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ORIGINAL PAPERS

Changes in Taxonomy from Linné to Cavalier-Smith; Case Study – Testacean Protists

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Abstract

Starting with Linné and up to nowadays taxonomy has been developing constantly and it has appealed to almost all of the domains of biologic sciences. However, during the last 100 years it has made an extraordinary leap, as a consequence of the broad changes which occurred in electronic microscopy, biochemistry, genetics, ecology and the mathematical processing of populational data. This evolution is most obvious at the level of microscopic organisms. As an example I have shown the qualitative and quantitative leap achieved at the level of unicellular eukaryotes – protoctists, which I have highlighted with examples from the study of testacean rhizopods. The cultures of the various species have proven to be highly useful, as well at the variability data at the level of the populations and those obtained from paleontology.

Keywords: species, correlations bwetween taxonomy and other domains of biology, genetic phylogeny, testaceans.

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Introduction

Carolus Linnaeus is considered the founder of taxonomy, and the exact date is the publishing of the10-th edition of his book entitled *"Sistema naturae"*, i.e. the year 1759 (*http://en.wikipedia.org/wiki/10th_edition_of_Systema_Naturae).*

Taxonomic research had been undertaken before him, but Linné's merit consists in the development of a unitary system which he applied rigorously for many years and which is still observed nowadays by all the biologists. Initially, the name of a new species was given according to the will of the person who had made the discovery, whereas Linné introduced the system of unitary name, the binary system – name and first name, which he called genus and species. This system was initially based only on descriptive elements regarding the morphology of the respective organism. At the basis of the system there was a single specimen, the so-called holotype, and if there were several specimens, the others were called paratypes.

At the same time with the setting up of biology as a field of research of living organisms, its various branches appeared, diversified and evolved more or