



Name: _____

Lab 6 Brachiopods and trilobites

Brachiopoda

Classification

Phylum **Brachiopoda** (Cambrian to recent)

Class **Inarticulata** (Cambrian to recent)
Shell articulation usually absent
Shells of apatite, calcite or aragonite

Order **Lingulida** (Cambrian to recent)
Valves binconvex and circular, triangular, or elongate
Beaks marginal
Pedicel groove
Shell of calcium phosphate and chitin

Class **Articulata** (Cambrian to recent)
Articulated shell with ventral teeth and dorsal sockets
Muscle scars near midline of valve
Shells of calcite

Order **Orthida** (Cambrian to Permian)
Simple shells
Strong hinge-line
Mildly convex valves
Pedicel foramen
Often with fine radial ridges

Order **Strophomenida** (Ordovician to Triassic)
Distinctive appearance
Usually have concave dorsal valve which creates saucer-like or cup-like appearance

Order **Pentamerida** (Cambrian to Devonian)
Usually with strongly convex shells
Often smooth externally
Conspicuous internal platforms for muscle scars

Order **Rhynchonellida** (Ordovician to recent)

Strongly convex shells
No apparent hinge-line on posterior margin
Usually lack internal platforms for muscle scars
Usually have strong radial ridges

Order **Atrypida** (Ordovician to Devonian)
Similar to rhychonellides but with a complex, spirally coiled brachidium

Order **Spiriferida** (Ordovician to Jurassic)
Broad hinge-line
Spiraled brachidium

Order **Terebratulida** (Carboniferous to recent)
Similar externally to atrypides
Brachidium less complex than atrypides

Trilobita

Phylum **Arthropoda** (Cambrian to recent)

Class **Trilobita** (Cambrian to Permian)
Arthropods with cephalon, thorax, and pygidium
Prominent elevation lengthwise along middle of back that produces three-lobed appearance

Order **Polymerida**
Small to large size
Variable sized pygidium
Five or more thoracic segments
Pygidium often segmented

Order **Agnostida**
Small
Eyeless
Two thoracic segments

Assignment

1. Brachiopoda.

Genus	Hinge-line widest point of shell?	Fold and sulcus well developed?	Pedicle opening present?	Order

2. Trilobita.

Specimen	Number of segments	Pre-glabella field?	Pygidium small, medium, or large?