

TAXONOMY AND NOMENCLATURE OF FUNGI

Taxonomy : The science of classification. It is concerned with principles of classification.

Classification: Grouping of organisms into classes, orders, families, genera, species etc.

Nomenclature : Art of naming living organisms.

Importance of taxonomy and nomenclature

; 1. for study of fungi

2. for scientific communication between mycologists and plant pathologists throughout the world.

Binomial system of nomenclature was originally introduced by Carl Linnaeus for higher plants. Later, this classification was adopted to fungi by his students C.H. Persoon and E.M. Fries.

Some important rules of nomenclature :

1. According to International code of Botanical Nomenclature, the names of organisms should be binomial i.e., 2 parts. The first part is noun designating genus and the first letter of the genus name should be in capital. The second name is often an adjective, describing the noun which denotes the species, and the first letter should be in small letter. Eg. *Puccinia graminis*.

2. Binomials are usually derived from Greek or Latin.

3. Binomials when hand written should be underlined and when printed italicised. Eg.. Puccinia graminis (hand written) *Puccinia graminis* (printed)

4. Citation of authors name: The full name or abbreviation name of scientist who described fungus first, follows the species name. Eg. *Puccinia graminis* Persoon or Pers.

5. Citation of two authors names: If name of species is transferred to another genus from original (*Botrytis infestans*), the name of first author who first described species must be kept in parenthesis followed by name of second author who gave present status of species. i.e., *Phytophthora infestans*. Eg. *Phytophthora infestans* (Mont.) de Bary.

6. The taxa (groups) used in classification are Kingdom, Division, Class, Order, Family, Genus and Species. Each category may be sub divided into sub groups like Sub- Division, Sub- Class, Sub- Order.

7. Species is the unit of classification or basic taxonomic category (taxon).

8. Species some times broken into variety / formae speciales (f.sp.) and varieties into races and races into biotypes.

Standard endings of TAXA :

Division ends with mycota

Sub- Division ends with mycotina

Class with mycetes

Sub- class with mycetidae

Order with ales

Family with aceae

No special ending for genus and species.

TAXA:

Kingdom

Division

Sub-division

Class

Sub-class

Order

Sub-order

Family

Genera

Species

Eg. *Puccinia graminis tritici* race 1

Kingdom :Fungi

Division : Eumycota

Sub-division : Basidiomycotina

Class : Teliomycetes

Order : Uredinales

Family : Pucciniaceae

Genus : Puccinia

Species : graminis

Variety : tritici