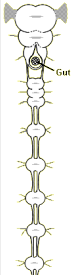



NERVOUS SYSTEM

- Ladder like nervous system
- dorsal brain in the head
- a paired, ventral, longitudinal nerve cord
- paired segmental ganglia
 - Fancy way to say: they have clumps of nerves where they have movements (at base of wings)

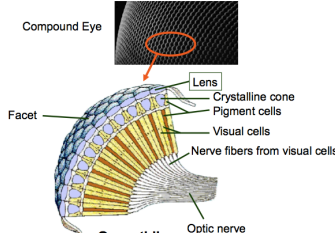
Side view of body showing relative position of circulatory (yellow), digestive (green), and nervous (blue) systems.

SENSE ORGANS

- 1. General**
 - receptors for light, vibrations, chemicals, equilibrium, gravity
 - cuticle modified to form a vast array of receptors (sensilla)
- 2. Mechanoreceptors**
 - extremely sensitive mechanoreceptors detect weak, low velocity air currents
- 3. Chemoreceptors**
 - detect chemicals
 - modified hollow setae with substrate-specific chemosensory neurons
- 4. Hygroreceptors**
 - humidity receptors
- 5. Photoreceptors**
 - widespread, often well-developed and sophisticated

SENSE ORGANS

- 3. Compound Eyes**
 - a. General**
 - multiple light receiving units
 - Called ommatidia
 - each ommatidium usually has its own lens (or cornea)
 - most have one pair



Compound Eye

Facet

Ommatidia

Lens

Crystalline cone

Pigment cells

Visual cells

Nerve fibers from visual cells

Optic nerve
