

Prosobranchia: Marine snails

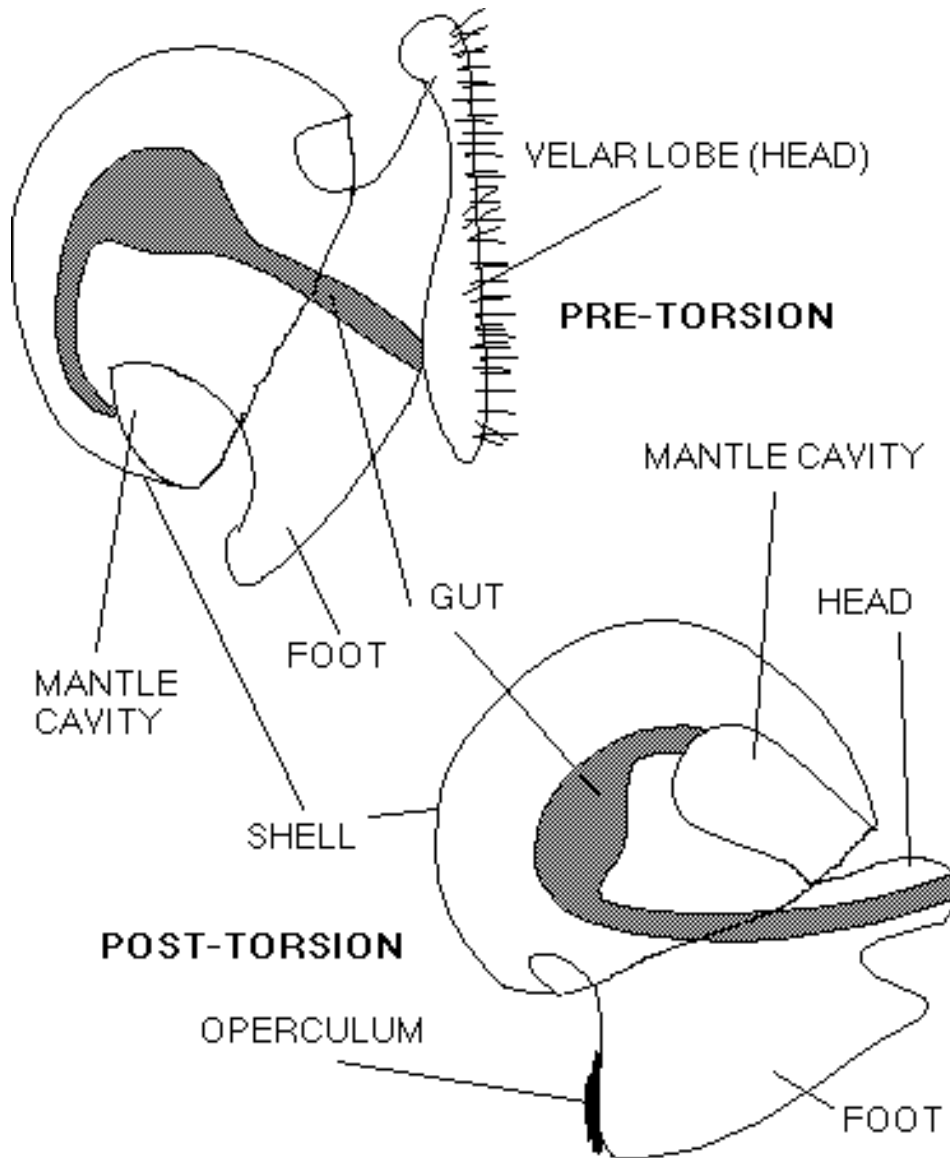
Opisthobranchia: Nudibranchs

Pulmonata: Terrestrial Snails, Slugs

Cl. Gastropoda

- Most diverse class of molluscs
- Marine, freshwater, and terrestrial snails and slugs
- Large foot
- 1-2 ctenidia
- 1-2 osphradia
- Distinct head with 1-2 pairs of tentacles
- Most asymmetric with spiraled shell
- All undergo torsion

Torsion



- Gastropod synapomorphy
- Occurs during larval development
- Rotation of the visceral mass, mantle and shell 180° with respect to the head and foot
- Brings the mantle cavity and anus to an anterior position above the head
- Subclass opisthobranchia - detorsion

