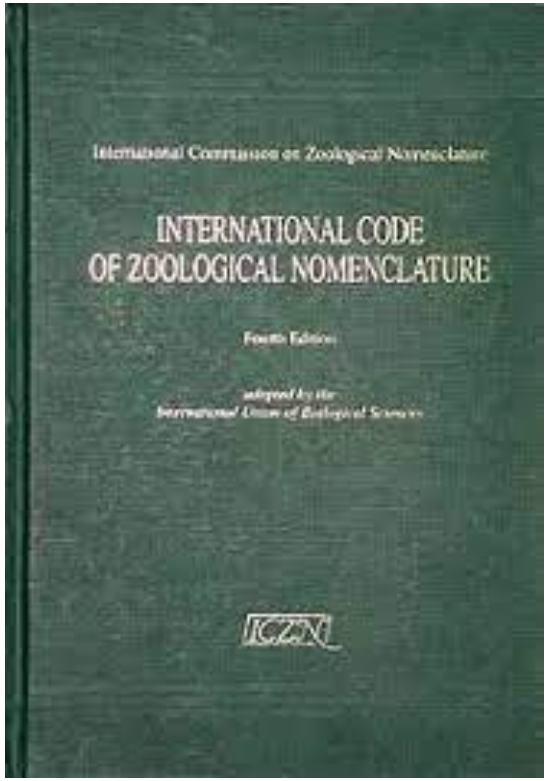
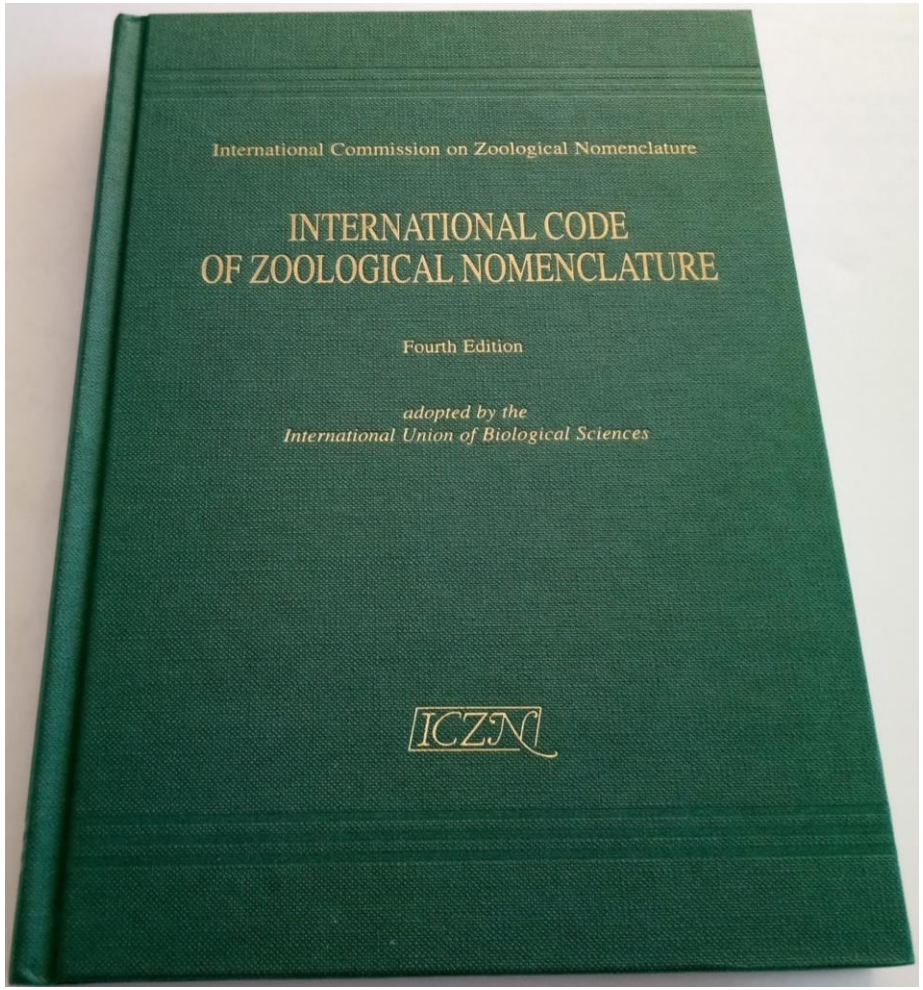
International Code of Zoological Nomenclature





