

Principles of Zoological Nomenclature

Latin: nomen=name; calare=to call.

Nomenclature provides names to species and higher taxa, to facilitate communication among zoologists. According to Article 1 of the code:

"Zoological nomenclature is the system of scientific names applied to taxonomic units of animals (taxa) known to occur in nature, whether living or extinct." The nomenclature should fulfill the following three basic requirements:

Uniqueness: *Every name must be unique. Uniqueness has been achieved by adopting binominal nomenclature, as proposed by Linnaeus in the X edition of Systema Naturae in 1758.*

According to binominal nomenclature, each species name should consist of the first generic and second species name. Species name should not duplicate under any genus, e.g. Panthera leo, Panthera tigris, Panthera pardus. A combination of the two makes the name unique.

Universality: *Scientific names should be known to all and be universally accepted.*

Stability: *Zoological names would lose their utility if they were changed frequently and arbitrarily. International*

Code of Zoological Nomenclature safeguards against frequent name changing.

International Code of Zoological Nomenclature

(Adopted by the 15th International Congress of Zoology (London) and published on November 6, 1961)

The object of the code is to promote stability and universality in the scientific name of animals, and to ensure that each name is unique and distinct.

Salient features of the "Code"

*The 1964 code consists of a Preamble, 86 Articles, 5 Appendices, a Glossary and a detailed Index, in parallel English and French. Starting date of the code is 1st January 1758 (publication date of the 10th edition of *Systema naturae*).*

1. *Names must either be Latin or Latinized.*
2. *Names of taxa higher than species should be uninominal.*
3. *Name of a species is binomen.*
4. *Name of a subspecies is a trinomen.*
5. *Name of a subgenus is placed in parenthesis between genus and species, e.g. *Xorides (Gonophonus) nigrus*.*

SPECIES name should not be started with capital letter. Species name is written in italic or underlined.

6. Family name should end in *DAE* , e.g. *Tipulidae*.

7. Genus name should be a noun in nominative singular or treated as such, e.g. *Apis*, *Rana*.

8. Species name should be an adjective or noun in nominative singular agreeing in gender with the generic name, e.g. *Drosophila obscura*, *Felis tigris* etc. OR a noun standing in apposition to the generic name, e.g. *Felis leo*.

9. Zoological nomenclature is independent of other systems.

10. All names given to the species from time to time should be mentioned in synonymy.

11. Author's name is not part of the name. It's use is optional and is suffixed, e.g. *Cancer pagurus* Linnaeus.

12. **Law of priority**: The valid name is the oldest name published and available.

13. **Synonymy**: Synonyms are different names assigned to the same taxon. They should be mentioned along with the valid taxon, e.g. *Erias vitella* (= *Erias fabia*).

14. **Homonymy**: Homonyms are identical names in spelling for different species of the same genus and for different genera of a family. Junior homonym has to be rejected. Homonymy arises when an existing species' name is not known to

the person assigning a name, or a species with identical name is transferred to the same genus.

15. **Holotype**: Single specimen on which description of the species is based. Red colored label is fixed on the specimen.

16. **Allotype**: Specimen of the opposite sex to holotype. Also carries a red label.

17. **Paratype**: All remaining specimens, after the designation of holotype and allotype, are assigned the status of paratypes. They carry yellow labels.

18. **Syntypes**: If no holotype is designated, all specimens that the author studied for the description of the species are called syntypes.

19. **Lectotype**: In the absence of a holotype, one specimen from syntypes can be designated as Lectotype and rest of the specimens as Paralectotypes.

20. **Neotype**: If all type-specimens are destroyed, a neotype, that fits the description very well, can be designated under exceptional circumstances.