Subclass Pulmonata

- Include land snails & slugs
- Most highly derived
- **No gills**; mantle vascularized & functions as lung = **Pneumostome**



Helix aspersa - garden snail (escargot)

Pneumostome

Subclass Opisthobranchia

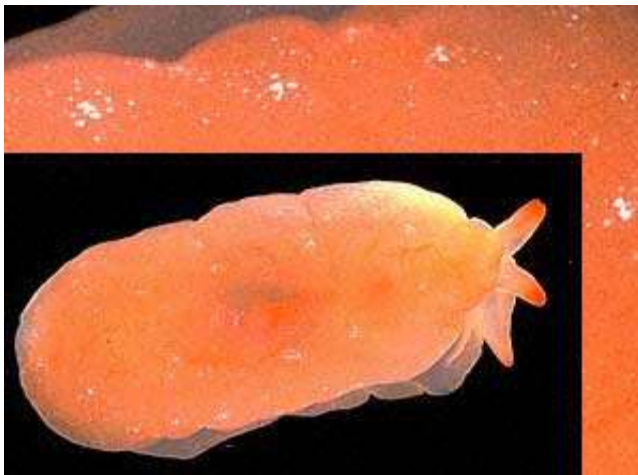
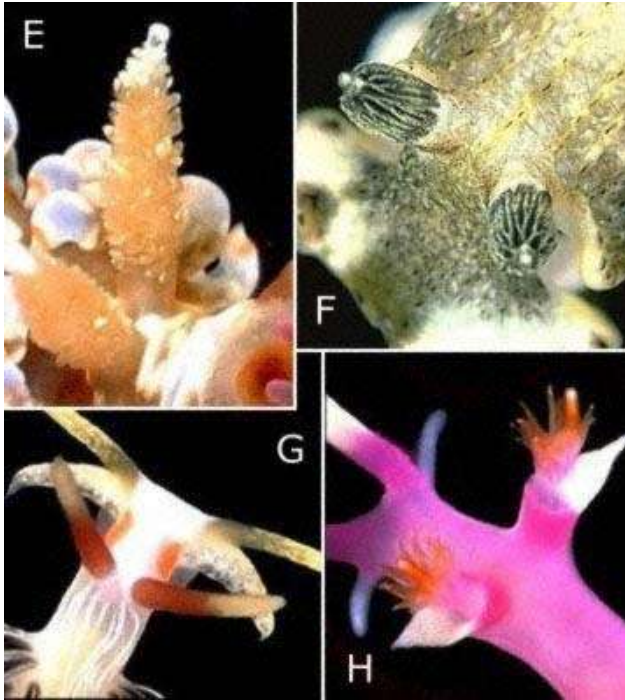


- **Order Nudibranchia:
Sea slugs**
 - Detorted
 - No shell
 - No distinct mantle cavity
 - No true ctenidium

