HISTORY OF TAXONOMY

(1) Aristotle : Father of biology & father of zoology

(2) Theophrastus :

(A) Time - 370 - 285 B.C.
(B) He is known as father of ancient plant taxonomy and father of botany.
(C) Both Theophrastus & Aristotle are Greek political philosophers.
(D) Theopharastus wrote many books on plants. Few of them are as follows

(a) Historia plantarum (B) Causes of plants (C) Enquiry into plants

(E) Theophratus gave names and descriptions of 480 plants in his book Historia plntarum.
(F) Theophrastus proposes the first classification of plant kingdom. He classified plant kingdom in to **four** groups on the basis of **growth habit -**
(a) Trees (b) Shrubs (c) Under shrubs (d) Herbs
(G) It is artificial classification.
(H) He proposed the term Annual, Biennial and Perennials.

(3) Carolus Linaneus : [1707 - 1778]

(A) His real name was - **Carl Von Linne**
(B) On the basis of work is latin language, he changed his name to Carolus Linnaeus. He was the Swedish scientist
(C) He is known as father of taxonomy, father of plant taxonomy and father of animal taxonomy.
(D) Linnaeus gave the **two kingdom** system classification. he grouped plants and animals into kingdom **Plantae** and kingdom **Animalia** respectively.

(E) **Linnaeus** wrote many books. Some important **books** are :

(1) Hortus uplandicus - First book
(2) Flora lapponica
(3) Philosophia botanica
(4) Critica botanica
(5) Systema naturae (1737)
(6) Genera plantarum
(7) Species plantarum - last book (1753)

(F) In ***"Philosophia botanica"*** Linnaeus gave the principles of nomenclature.
(G) In **"Systema naturae"** Linnaeus gave the scientific names of animals. In this book he gives the detailed description of animals kingdom.

- he also gave the outline classification of plant kingdom in this book.

(H) In **"Genera plantarum"** Linnaeus gave the detailed description of plant kingdom.

- He classified the plant kingdom into 24 classes on the basis of stamens and style.
- This was an artificial classification.
- The main basis of Linnaeus classification was the "Sex organs". Therefore this classification is also known as "Sexual classification".

(I) In **"Species plantarum"** he gave the scientific names of plants. [he gave the description of 6000 plant species]

(4) A.P. De Candolle:

(A) He wrote the book "Theories Elementaire de la botanique"

(B) He was the first to propose the significance of vascular tissue in taxonomy.
On this basis of vascular tissue the classified plants into two groups

(a) Cellular plants (Non vascular plants) - this group includes Thallophyta and Bryophyta

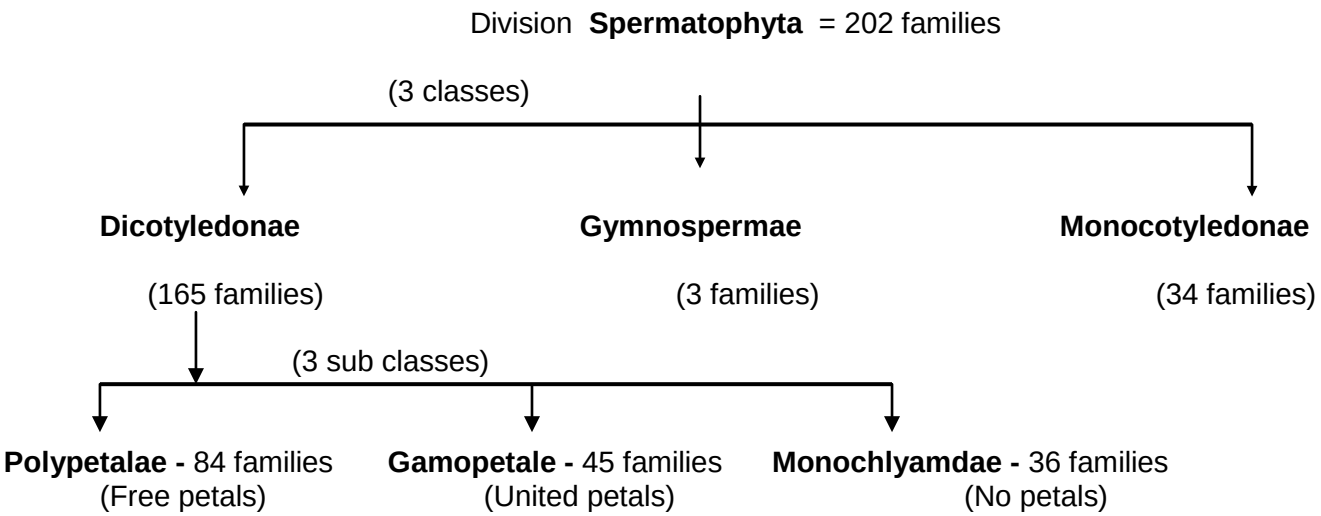
(b) Vascular plants - This group includes Pteridophyta, Gymnosperm and Angiosperms.

(5) George Bentham (1800- 1884) and Joseph Dalton Hooker (1817 - 1911) -

(A) Both Bentham and Hooker were related to Royal botanical garden.

(B) Scientists working in botanical garden are known as curapor.

(C) The wrote the book "Genera plantarum" (1862 -1883).
In this boom Bentham and Hooker gave the **biggest** and **natural classification** of spermatophyta i.e. plants with seeds.



- In Genera plantarum, these is description of 202 families. In it, basically the description of plant with seeds is present.

Merits of Bentham and Hooker classification.

- The classification of Bentham and Hooker was **natural formal**
- The classification of Behtham and Hooker was mainly based on the **floral characters.** This was very appreciable because floral characters are more stable than vegetative (root, stem, leaves) characters.
- It is the simples classification. Therefore the arrangement of all plants in the botanical gardens and herbarium of the world is based on it Although it is **not the best** classification but yet the arrangement of plants in botanical gardens and herbarius is based on it, because it is the simpler one. The main reason for its simplicity is that this classification is based on **actual observation.**

Demerits of Bentham and Hooker :

- In this classification the phylogeny of plants is not considered, because in it, gymnosperms are placed in between dicots and monocots. The sequence of evolution is as follows :

  Phylogeny = Gymnosperm $\rightarrow$ Dicots $\rightarrow$ Monocots

(6) A.W. Eichler :

- Syllabus de vorlesungen uber phanerogamen kunde - Book written by Eichler.
- In this book, Eichler gave the **first phylogenetic classification** of plant kingdom.
- The classification of Eichler is very **little phylogenetic.**