GENERAL CONCEPTS OF PLANT EVOLUTION AND THEIR STRUCTURE DAUGHTER

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Abstract: If I give a general understanding of the evolution of plants and their structure, since the 50s of the last century, a number of scientists have been working on the evolution of plants, and by introducing their concepts into science, they have made the evolutionary system of plants much clearer. enriched with limes.

Keywords: Prokaryotes, eukaryotes, cyanobacteria, nucleoplasm, genoform, heterotroph, autotroph, histone, diploid, haploid

Abstract: Since the 50s of the last century, several scientists (De Fries, G. Curtis, C. Geoffrey, E. Dotson, A. Takhtadjyan, etc.) proposed to divide the organic world into four to nine worlds. The famous scientist academician Artur Takhtagjyan created the current system of evolution in his work published in 1973. This system is as follows:

1. The large world of prokaryotes - organisms without a nucleus. This large world consists of only one small world - Procaryota, and is divided into three sub-worlds: archaebacteria, true and oxyphytobacteria. is called The cell of prokaryotes is from 2-3μm to 10μm

2. Organisms that have a true nucleus are eukaryotes. This world is divided into three sub-worlds: animals, fungi and plants. Prokaryotic plants include bacteria (protozoa) and blue-green algae. In some literature, blue-green algae mixed with bacteria become cyanobacteria. Their cytoplasm does not have a clearly visible nucleus. A cell contains only one or more pieces of DNA (deoxyribonucleic acid), called the nucleoplasm. There are no true chromosomes, the gene that carries the hereditary traits is called a genoform.

The genoform is located around the DNA. Protein material, mitochondria and plastids are not found in the cytoplasm. In the cell of prokaryotic plants, there are mesosomes formed in the cytological membrane. In addition, there is a gas vacuole in the cell, which helps the body to stay suspended in water. In the cytoplasm, ribosome, oil droplets, polysaccharide and polyphosphate granules are found. The cell wall of prokaryotes does not contain chitin or cellulose. Mitosis and meiosis of the cell and the sexual process were not determined in them. Cell division occurs in a normal-amiotic manner. In most representatives, the cell is born without a cell, if it is very simple. Most representatives of prokaryotes are heterotrophs, some representatives feed on autotrophs. Some representatives (bacteria-protozoa) are parasites.

Eukaruots: These include fungi, algae (green, red, brown, diatom, pyrrhophyte, suglenophyte, yellow gold, various diatoms) and all higher plants, animals and humans. Cells and tissues of eukaryotes 10 -100 μm in size. The cell has a developed nucleus, which contains chromosomes. Chromosome consists of DNA and histone protein. Histone is composed of many amino acids. Cell cytoplasm of eukaryotes contains cell organelles - mitochondria and plastids, Golgi apparatus. Protoplasm moves around the center of the cell or in a straight line. The cell wall consists of chitin or cellulose.

These include variously developed reproductive organs, during the sexual process, a diploid nucleus is formed as a result of the addition of a nucleus (from the Greek. diplos-

secondary, more than twice) and a haploid nucleus is formed from the division of the added nucleus (from the Greek, haplos divided) will be In the cell of eukaryotes, soda performs the task of moving along the undulipod, which is located with the help of special bodies (kinetosome).

Plant nutrition: The world of plants is divided into genoforms and autotrophs depending on their nutrition. According to modern scientists, the oldest form of nutrition is heterotrophic nutrition.

The body of the initially formed heterotrophic nutrition is complex. It did not have cell parts like those of modern organisms. A simple cell is fed by ready-made organic matter. Such nutrition is called saprophytic (Greek sapros - humus, trophic nutrition). All animals, fungi, single-celled organisms, bacteria and some algae are saprophytes. Currently, most scientists recommend that fungi be separated from the plant world, because they do not have motile cells during their life. However, given some of the characteristics of fungi: non-stop cell growth, reproduction, and their similarity to bottom plants, they are studied by transplanting them into plants. The evolution of fungi begins with unicellular eukaryotes. Most representatives of fungi are mainly saprophytes and feed on decaying organic matter. They break down organic substances, exchange substances in nature, and ecological balanceis an important biological catalyst in storage. In the process of decomposition, organic matter releases atmospheric carbon dioxide gas and supplies the soil with nitrogenous compounds. Nutrition of higher plants with the participation of fungi is called mycotrophic (Greek-mycos-fungus) nutrition. Parasites (Greek: parazitos-tekinkhur) are also found among heterotrophic feeding plants and fungi.

They live at the expense of plants and animals. For example, among flowering plants, sedge, ivy, sedge; Among the fungi, black moth and rust fungi belong to free-parasitic feeders. Among the plants, there is also a mixed myxotrophic (from the Greek mixis - mixed) nutrition. Such organisms, in addition to the organic matter produced by photosynthesis, also feed on ready-made organic matter. Such a phenomenon can be found in euglena, a representative of green algae. In a slow and long process of evolution, the first photosynthetic autotrophic (self-feeding) organisms appeared on Earth about 3.4 billion years ago. The origin of life on Earth depends on autotrophic organisms. The cells of early autotrophic organisms were simpler compared to modern autotrophs but more complex compared to heterotrophs. The cell of autotrophic plants contains the pigment chlorophyll (chromatophore), which gives it a green color. All green plants that have chlorophyll or chromatophore in their cells absorb carbon dioxide from the air, and in the process of assimilation, they obtain the energy needed to form organic matter from inorganic substances from sunlight.

Part of the oxygen released due to the process of photosynthesis turns into azone (03) in the atmosphere, and it does not send the ultraviolet rays released from sunlight to the earth. It allows living organisms to develop here. In addition, the plant breathes from the amount of oxygen it releases. There are other types of autotrophic organisms that live underground in total darkness. Such organisms are called chemotrophic organisms. Chemotrophic organisms get the energy they need for food. This is called chemosynthesis. Chemosynthesis was first introduced in science by the Russian scientist S.N. Discovered by Vinogradsly (1887). Chemotrophic plants include iron, sulfur bacteria, and nitrogen-fixing bacteria.

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