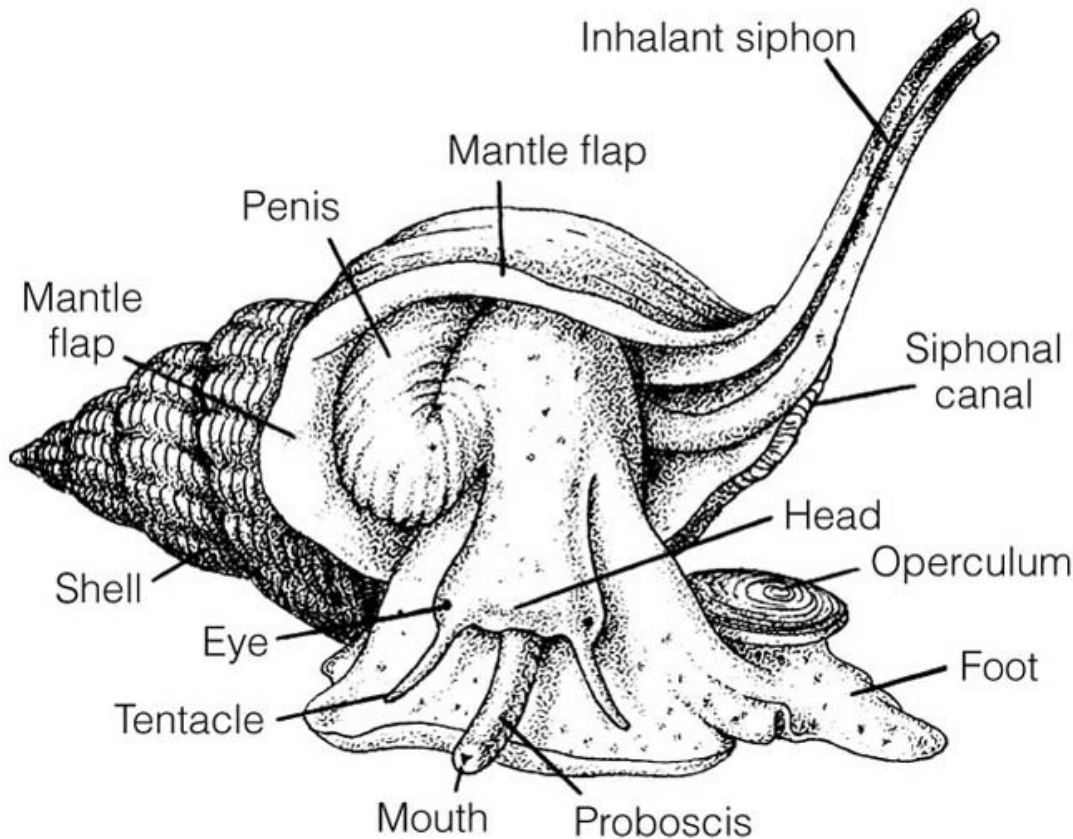


Order Nudibranchia

- Rhinophores: olfactory organ
- Cerata



Subclass Prosobranchia

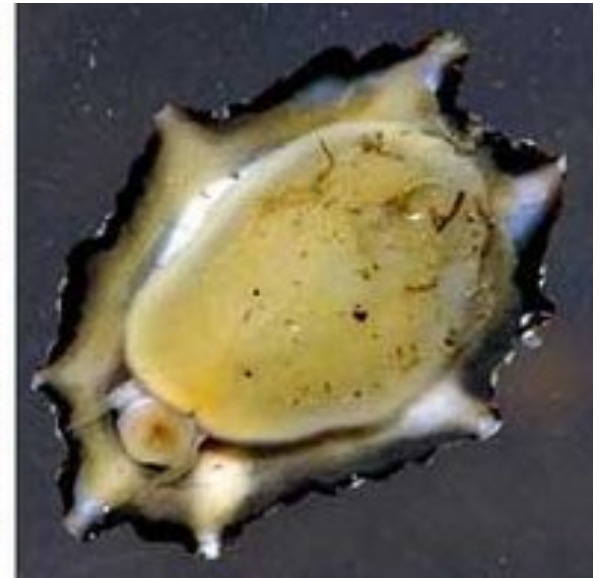


- **Proboscis:** extendable muscular tube with mouth
- **Aperature:** opening at base of shell where head/foot retract
- **Operculum:** covers aperature (flexible protein or rigid calcium)
- Shell aperture forms a siphonal notch or canal

