Bivalvia 101

An Introduction to Marine Bivalves

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Beautiful Bivalves
of Southern California
Class Bivalvia

= two valves (shells)

Clams, mussels, scallops, oysters and their kin

• Two part shell
Bivalvia
Clams, mussels, scallops, oysters and their kin

- Two part shell
- No head
Bivalvia
Clams, mussels, scallops, oysters and their kin

- Two part shell
- No head
- Most are filter feeders
Bivalvia
Clams, mussels, scallops, oysters and their kin

- Two part shell
- No head
- Most are filter feeders
- Broadcast spawners
Bivalvia
Clams, mussels, scallops, oysters and their kin

- Bivalves are great to EAT!!!
Bivalve Orienteering

Looking from the top – Dorsal view
Bivalve Orienteering

How do we know which end is which??
Bivalve Orienteering

Ligament is usually posterior
Bivalve Orienteering

Beaks often point anterior
Bivalve Orienteering

Determining left from right

Left valve

Right valve

Posterior

Anterior
Bivalve Orienteering

Anterior pointed away from you

Left hand
Left valve

Anterior pointed away from you

Right hand
Right valve

Quick hint
Bivalve Orienteering

Looking from the side - Lateral view
Bivalve Orienteering

Dorsal

Posterior

Anterior

Ventral

Looking on the inside
Bivalve Characters

Beak vs. Umbo
Bivalve Characters – Sculpture

Radial Sculpture
Bivalve Characters – Sculpture

Commarginal Sculpture
Bivalve Characters – Sculpture

Cancellate Sculpture
Bivalve Characters – Sculpture

Divaricate Sculpture
Bivalve Characters – Sculpture

Commarginal Lamallae
Bivalve Characters – Sculpture

- Crenulate
- Smooth

Inner Ventral Margin
Bivalve Characters

Lunule and Escutcheon
Bivalve Characters - Ligament

External Ligament
Bivalve Characters - Ligament

Internal Ligament
Bivalve Characters - Dentition

Taxodont Teeth
Taxodont Teeth
Bivalve Characters - Dentition

Heterodont Teeth
Bivalve Characters - Dentition

Without Teeth - Edentulous
Bivalve Characters - Dentition

Cardinal Teeth & Lateral Teeth
Bivalve Characters - Scars

Pallial Line & Pallial Sinus
Bivalve Characters - Scars

Posterior Adductor Muscle Scar

Anterior Adductor Muscle Scar

Adductor Muscle Scars
Bivalve Characters - Color