India’s First Cryptogamic Garden

Why in News

Recently, **India’s first cryptogamic garden** was **inaugurated in the Chakrata town of Dehradun, Uttarakhand.**

- The garden will be housing nearly 50 species of lichens, ferns and fungi (*collectively known as Cryptogamae*).

Note:

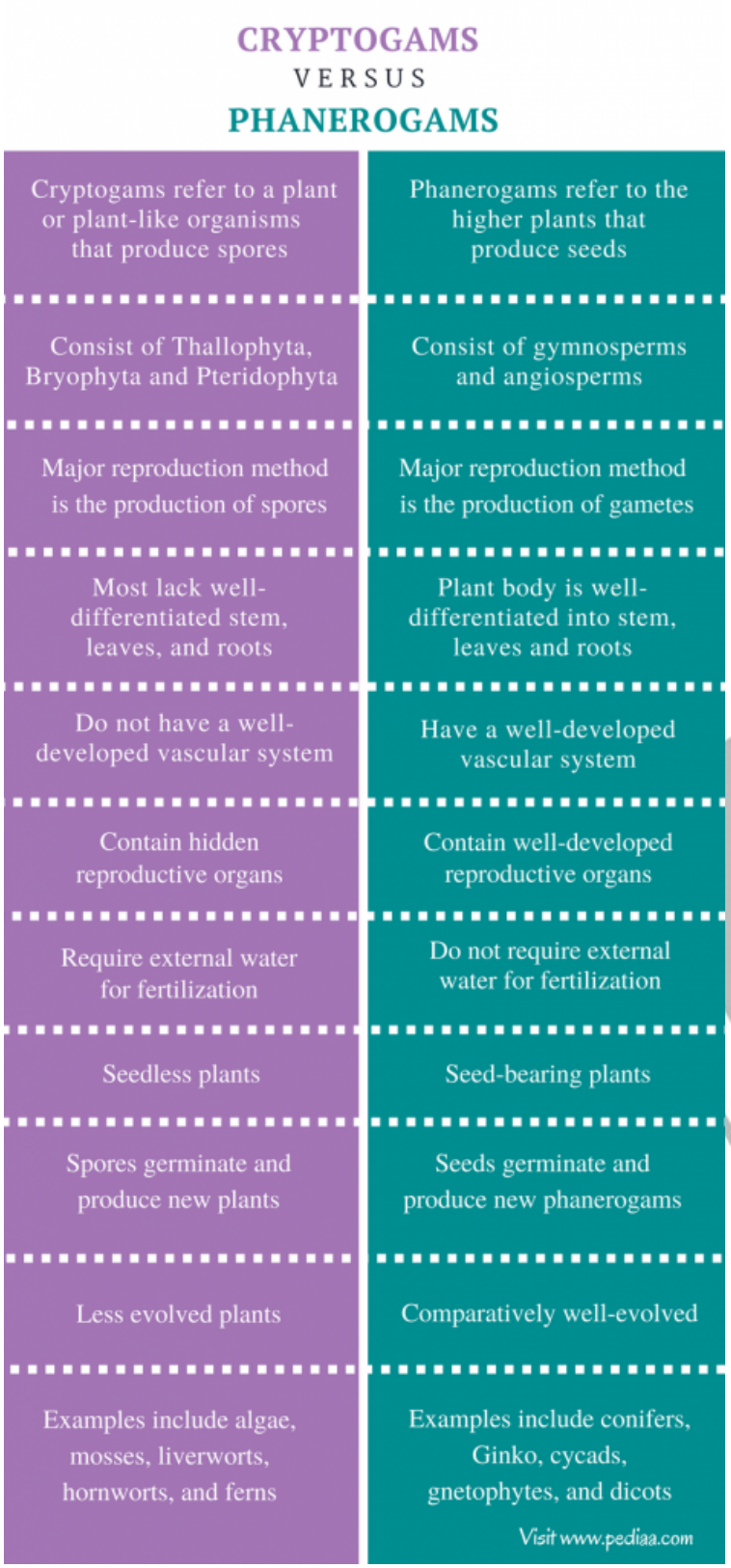
- **Plant kingdom** can be divided into two sub-kingdoms viz. **Cryptogams and phanerogams.**
- Cryptogams consist of seedless plants and plant-like organisms whereas phanerogams consist of seed-bearing plants.
    - Phanerogams are further divided into two classes i.e. **gymnosperms and angiosperms**.

Key Points

- **Factors Responsible for Location of this Garden:**
    - This garden is at Deoban in Chakrata at a height of 9,000 ft.
    - This site is chosen **because of its low pollution levels and moist conditions** which are conducive for the growth of these species.
    - Further, Deoban **has pristine majestic forests of Deodar and Oak** which create a natural habitat for cryptogamic species.
- **Cryptogams:**
    - A cryptogam is a **plant that reproduces with the help of spores.**
    - The word **"Cryptogamae" implies ‘hidden reproduction'**, referring to the fact that they do not produce any reproductive structure, seed, or flower.
    - Due to this, they are called **"flowerless"** or **"seedless plants"** or **‘lower plants'.**
    - They **need a moist environment** to survive.
    - These are **present in aquatic and terrestrial places.**
    - **Algae, bryophytes, lichens, ferns and fungi are the best-known groups** of cryptogams.
- **Classification of Cryptogams:** Cryptogams are classified into 3 groups based on the various structural and functional criteria of the plant.
    - **Thallophyta:** Thallophyta is a division of the plant kingdom including primitive forms of plant life showing a simple plant body. They **lack roots, stems, or leaves.**
        - It **includes algae-**like Spirogyra, Sargassum, etc.
        - They are predominantly aquatic and found both in marine as well as freshwater habitats.

- **Bryophyta:** Bryophytes comprise a limited variety of **non-vascular land plants.** They prefer moist habitats but they can survive in dry environments too. Example- hornworts, liverworts, mosses, etc.
    - They occupy an intermediate position between algae and pteridophytes.
    - Since bryophytes can survive in both water and land, they are considered as the **'amphibians of the plant kingdom'.**
- **Pteridophyta:** A pteridophyte is a vascular plant that disperses spores. It is the first plant to **have xylem and phloem.**
    - Ferns are the largest living group of primitive vascular plants.

- **Other Types of Cryptogams:**
    - **Liches:** Lichens are a complex life form that is a **symbiotic partnership of two separate organisms, a fungus and an algae.**
    - **Fungi:** It is a kingdom of usually **multicellular eukaryotic organisms** that are **heterotrophs.**



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