

## QUANTITATIVE APPRECIATIONS REGARDING THE BIODIVERSITY

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**Abstract.** Biodiversity represents the totality of the Earth flora and fauna species. It is considered that about 2,000,000 species have been known so far. However, it is estimated that 12,990,400 species would live on the globe.

**Keywords:** biodiversity, quantitative values, monitoring, the Earth.

**Rezumat. Aprecieri cantitative asupra biodiversității.** Biodiversitatea reprezintă totalitatea speciilor vegetale și animale de pe Planeta Terra. Se consideră că în prezent se cunosc în jur de 2.000.000 de specii. Potențial se estimează că, pe glob ar exista 12.990.400 specii.

**Cuvinte cheie:** biodiversitate, valori cantitative, monitorizare, Terra.

Biodiversity represents the variety of all living organisms from all terrestrial, inland waters and marine environment ecosystems. In simpler terms, biodiversity is constituted from the assemblage of living organisms, genetic material and the ecological complexes they belong to.

The knowledge of species is a long-lasting work, which is far from being finished. By the middle of the 18<sup>th</sup> century, only 9,000 species were known.

Presently, the number of vegetal and animal species was estimated to about 2 million (1,849,000 species).

However, it is considered that the real number would be 12,990,400 species (Table 1).

Table 1. Inventory of known species on large taxonomic groups and the evaluation of the potential number of species for each group (according to LEVEQUE, 1997).

Taxonomic group	The approximate number of registered species	Potential number of species
Viruses	4,000	500,000
Bacteria	4,000	1,000,000
Funguses	72,000	1 to 2 millions
Protozoa	40,000	200,000
“Alga”	40,000	400,000
Plants	270,000	320,000
<b>Invertebrates</b>	<b>1,400,000</b>	-
Arachnids	75,000	750,000
Crustaceans	40,000	150,000
Insects	950,000	8,000,000
Other arthropods	125,000	-
Mollusks	70,000	200,000
Nematodes	25,000	400,000
Other species	115,000	250,000
<b>Vertebrates</b>	<b>42,500 – 42,900</b>	-
Fish	19,000	21,000
Amphibians	4,200	4,500
Reptiles	6,300	6,500
Birds	9,000 – 9,200	9,200
Mammals	4,000 – 4,200	4,200

According to the Census of Marine Life, published in the United States of America in the scientific journal PLOS BIOLOGY, there would be 8.7 million species on the Earth (ORNATO, 2012).

A recent study of the American researchers, based on an informational model, reached the conclusion that the following groups of organisms would live on the Earth: animals (7.8 millions species), higher plants (298,000 species), fungi and molds (611,000 species), alga (21,000 species) (Table 2).

Table 2. The numerical situation of the estimated and classified groups of organisms (according to ORNATO, 2012).

Taxonomic group	Number of estimated species	Number of classified species
Animals without protozoa	7.77 millions	953,434
Plants	298,000	215,644
Funguses and molds	611,000	43,271
Protozoa	36,400	8,000
Alga, diatomeae, water molds	27,500	13,033

Of the total number of presented species, only 1.23 million (or 14%) have been discovered, described and classified so far. The rest of 86% of all the species present on the Earth live in terrestrial and continental water ecosystems and 91% live in seas and oceans and wait to be discovered and classified.

It is considered that numerous species could disappear even before being discovered and studied for their functions within the ecosystem (CALLARD & MIILIS, 2003).

Biodiversity creates the whole existence of human society providing sources of food, raw materials, health and recreation. Apart from the ethical and naturalist concerns, the diversity of the living is actually a set of *biological resources* essential for human beings.

For biotechnology, biodiversity is a factor of inspiration and use of raw materials that will be discovered in the future to the species that have not been known until now. Defending this potential is an argument to be used in the fight to protect biodiversity (CHAUVET & OLIVIER, 1992; GALLOCHAT, 1994).

Recently, the International Union for Nature Conservation finished the red list where there are registered 59,508 monitored species, 19,625 of which are threatened species.

**In conclusion**, the plants and animals that biodiversity refer to represented and still represents the main factors of human society development. The knowledge of species was achieved gradually once research in this field intensified.

The increase of human population and the abusive exploitation through excessive hunting, fishing, agriculture and industry led to the disappearance or reduction of the populations.

The creation of parks and natural reserves – data bases regarding biodiversity monitoring and conservation as well as of other protection means led to the rescue of numerous species.

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