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Brachiopods- morphology, classification, evolutionary trends and
geological evaluation

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Contents

1. INTRODUCTION
2. MODE OF LIFE
3. MORPHOLOGY
4. GEOLOGICAL HISTORY
5. CONCLUSION



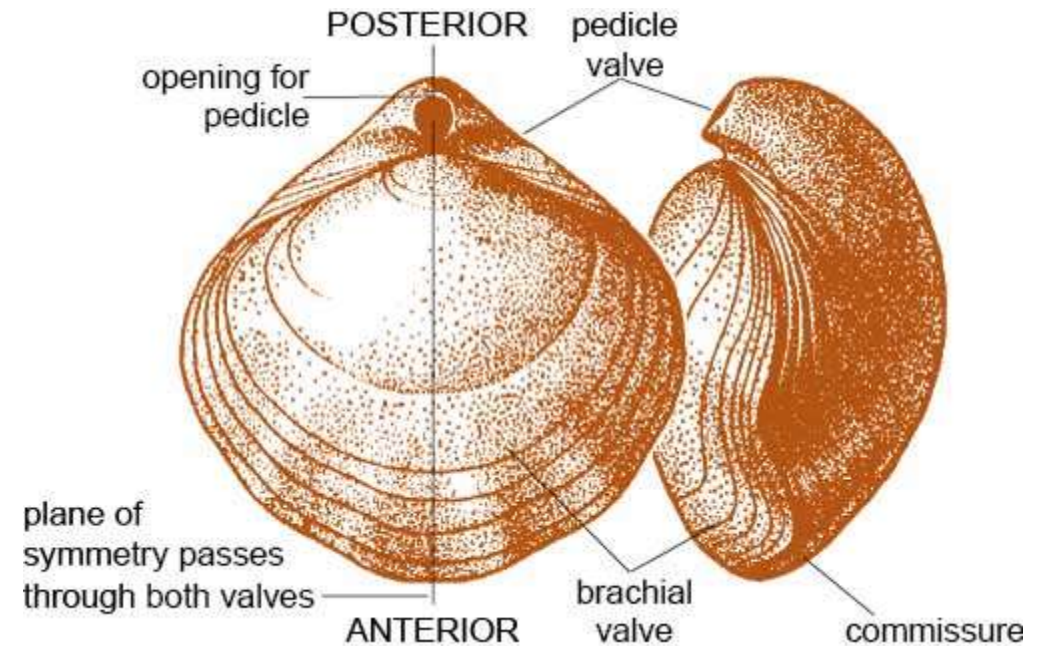
INTRODUCTION

- Phylum- Brachiopoda
- Classes — [Articulata
Inarticulata

Orders- 7 articulate

4 inarticulate

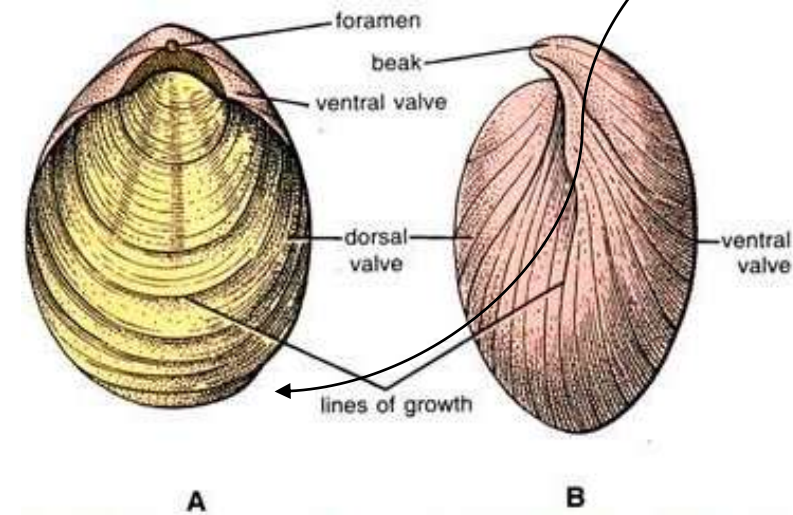
- Brachiopoda(brachio= arm; pod= foot)
- valves are open and closed by contracting muscles called adductor and diductor muscles and has two valves pedicle and brachial valve.



