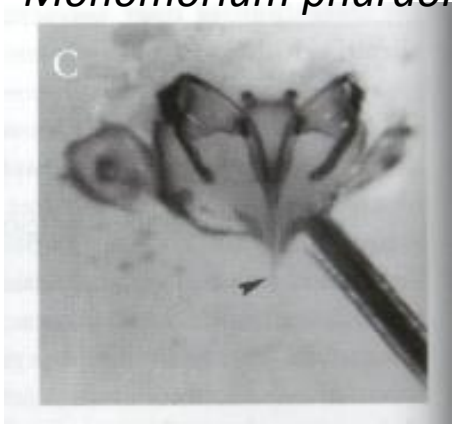
- Most queens and male ants have wings; queens shed the wings <u>after the nuptial flight</u>, leaving visible stubs, a distinguishing feature of queens.
- However, wingless queens (<u>ergatoids</u>) and males occur in a few species



Morphology, Formicidae

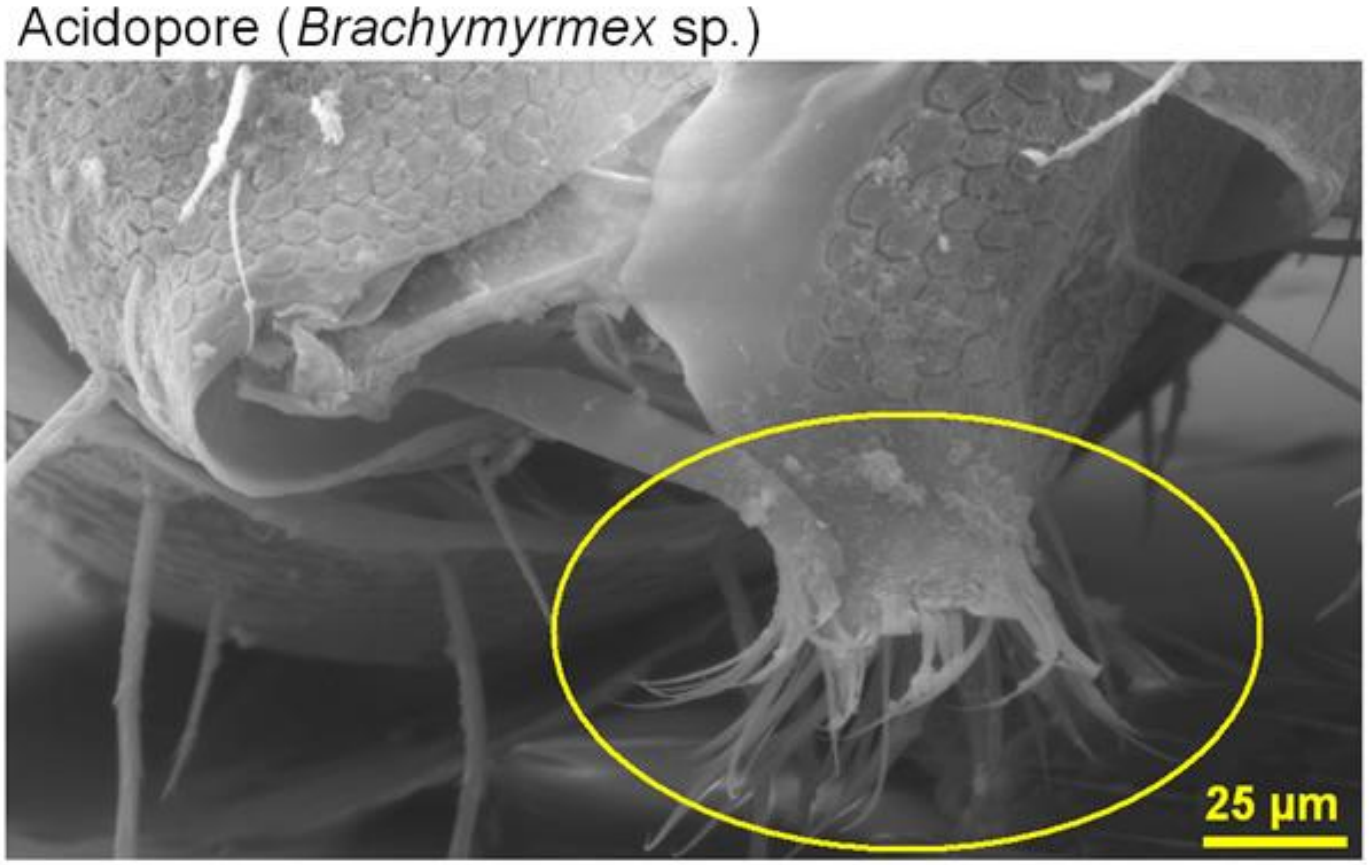
- The metasoma (the "abdomen") of the ant houses important internal organs, including those of the reproductive, respiratory (tracheae) and excretory systems.
- Workers of many species have their egg-laying structures modified into stings that are used for defending their nests, attacking prey

