IMPORTANCE OF GREEN ALGAE IN THE ECOLOGICAL ENVIRONMENT

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Abstract. Despite being invisible, benthic algae, the youngest type of plant found in nature, are of great importance in the plant world. Because the formation of soil and the purity of the aquatic environment are directly related to algae.

Keywords: ecological environment, environment, algae, cell, nucleus,

Annotaysiya. Tabiatda tarqalgan o'simliklarning eng kenja turi bo'lgan tuban yashil suvo'tlar ko'rimsiz bo'lishiga qaramasdan o'simliklar dunyosida muhim ahamiyatga .CHunki tuproqning paydo bo'lishi ,suv muhitining tozaligi bevosita suvo'tlari bilan bog'liq.

Kalit so'zlar: ekologik muhit ,muhit ,suvo'tlar,hujayra,yadro,

Аннотация. Несмотря на свою невидимость, бентосные водоросли, самый молодой тип растений в природе, играют важную роль в растительном мире. Образование почвы и чистота водной среды напрямую связаны с водорослям.

Ключевые слова: экологическая среда, окружающая среда, водоросли, клетка, ядро

Green algae are a division (type) of benthic plants. Their cells contain green chlorophyll. Green algae contain pigments similar to those found in higher plants. They are unicellular, colonial, and multicellular, and some have acellular structures. Cells are unicellular, uninucleate, or rarely multinucleate, surrounded by a cellulose shell. Chromatophores reproduce by perenoids, asexually, sexually, and vegetatively. Vegetative cells serve as reproductive organs. Green algae are divided into the true green algae and the conjugates subdivision. There are 360 genera and 5700 species of green algae known. They are mainly distributed in fresh water and seas.

DESCRIPTION OF THE DEPARTMENT OF GREEN ALGAE. The blue-green algae are close to the red algae in terms of their pigment composition and the absence of filamentous stages, but they are similar to the Schizophyta in terms of their lack of a typical nucleus, mitochondria, and chromatophores, and are therefore studied in the Prokaryota group.

When a cell of a blue-green algae is examined under a light microscope, the cytoplasmic membrane is not visible, it is characterized by the separation of only the colored part near the cell membrane (chromoplasm) and the central colorless part (centroplasm). There is no strict boundary

between chromoplasm and centroplasm. The centroplasm does not have a nuclear membrane, nucleus, or nucleoli. However, DNA accumulates in the cytoplasm. Therefore, it is primitive (we study it by including it in the group of primitive archaea). The cytoplasm also contains reserve nutrients (glycogen, volutin, cyanophycin grains) and gas-filled spaces called gas vacuoles or pseudovacuoles. Some types of these pseudovacuoles are preserved throughout the entire vegetation period, while others are only present at certain stages of development.

CLASSIFICATION. IMPORTANT REPRESENTATIVES Blue-green algae families are divided into three genera: Chrococcopsida, Xamesifonsimones (Chame siphonopsida) Hormogoniums (Hormogoniopsida) Ancestor of blue-green algae - Chrococcopsida Classification: Section: Blue-green algae genera - Cyanophyt Ancestor: X rok ok k sim onla r– Chrococcopsida Turkum: Mic rot cysts lar – Microsy st is Turkum: Gleok apsa – Gle ocapsa Turkum: Merism opediy a - Me rismope dia

CLASSIFICATION. IMPORTANT REPRESENTATIVES This ancestor includes mainly colonial, sometimes unicellular algal forms. The cells are differentiated into basal and apical parts. Reproduction occurs as a result of equal cell division. If the divided cell does not separate, it is surrounded by a mucous membrane, forming a colony. The shape of the colony can be round, spherical or flat - plate-like. Representatives of this ancestor are divided into several tribes and orders. We will get acquainted with the most important orders. Microcystis Microcystis - is widespread in the planktonic state of freshwater algae, forming a "bloom" of water during development. The cell shape is spherical, such a cell divides in all directions, forming a mucous colony that does not have a clear shape. Microcystis species play an important role in purifying lake water from organic matter and are food for microorganisms in the water. Some species, such as M.toxica, found in South America, are poisonous to animals. Gleocapsa genus (Gleocapsa). This genus includes unicellular and colonial representatives. They grow freely in water or attached to the substrate. The cell shape is spherical, surrounded by a single or multi-layered mucus membrane. Species of the Merismopedia genus (Merismopedia) grow as plankton in stagnant freshwater together with other algae.

Ecological importance

Importance in oxygen production:

During photosynthesis, benthic plants take carbon dioxide from the atmosphere and produce oxygen, which is important for life on Earth.

Nutritional basis:

They form the lowest level of the food chain. They produce food and energy through photosynthesis and serve as a source of food for other organisms (zooplankton, fish, etc.).

Ecosystem stabilizer:

The growth of seaweed helps to ensure the stability of the sea and lake bottom. They serve as food and shelter for aquatic animals, and also contribute to reducing water pollution.

Economic and human importance Food industry: Some benthic plants, for example, substances obtained from seaweed, are used in the food industry. In traditional medicine, benthic plants are used as medicinal agents.

Chemical industry:

Substances obtained from them are also used in the production of various chemical products. Conservation of biological diversity: Benthic plants enrich the biodiversity of the plant world and play an important role in ensuring the health of Earth's ecosystems.

Conclusion:

Landscapes are of great importance not only for ecological systems, but also in various spheres of human life. Their ecological and economic benefits, their role in scientific research, and their contribution to ensuring the sustainability of nature indicate the need for their conservation and study. Despite the simple structure of landscapes, their ecological, economic, and human importance are enormous. They constitute the main part of ecosystems and play an important role in maintaining the balance of nature. In addition, it is known that humans can significantly influence important physiological processes such as gas exchange during respiration

References:

Используемая литература:

Foydalanilgan adabiyotlar:

1. https://uz.m.wikipedia.org/wiki/Tuban_o%CA%BBsimliklar

2. Sagdiyev A., Salimov B. (2015). O‘simliklar sistematikasi. Toshkent: Fan va texnologiya nashriyoti.

3. Mamatov M.X. (2018). Botanika asoslari. Toshkent: O‘zbekiston milliy universiteti nashriyoti.

4. S.T. Karimov, Ekologik botanika, Toshkent, 2020.

5. Online resurslar: https://www.sciencedirect.com https://www.ncbi.nlm.nih.gov