THE LIVING WORLD

Notes for KITE Victers Zoology Class (Class :2) 25/11/2020

For viewing the class click the link below

https://www.youtube.com/watch?v=y4IO9p8-EVc

DIVERSITY IN THE LIVING WORLD

- **Each different kind of plant, animal or organism that we see, represents a species.**
- **The number of species that are** known and described range between 1.7-1.8 million.
- **This refers to biodiversity or the number and types of organisms** present on earth.

Nomenclature

- **Nomenclature is the standardization of naming of living things so that a particular organism is known by the same name all over the world.**
- **The first step in** nomenclature or **naming is identification.**
- **International Code for Botanical Nomenclature (ICBN)** provide agreed principles and criteria for naming plants.
- **International Code of Zoological Nomenclature (ICZN)** provide agreed principles and criteria for naming animals.

Binomial nomenclature

- **T**he system of providing a name to an organism with two components is called **Binomial nomenclature.**
- Binomial nomenclature system is given by **Carolus Linnaeus.**
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- **Each name has two components –**

  The Generic name and the specific epithet.

Example

- **The scientific name of mango is written as *Mangifera indica.***
- In this name ***Mangifera*** represents the **genus**

indica, is a particular species, or a specific epithet.

Universal Rules of Nomenclature

1. Biological names are generally in Latin and written in italics.

2. The first word in a biological name represents the genus while the second component denotes the specific epithet.

3. When handwritten,both the words in a biological name are separately underlined, or printed in italics to indicate their Latin origin.

4. The first word denoting the genus starts with a capital letter while the specific epithet starts with a small letter.

- **Name of the author appears after the specific epithet, i.e., at the end of the biological name and is written in an abbreviated form,**

Example

***Mangifera indica* Linn.**

It indicates that this species was first described by Linnaeus.

Classification

- **Classification is the process by which anything is grouped into convenient categories based on some easily observable characters.**

Taxa

The scientific term for categories is taxa.

TAXONOMY

Based on characteristics, all living organisms can be classified into different taxa (categories). This process of classification is taxonomy.

Basic processes of taxonomy

- **Characterisation**
- **Identification**
- **Classification and**
- **Nomenclature**

are the processes that are basic to taxonomy.

TAXON

It is the unit of classification which represents a rank in classification.

In Biology, commonly used taxa are

- Species
- Genus
- Family
- Order
- Class
- Phylum
- Kingdom

SPECIES

- **A group of individual organisms with fundamental similarities are called as a species.**

GENUS

- **Genus is a group of related species.**
- **Lion - *Panthera leo***
- **Leopard - *Panthera pardus***
- **Tiger – *Panthera tigris***

are all species of the genus Panthera.

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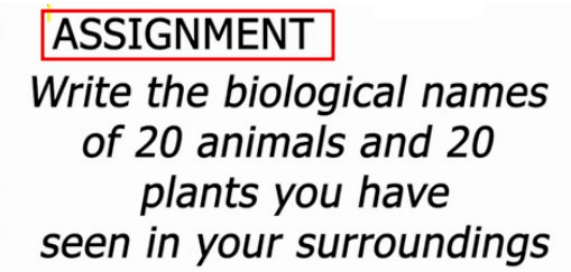
FAMILY

Family, has a group of related genera with still less number of similarities as compared to genus and species.

Among animals, genus *Panthera*, *comprising lion, tiger, leopard is put along with genus, Felis (cats) in the family Felidae*.

Similarly, cat and a dog, are separated into two different families – Felidae and Canidae, respectively.



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