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Selection of taxonomical system of algae to use in hydrobiological and algofloristic research

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"The need for taxonomy has never been as important as it is today" wrote the American evolutionist E. Mayr (1971) forty years ago but these words remain topical in the today. This need is particularly felt for the Iranian algologists who proceeded only recently to the study to marine area of water and inland water bodies of the country and to the creation of first algal lists of Iran. Unfortunately, the modern taxonomy of plant especially algae is in crisis. There is no common opinion about the number and volume of divisions of algae and this creates difficulties in the choice of the system for florists and hydrobiologists. A brief review of the current state of the algal taxonomy showed that morphological status of an organism is the result of whole genome functioning and, consequently, morphological characteristics are determining in research on natural populations. Separation of high rank taxa on the grounds of 1-2 ultrastructural characters not possessing diagnostic weight, merging on the basis of those characteristics organisms significantly different by their morphological and physiological status erodes margins between taxonomic groups and depreciates their rank. Molecular-genetic methods are preferable to use only for approbation of previously proposed systems both a modern and traditional systems. Based on stated above at hydrobiological and algofloristic research on natural water objects at the analysis of taxonomic structure of set of species revealed the traditional system is preferable, which is based on the system of B. Fott: *Cyanophyta* (a) *Cyanophyta*; *Rhodophyta* (a+d) *Rhodophyta*; *Chromophyta* (a+c) (incl. *Ochromophyta*); *Dinophyta*; *Cryptophyta*; *Chrysophyta* (incl. *Haptophyta*, *Prymnesiophyta*); *Xanthophyta* (incl. *Eustigmatophyta*); *Bacillariophyta*; *Phaeophyta*; *Chlorophyta* (a+b); *Euglenophyta*; *Chlorophyta* (p.p. *Prochlorophyta*, incl. *Streptophyta*). The proposed system is not only used in some countries but also it underlies the majority of newly proposed systems which allows to accurately making a comparison data from different scientists in different years and different countries.

Key words: algae, algofloristic, hydrobiological, morphological, taxonomy.

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