Order Vetigastropoda



Order Patellogastropoda



Order Caenogastropoda

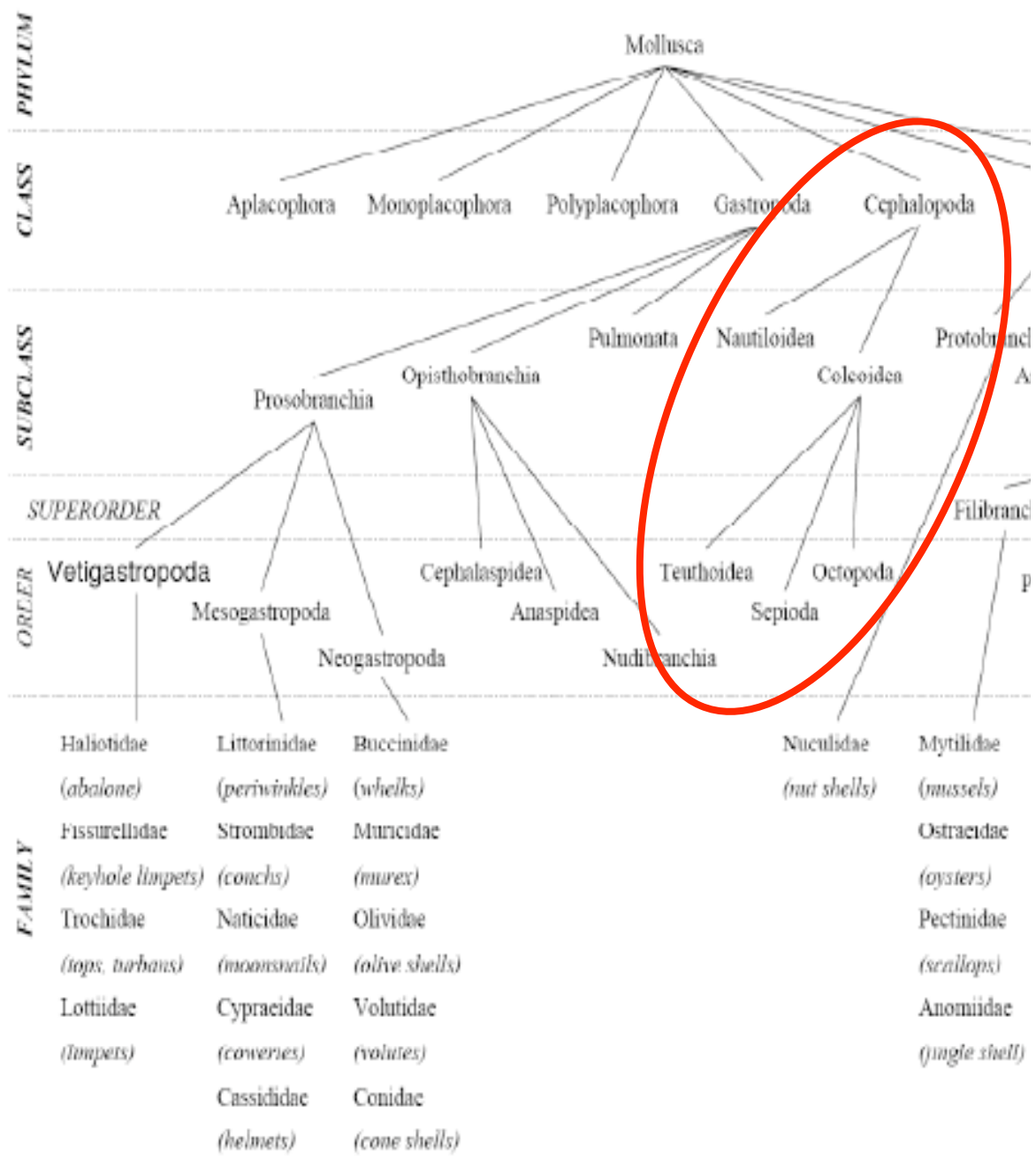
Suborder Mesogastropoda



Suborder Neogastropoda



Hungry, hungry cone snail

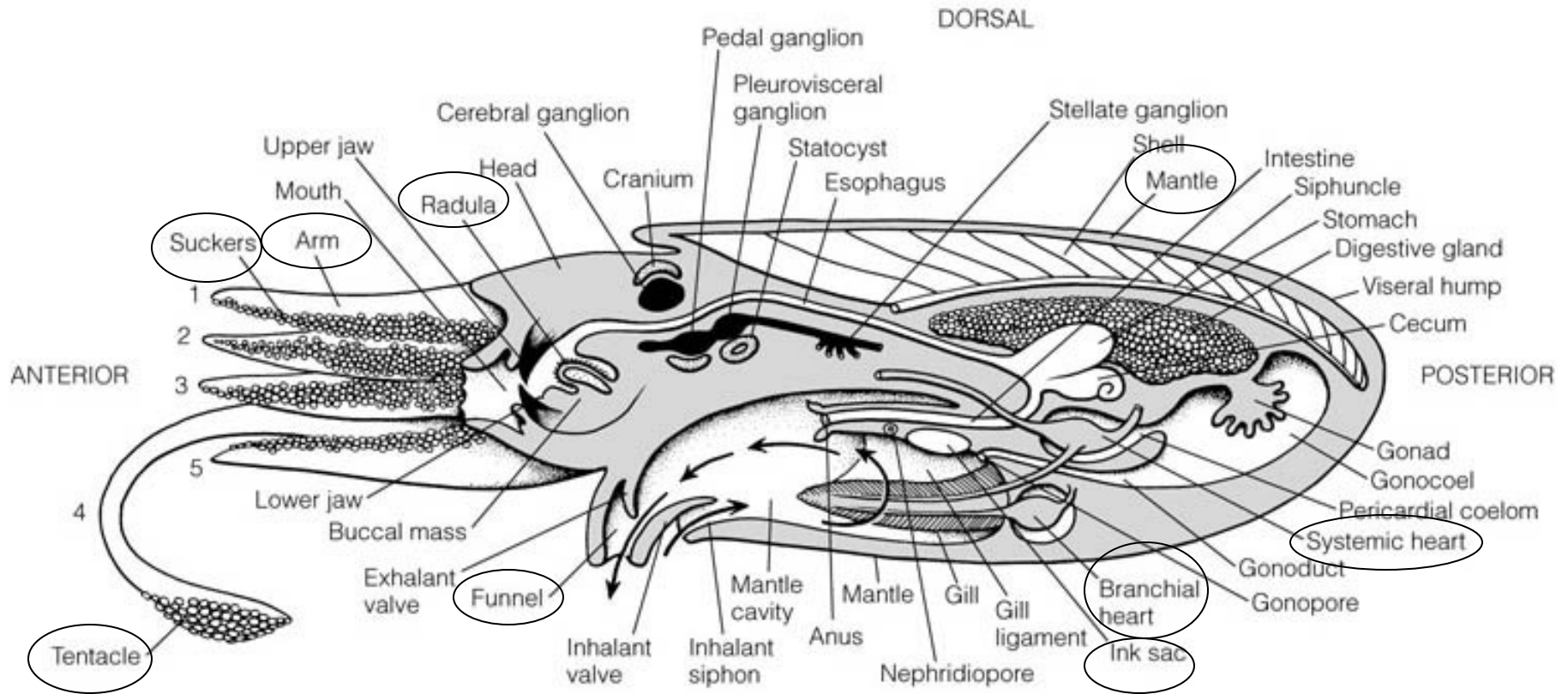


- Class Cephalopoda
- Subclass Nautiloidea
- Nautilus
- Subclass Coleoidea
- Order Sepiida cuttlefish
 - Order Teuthoidea squid