Mode of life

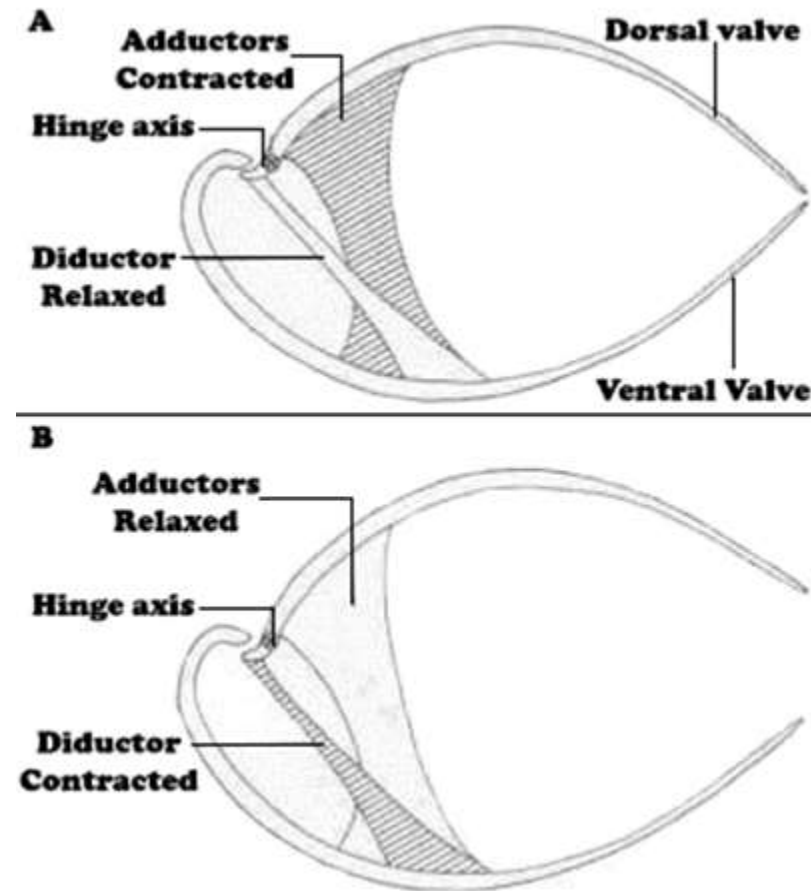
- Brachiopods are sessile and marine
- Attached to seafloor by pedicle at posterior
- Inarticulate brachs live in tube
- Adult brachs are filter feeders
- Food passes from mouth to esophagus to stomach.

- they allow water into its shell as they are filter feeders extracting food from seawater.
- The two valves are of different sizes however they do show line of lateral symmetry.



- Inside the shell is the mantle cavity and is mainly lophophore, which is a food gathering and water filtering device.
- The main muscles were the adductor and diductor muscles, which were used to close the shell.
- The cardinal process and hinge acts as a fulcrum on which the muscles can pull.
- The diductor muscles contract and pull down the cardinal process and open the shell.

- The role of lophophore is to act as a feeding device, which collects suspended particles
- Some brachiopods like spirifers have a spiral calcite support called lophophore support or spiralia.



Geological history

- Brachiopods are long lived phylum ranging from Cambrian to present
- They were very common in the Paleozoic and slightly less so in the Mesozoic but still remain important
- In the present not many forms are left with approximately 70 Genera
- Over 2500 fossil genera are known
- The largest were found in the Cambrian.

conclusion

- The brachiopods are exclusively marine
- Live in environments ranging from subtidal to the abyss
- Brachiopods swim only in larval stage
- Brachiopods occurs throughout the world in both cool and temperate zones
- Most brachiopods found in the neritic zones , a few are found depths of 5000m
- Most brachiopods range between 20-70mm, some are upto 370mm.