

A Note on Gymnosperm

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Commentary

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Description

The gymnosperms otherwise called Acrogymnospermae are gatherings of seed-creating plants that incorporate conifers, cycads, Ginkgo, and geophytes. The name depends on the unenclosed state of their seeds (called ovules in their unfertilized state). The non-encased state of their seeds diverges from the seeds and ovules of blooming plants (angiosperms), which are inside an ovary. Gymnosperm seeds foster either on the outer layer of scales or leaves, which regularly alter their shapes to cones, or lone as in yew, Torreya, Ginkgo. The gymnosperms and angiosperms together form the spermatophytes or seed plants. The gymnosperms are classified into six phyla.

By the wide margin, wide margin, the biggest gathering of living gymnosperms ^[1] is the conifers (pines, cypresses, and family members), trailed by cycads, gnetophytes (*Gnetum*, *Ephedra*, and *Welwitschia*), and *Ginkgo biloba* (a solitary living animal categories). About 65% of gymnosperms are dioecious (having the male and female reproductive organs in separate individuals) however, conifers are practically all monoecious. A few genera have mycorrhiza, a contagious relationship with roots (*Pinus*), while in some others (*Cycas*) little specific roots called coralloid roots are related to nitrogen-fixing cyanobacteria. The more extensive "Gymnosperm" bunch incorporates wiped-out gymnosperms. The fossil record of gymnosperms incorporates numerous unmistakable taxa that don't have a place with the four present-day gatherings, including seed-bearing trees that have some degree plant-like vegetative morphology.

The surviving gymnosperms incorporate 12 fundamental families and 83 genera which contain more than 1000 known species. Over 1000 living types of gymnosperms ^[2] exist. The gymnosperms are begun in the late Carboniferous time frame, supplanting the lycopsid rainforests of the tropical district. This advancement seems to have come about because of an entire genome duplication occasion around 319 million years prior. Early attributes of seed plants are clear in fossil progymnosperms of the late Devonian time frame around 383 million years prior. During the mid-Mesozoic time, fertilization of some terminated gatherings of gymnosperms was by wiped out types of scorpionflies that had particular proboscis for benefiting from fertilization drops. Conifers are the wide margin of the most bountiful surviving gathering of gymnosperms with six to eight families, with a sum of 65–70 genera and 600–630 species (696 acknowledged names). The Conifers are woody plants and most are evergreens. The leaves of numerous conifers are long, meager, and needle-like different species, including most Cupressaceae and some Podocarpaceae, have level, three-sided scale-like leaves ^[3]. Agathis in Araucariaceae and Nageia in Podocarpaceae have wide, level lash molded leaves.

Majority of the gymnosperms include shrubs and trees, and there is practically no herb or climber. The roots are generally tap roots. Coralloid roots and mycorrhizal associations (*Pinus*) are also found in some genera. The stem is aerial, erect, solid and branched (*Pinus*) or un-branched (*Cycas*). The older parts of the stem are generally covered with armour of persistent woody leaf beses (*Cycas*).

The Angiosperms and the Gymnosperms bear seeds and have few similarities. This is because gymnosperms are 200 million years older than angiosperms. Thus they evolved over time to create angiosperms. The main difference comes from their diversity which is greater in gymnosperms.

REFERENCES

1. Li X, et al. Differences in responses of tree-ring $\delta^{13}C$ in angiosperms and gymnosperms to climate change on a global scale. *For Ecol Manage.* 2021; 492:119247.
2. Baumann A, et al. Arabinogalactan-proteins from non-coniferous gymnosperms has unusual structural features. *Carbohydr Polym.* 2021; 261:117831.
3. Hare VJ, et al. Differences in carbon isotope discrimination between angiosperm and gymnosperm woody plants, and their geological significance. *Geochim Cosmochim Acta.* 202; 300:215-30.