 - Order Octopoda octopus

Class Cephalopoda



General anatomy



Lateral Fins: provide stabilization /direction during locomotion; rippled for slow forward swimming

Funnel: locomotion – jet propulsion; location where ink is released

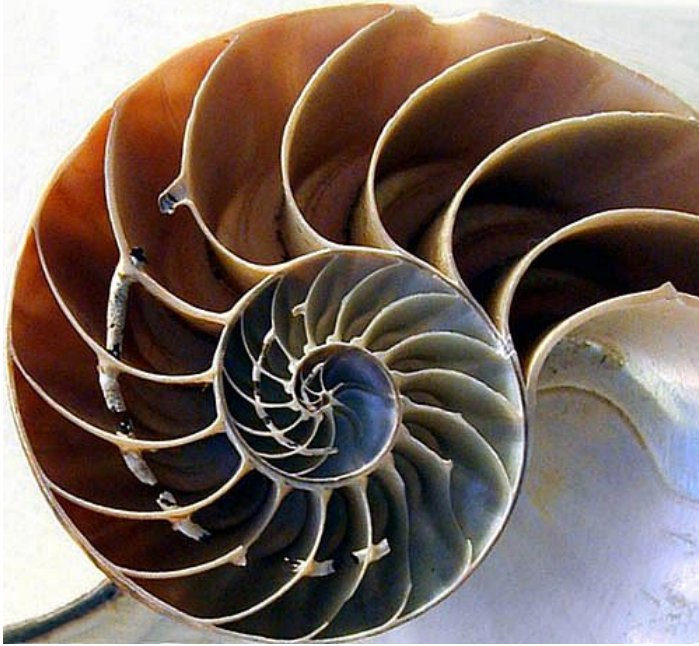
Elongate tentacles: retractable to capture prey and bring it to the other arms and mouth