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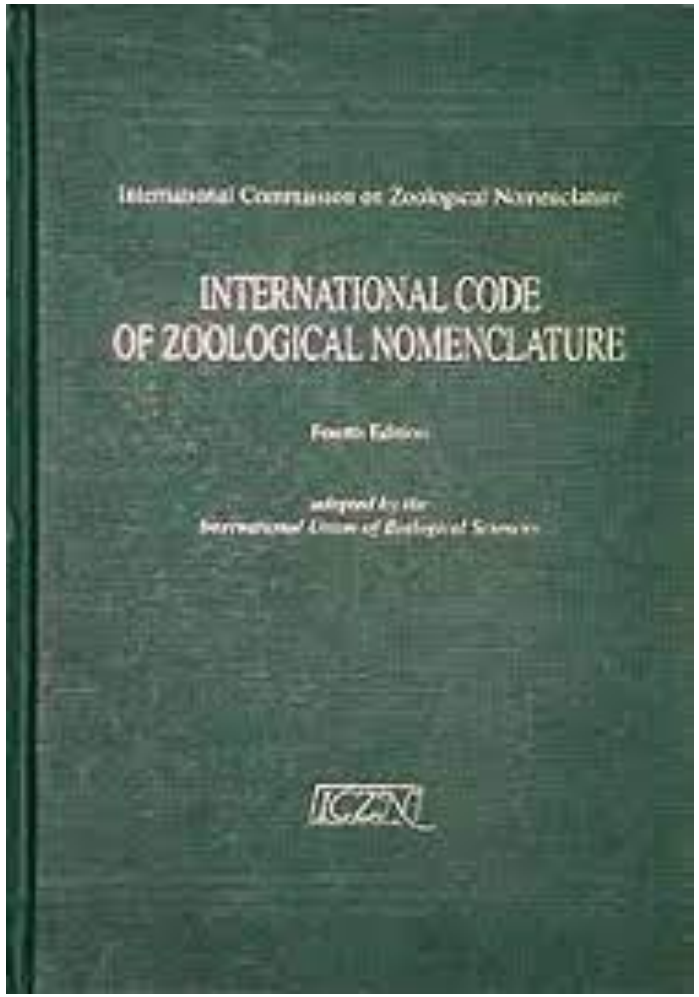
International Code of Zoological Nomenclature (ICZN)

- International Code of Zoological Nomenclature (1964) is the system of rules and recommendations authorized by the International Congress of Zoology.

- The objective of the code is to promote stability and universality in the scientific names of animals and to ensure that each name is unique and distinct then other.



Principles of Zoological Nomenclature

- Nomenclature (Latin: nomen=name; calare=to call) provides names to species and higher taxa, to facilitate communication among zoologists.

- "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.
  1. Uniqueness
  2. Universality
  3. Stability

1. Uniqueness

- The name of a taxon is like the index number of a file. It gives immediate access to all information in literature, available about a particular taxon.
- Every name must be unique because it is key to the entire literature.
- Uniqueness has been achieved by adopting binominal nomenclature, as proposed by Linnaeus in the 10th 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.

2. Universality

- Scientific names should be known to all and be universally accepted.
- Vernacular names would be difficult to keep track of, and scientists will have to learn names in several languages of the world.
- To avoid this, zoologists have adopted by international agreement a single language, Latin, which is acceptable to everybody.
- One need not learn Latin language in order to give name. Any word in any language, if latinized by changing the ending by suffixing –us,-a, or –ensis is acceptable as valid Latin name, e.g., japonica, indicus, chinensis.

2. Universality

- Use of Latin is also advantageous due to the fact that most of the ancient scientific literature is written either in Latin or Greek and it would be easy to refer to the old literature if names are given in Latin.

3. Stability

- Zoological names would lose their utility if they were changed frequently and arbitrarily.
- International Code of Zoological Nomenclature has been designed to bring about stability.
- Taxonomists are bound to follow the rules given in the code before assigning names to taxa.
- Most of the changes in names are due to taxonomists' errors. Lot of name changing has taken place during the last 200 years.

International Code of Zoological Nomenclature

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

- **The International Code of Zoological Nomenclature (ICZN or ICZN Code) is a widely accepted convention in zoology that rules the formal scientific naming of organisms treated as animals.**
- **The objective 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 from other.**

International Code of Zoological Nomenclature

- The Swedish naturalist Carolus Linnaeus,(1707-1778),is the father of nomenclature, gave a set of rules of nomenclature which was published in Critica Botanica (1737), Philosophia Botanica (1751) and in the 10th edition of Systema Naturae (1758).
- The original code was adopted in 1904 in the 6th International Congress of Zoology in Bern and published in 1905 in Paris as, “Regles Internationales de la Nomenclature Zoologique.”

- The most recent version (a modified version of 1961 code) was published in 1964 in parallel French and English. It was adopted by the 16th International Congress of Zoology, Washington (1963) with modifications in articles 11, 31, 39 and 60.

International Code of Zoological Nomenclature

- The International Commission on Zoological Nomenclature (ICZN) acts as adviser and arbiter for the zoological community by generating and disseminating information on the correct use of the scientific names of animals.
- The ICZN is responsible for producing the International Code of Zoological Nomenclature - a set of rules for the naming of animals and the resolution of nomenclatural problems.

- International Code of Zoological Nomenclature (1964) is the system of rules and recommendations authorized by the International Congress of Zoology, to see the rules and principles of nomenclature and the application of these rules for both living and fossil animals.
- The objective of the code is to promote stability and universality in the scientific names of animals and to ensure that each name is unique and distinct. Code does not restrict the freedom of taxonomic thought and action.

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 the10th 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.

Salient features of the Code

- 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. Its use is optional and is suffixed, e.g. *Cancer pagurus* Linnaeus.

Salient features of the Code

- 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 vitelli (=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.

  Different name of same taxa

  - Senior name : Sitophilus oryzae
  - Junior name : Calandra oryzae

Salient features of the Code

- 15. Holotype: a single type specimen upon which the description and name of a new 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.

Salient features of the Code

- 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.

Types of specimen

HOLOTYPE
ISOTYPE
LECTOTYPE
NEOTYPE
SYNTYPE
PARATYPE

Thank You