

TOPIC 5.3: BIODIVERSITY

Plant Phyla



Bryophyta (e.g. liverworts and mosses)

- No vascularisation (lacks xylem / phloem)
- Reproduce via spores released by stalks
- No 'true' leaves, roots or stems



Coniferophyta (e.g. conifers)

- Have vascularisation (xylem and phloem)
- Reproduce via seeds (found in cones)
- Narrow leaves with a thick, waxy cuticle



Filicinophyta (e.g. ferns)

- Have vascularisation (xylem and phloem)
- Reproduce via spores in sporangia
- Have large fronds divided into leaflets



Angiospermophyta (e.g. flowering plants)

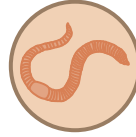
- Have vascularisation (xylem and phloem)
- Reproduce via seeds (found in fruits)
- Have flowers as reproductive organs

Invertebrate Phyla



Porifera (e.g. sponges)

- Have an asymmetrical body plan
- Have no mouth or anus (have pores)
- May have spicules for structural support



Annelida (e.g. earthworms and leeches)

- Possess bilateral symmetry
- Have a separate mouth and anus
- Body composed of ringed segments



Cnidaria (e.g. jellyfish and anemones)

- Possess radial symmetry
- Have a mouth but no anus (single opening)
- Has tentacles and stinging cells (cnidocytes)



Mollusca (e.g. squids, slugs, snails, bivalves)

- Possess bilateral symmetry
- Have a separate mouth and anus
- Has non-visible segments (may have a shell)



Platyhelmintha (e.g. flatworms, tapeworms)

- Possess bilateral symmetry
- Have a mouth but no anus (single opening)
- Has a flattened body (increases SA:Vol ratio)



Arthropoda (e.g. insects, spiders, crustaceans)

- Possess bilateral symmetry
- Have a separate mouth and anus
- Have jointed appendages and exoskeleton

Vertebrate Classes



Phylum Chordata (i.e. vertebrates)

- Possess bilateral symmetry
- Have a separate mouth and anus
- Have a notochord (may form a backbone)



Reptiles

- Covered in scales (made of keratin)
- Have internal fertilisation (lays soft eggs)
- Breathe via lungs and are ectothermic



Fish

- Covered in scales (bony plates of skin)
- Reproduce via external fertilisation
- Breathe through gills and are ectothermic



Birds

- Covered in feathers (made of keratin)
- Have internal fertilisation (lays hard eggs)
- Breathe via lungs and are endothermic



Amphibians

- Have a moist skin (permeable to gases)
- Reproduce via external fertilisation
- Breathe through skin and are ectothermic



Mammals

- Covered in skin (and keratin hair follicles)
- Have internal fertilisation (and lactation)
- Breathe via lungs and are endothermic