

## TYPIFICATION

The names of taxa in the rank of family or a lower rank i.e., genus and species are determined by means of nomenclatural types.

A nomenclatural type is that element of a taxon to which the name of a taxon is permanently attached (either as correct name or as a synonym). The nomenclatural type of a species is an individual herbarium specimen mounted on a sheet. It is that element with which the name is permanently attached. For small herbs, the type consists of more than one individual mounted on a sheet. Careful preservation is essential as they are the records of the present and the past. If a specimen cannot be preserved in dried form it should be recorded by diagnostic drawing, photographs and proper description. The type of a family is a genus and that of a genus is a species.

The following terms are commonly used in the nomenclature of types:

A. **Holotype:** It is the one specimen or other element used by the author or designated by him as the nomenclatural type.

B. **Isotype:** It is a duplicate copy of the holo-type. It is always a specimen. During collection, several plants or several branches of a plant are collected. At that time one is selected as a holotype and the rest are considered as isotypes

C. **Lectotype:** A lectotype is a specimen or other element selected from the original material to serve as nomenclatural type when no holotype was designated at the time of publication or as long as it is missing.

D. **Syntype:** If the author does not designate a single holotype from the multiple collections and has used all or more than one specimen then the specimens are called syntypes.

E. **Neotype:** A neotype is a specimen or other element selected to serve as nomenclatural type as long as all of the material on which the name of the taxon was based is missing.

F. **Paratype:** It is a specimen other than an isotype or a syntype cited by the author while describing a taxon. (Where the author has cited two or more specimens as types, the remaining specimens are designated as paratype and not syntype. However, when no holotype was designated, there will also be no paratype because all the cited specimens will be syntypes.)

G. **Topotype:** A specimen of a plant collected from the same locality as the holotype and usually on a different date.

H. **Epitype:** It is a specimen or illustration to serve as nomenclature type when the holotype, lectotype or neotype or all original material associated with validly published name is demonstrably ambiguous.