

## **Abstract**

Echolocation ranks among key components of adaptive setting of bats. It enabled them to evolve a plethora of diverse foraging strategies and exploit an enormous spectrum of food resources for which they represent one of the most diversified groups of terrestrial mammals with a cosmopolitan distribution. Evolution of echolocation proceeded via responses to diverse constraints and factors, both intrinsic and extrinsic, that effect particular variables of echolocation biology.

The present bachelor surveys, based on literary records, briefly some of these effects and their role upon structure of bat communities. I summarize basic characteristics of echolocation types, influence of Doppler shift, strategy and use of echolocation in different environments and adaptation against defensive abilities of a prey. Among other I provide an account of history and evolution of bat detectors, the instruments essentially improving current study of that topics.

**Keywords:** Bats, echolocation, sonar, diversity, adaptation, Old World