Systemic heart : supplies blood carrying oxygen (via two aortas) to the body

Branchial heart: needed because cephalopods are very active and have high circulatory requirements. Drives blood through ctenidia and to the main heart

Closed circulatory system allows for unidirectional flow of blood and more efficient gas exchange

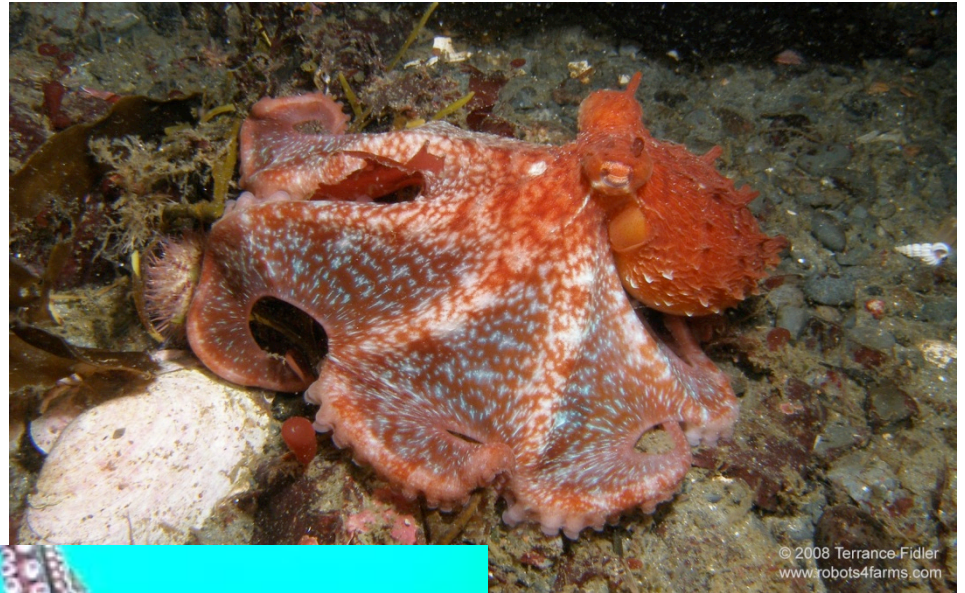
Chambered nautilus



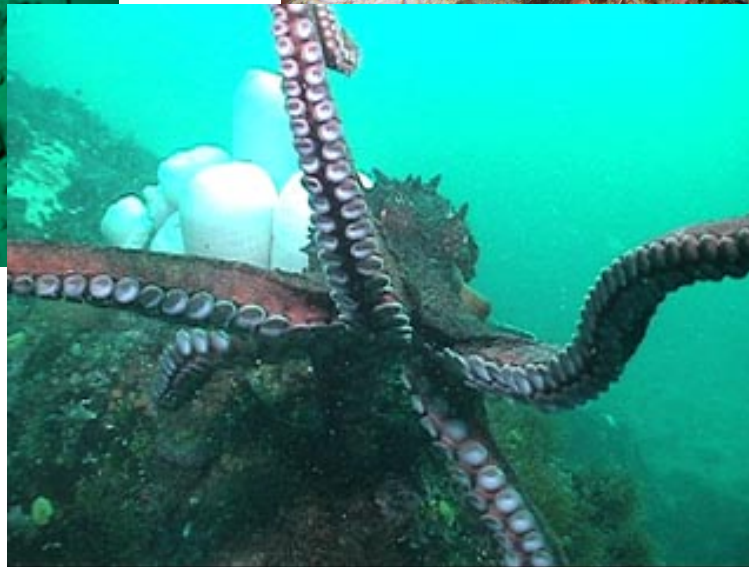
Paper nautilus



Giant Pacific Octopus



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Octo Camo



Cuttlebones: porous, composed of calcium carbonate, provides regulated buoyancy

Good Cuttlefish Hunting