## МИНИСТЕРСТВО ОБРАЗОВАНИЯ И НАУКИ РФ ТОМСКИЙ ГОСУДАРСТВЕННЫЙ УНИВЕРСИТЕТ БИОЛОГИЧЕСКИЙ ИНСТИТУТ

## СТАРТ В НАУКУ

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## THE WORLD THROUGH DIFFERENT EYES

N.D. Blazhko, I.V. Chakina @chakina-2011@mail.ru, 3103nadyusha@gmail.com

Eyes are organs of the visual system. They provide animals with vision, the ability to perceive and process visual details, and allow them to perform several photo-reaction functions that are independent of vision. In higher organisms, the eye is a complex optical system that performs many different functions. The simplest «eyes», such as those of microorganisms, determine whether it is currently light or dark, this is enough to detect circadian rhythms. It is widely known that the eye can be both complex and simple.

In this paper we describe different ways of visual perception of different animals which are caused by multiple factors, study and compare the structure of the human eye and some animal species, such as dogs, cows, cats, rabbits, horse spiders, mice, etc. in order to get better understanding of how and what they can see.

Humans and animals see the world very differently and have different eye structures. Geckos, unlike humans, can see very well in the dark. They are 350 times more susceptible to colors. Insects perceive the image in slow motion and see ultraviolet light. Our vision has a great sharpness far and near, the widest color range. It happens due to the fact that the human eye has a functional center – the retina, a yellow spot where photoreceptors-cones with the highest visual activity are located. The denser their concentration, the higher visual acuity. As for animals, their vision is very different (thermal, infrared, etc.) and depends on many factors related to the structure of their eyes, and the presence of additional organs of perception.

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