Amphibians currently belong to a group of most endangered animal species in the world. In addition to the loss of habitats, climate changes and pollution, contagious diseases are also one of significant causes of amphibian extinction. Since the role of humans in disease spreading and transfer from one area to another is significant, it is very important to learn more about emerging diseases in amphibians, how to diagnose those diseases and how to prevent their spread. In this lecture current knowledge regarding the following fungal and viral causes of emerging amphibian diseases will be presented, specifically about the: (i) chytrid fungus *Batrachochytrium dendrobatidis* (BD), a well known cause of mass amphibian mortality worldwide; (ii) another recently described chytrid fungus *Batrachochytrium salamandrivorans* (BS) which is, to our current knowledge, the cause of disease and mortality in Caudata (Urodela) only; and (iii) Ranavirus which can cause disease in amphibians, reptiles and fishes. The results of preliminary investigation of BD, BS and Ranavirus infections in the olms (*Proteus anguinus*), and of other amphibians from Croatia will also be presented. The aim of this lecture is to provide the herpetologists with more information about infectious and deleterious amphibian diseases, to help them in their everyday activities, particularly in the field, to recognize disease, collect adequate samples and prevent disease spread from one site to another.

Key words: Amphibians, Emerging diseases, *Batrachochytrium dendrobatidis*, *Batrachochytrium salamandrivorans*, Ranavirus

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DISTRIBUTION, ABUNDANCE AND DETECTION PROBABILITY OF LACERTIDAE IN FOUR CROATIAN ISLANDS

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The evaluation of real abundance of species like reptiles may be some time problematic because those species may be very sensitive to environmental and weather conditions. Consequently the possibility to evaluate the detection probability may be an important result (McDiarmid et al., 2012). Furthermore, in Mediterranean islands, the distributions of reptiles is still incomplete (Ficetola et al., 2014). During the spring of 2014 we carried out an extensive survey in four island of Croatia: Losinj, Unije, Susak, Ilovik. The aims of this field campaign were:1. to assess the abundance of more common species of Lacertidae; 2. to evaluate the usefulness of detection probability measured by means of repeated transects; 3. to describe the microhabitat elements that may have an important role in species abundance.We covered the islands with 60 transect (36 Losinj, 10 Unije, 6 Susak, 8 Ilovik), each transect was repeated two or three times. By means of R package and of AIC approach we built models for three species (*Algyroides nigropuntaus*, *Podarcis melliselensis* and *Podarcis siculus*) we were able to get models of abundance. The most abundant is P.m. clearly linked to microhabitat such as stone walls. The repetition of transects may increase a lot the available information, altough if in large areas may require a significative amount of time. But after a repetition the possibility to casual detection decrease a lot and the general result is reliable.

Key words: Detection probability, Herpetofauna, Island biogeography, Species abundance