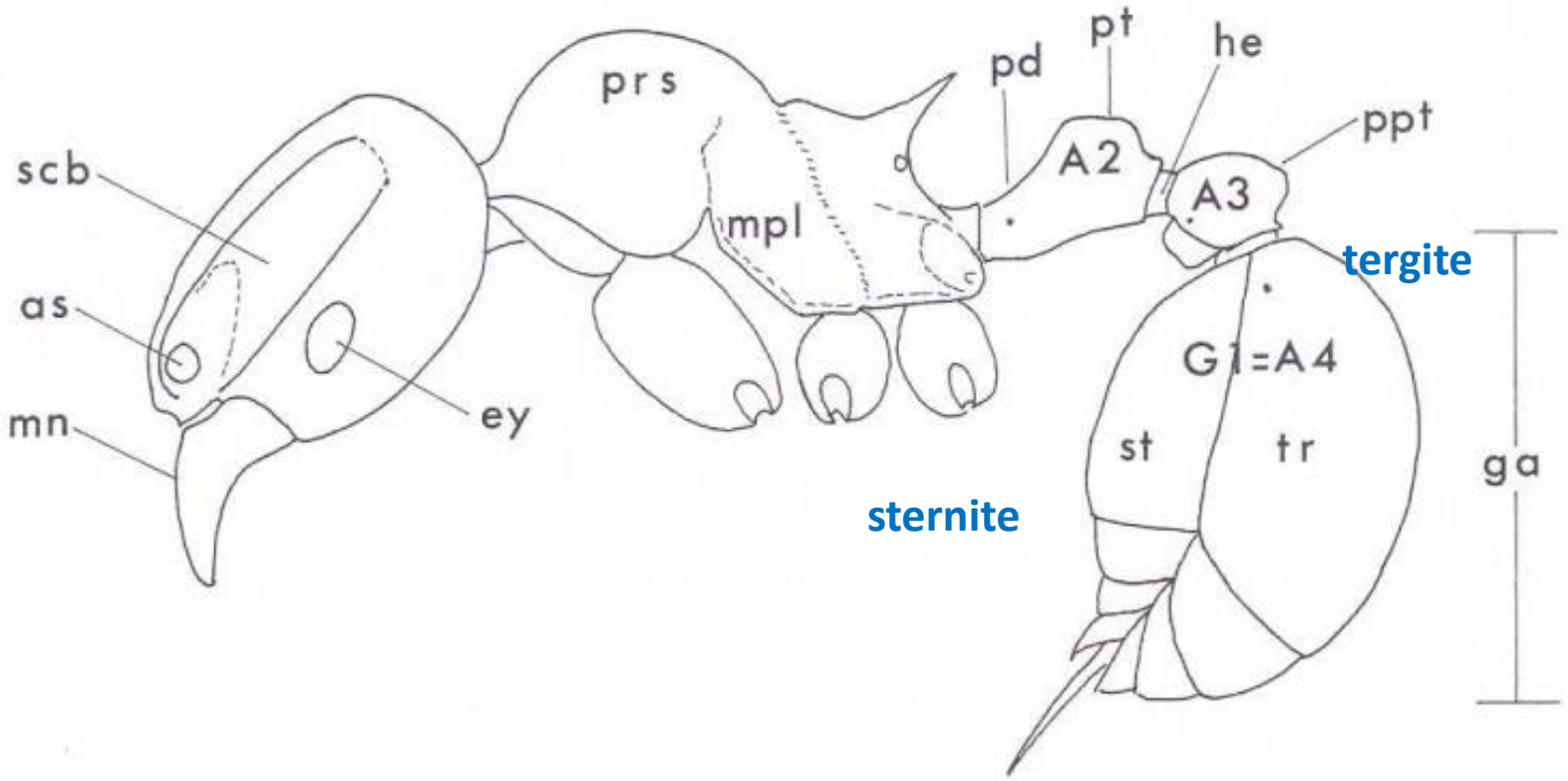
Monomorium pharaonis



Myrmica sp worker

Workers of many species have their sting structures modified into an acidopore





Pictures

Paraguay ants Project

http://projects.biodiversity.be/ants