

DIVERSITY AMONG PLANTS

- Ferns flourished well and dominated the earth during the Permian and Triassic periods
- Ammonoid mollusks were dominant during Triassic and Jurassic period.

Plant Diversity:

Dicotyledons → 200,000 species

Monocotyledons → 50,000 "

Gymnosperms → 700 "

Algae → 18000 "

Fungi → 80,000 "

egg → oosphere

zygote → oospore

* BRYOPHYTES

Musci — Mosses

Hepaticae — Liverworts

Anthocerotae — Hornworts

Liverworts → Marchantia

Hornworts → Anthoceros

Mosses → Funaria and Polytrichum

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* TRACHEOPHYTES (VASCULAR PLANTS)

1. Sub-Phylum Psilopsida
2. Sub-Phylum Lycopsidea
3. Sub-Phylum Sphenopsida
4. Sub-Phylum Pteropsida

* PSILOPSIDA

Living Genera : Psilotum , Tmesipeteris

Species : Rhynia , Cooksonia , Psilophyton (Psilopsidom)

* LYCOPSIDA (CLUB MOSS)

Living Genera : Lycopodium , Selaginella , Isoetes ,
Phylloglossum

Fossil Genera : Lepidodendron , Sigillaria

* SPHENOPSIDA (HORSE TAILS)

Living Genus : Equisetum

Extinct Genus : Calamites

* PTEROPSIDA

1. Filicinae
2. Gymnosperms
3. Angiosperms

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1. FILICINAE (FERNS)

Adiantum , Pteris , Dryopteris , Pteridium

2. GYMNOSPERMS

Living Groups : Cycads , Conifers

→ *Cycas circinalis* , *Cycas revoluta*

Conifers : Pines , Firs , Cedars , Spruce

Species : Ginkgo , *Cedrus deodara* , chir pine (*Pinus roxburgii*) ,
chilghoza pine (*Pinus geradiana*)

3. ANGIOSPERMS

Monocots : Sarsapirilla , Smilax , yams (*Dioscorea*)

Dicots : Alexandrian laurel (*Calophyllum*)

Species : *Cassia fistula* (amaltas) , *Achyranthus* (path kunda) ,
bottle brush , mulberry , willow , *Iberis* (candy tuft) ,
Hydrocotyl (brahmi booti) , carrot , sunflower ,
begonia , *Tradescantia* , *Silene* , *Ipomoea* , *Euphorbia* etc

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- * Seta: Any of a number of different bristle or hair-like structures on living organisms.
- * calyptra: ^{in bryophytes.} An enlarged archegonial venter that protects the capsule containing the embryonic sporophyte. The calyptra is usually lost before the spores are released from the capsule.
- * operculum: A structure that closes or covers an aperture.
- * Peristome: A fringe of small projections around the mouth of a capsule in mosses and certain fungi
- * Sporophyll: A sporophyll is a leaf that bears sporangia
- * Strobili: A strobilus is a structure present on many land plant species consisting of sporangia-bearing structures densely aggregated along a stem
- * ligule: A thin outgrowth at the junction of leaf and leaf stalk
- * rhizophore: In many clubmosses of the genus *Selaginella*, a leafless branch arising at the fork of a stem, which grows downwards and bears roots on contact with the earth
- * rachis: the midrib of a compound leaf or frond

* sorus (plural: sori) : A sorus is a cluster of sporangia in ferns and fungi

* oosphere : An unfertilized egg within an oogonium

* heterogamy : The formation of two different types of gametes

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INFLORESECE

1. Typical Raceme

Cassia fistula (Amaltas)

2. Spike

→ Acyranthus (Puth kunda)

→ Bottle brush

3. Catkin

→ Mulberry

→ Willow

4. Corymb

→ Iberis (candytuft)

5. Umbel

→ Hydrocotyl (brahmi booti)

→ Carrot (compound umbel)

6. Panicle

→ Grapes, mango and oat

7. Capitulum

Sunflower

8. Uniparous Cyme

→ Begonia

→ Tradescantia

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9. Biparous Cyme

→ Silene

→ Ipomoea

10. Multiparous Cyme

Euphorbia

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