

## POLLUTION OF ECOLOGY

**Qurbonova Umida Sayetbekovna**

Fergana Polytechnic Institute

### ANNOTATION

The early ideas about the study of nature and the influence of environmental factors on animals were reflected in the works of ancient Greek philosopher scientists. In the works of the great scholars of Central Asia in the X-XII centuries, al-Khorezmi, al-Farabi, Abu Rayhon Beruni, Ibn Sina, information is given about the structure of the Earth, medicinal plants, animal habitats. Zahiriddin Muhammad Babur in his historical work " Baburnoma " brought a lot of information about various plants and animals of Central Asia and India, their distribution, periods of reproduction.

**Key words:** great scholars, historical work, distribution, periods

A detailed and in-depth study of the living environment of living organisms began in the XIX-XX centuries. The study of the influence of the environment on the life of living organisms was initiated by the German scientist Alexander Humboldt. He was the first to study the importance of environmental factors in the life of plants. At the beginning of the XX century, the direction of Ecology was formed in botany, zoology and other natural sciences. Gradually, the ecological approach to the study of Nature began to acquire great importance. In a number of countries, works have been published that cover a wide range of environmental problems. In the development of ecology, the English scientist A. The concept of the ecosystem formed by Tensley and the Russian scientist V.N. An important place is occupied by the theory of biogeocenosis, which Sukachev put forward. Since the 70s of the XX century, due to the increased influence of man on nature, environmental problems began to become important, the term "ecology" also began to be used in a relatively broader sense.

As a result of the development of ecology, the development of industry, agriculture, the directions that determine the harm to human health, study the Prevention of environmental disasters: such branches as "human ecology",

“agricultural ecology”, “Transport ecology”, “Industrial Ecology”, “medicine ecology”, “Geoecology”, “construction ecology” are emerging.

From General ecology, various ecologies, ecological orientations are developing as a branch of scientific disciplines, including:

1. Physiological Ecology is the study of a physiological organism that arises under the influence of the adaptation of living organisms (microorganisms, plants, animals, people) to its habitat.
2. Paleecology studies the ecology of organisms, species, groups that have disappeared from nature;
3. Evolutionary ecology-ecological mechanisms by which a population changes and develops in nature;
4. Morphological ecology-studies the laws of the structure of their bodies, as a result of the influence of living conditions of living organisms;
5. Marine and Freshwater Ecology-hydroecology-studies the laws of growth, development, reproduction, distribution of living organisms found in various bodies of water;
6. Human ecology-studies the natural state of a person, the essence of environmental factors that negatively and positively affect him, his health, role and role in nature;
7. Social ecology-studies the different ecological relationships between society and nature

The variety of problems that ecology studies requires the application of different methods.

In ecology, the following methods of field, laboratory, experimental and mathematical model are used.

1. Field style or method of observation, conducted in natural conditions; Representatives of the species by field style study the groups of various large and small living organisms that they form in natural conditions;
2. Laboratory experiment method-in special places, rooms, various microorganisms, algae, invertebrates, their forms are grown in small-small cups,

aquariums using special nutrients, light, temperature. The speed of their reproduction, the formation of biomass, physiological and biochemical composition are studied.

Laboratory experimental and field methods differ from each other. That is, in laboratory - experimental artificial conditions, it is possible to control the negative and positive effects of artificial environmental factors (light, temperature, humidity, etc.) affecting the body. In natural conditions, however, it is difficult to control at once how many environmental factors affect the organism in one place and at the same time (light coming from the sun, the rate of flow of the river).

3. Mathematics styles and modeling. Determination of the natural state, changes and specific environmental aspects of various ecosystems using the method of mathematical models. V.S.Patten (1971), M.V. Dale (1970) Yu. Adom (1975), T.G. Reflected in the work of such scientists as Gilmanov (1980).

The effects of artificial light on organisms are highly variable, and beneficial (e.g., increasing the ability of carnivorous species to observe prey) cause immediate death (e.g., The Moth is attracted to incandescent lights and dies from heat). Also, light at night can be beneficial and harmful to one species. As an example, people use artificial light inside a building to extend the time of work and play, but light disrupts a person's circadian rhythm and as a result, stress damages health.

Through these different effects, light pollution has separate types, ecology regions are affected. If two species are the same, then the location, population frequency can be changed by introducing artificial light of each species if the light at night is not affected the same. For example, some species of spiders avoid burning areas, while other species are happy to build the cobweb directly into the lamp post. Because lamp posts attract many pilots from insects, spiders that do not think about light gain an advantage over spiders that avoid it, and as a result are common. These types of frequencies can then change to Pear-effects, as these species interact with others in the ecosystem, and food webs have been modified. These ripple effects can eventually even affect daytime plants and animals. For

example, changes in the activity of active insects at night can change the survival rate of plants blooming at night, making food or shelter for daytime animals.

The introduction of artificial light at night is one of the most drastic anthropogenic changes on Earth, comparable to toxic pollution, land use changes, and climate change due to increased attention of greenhouse gases.

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