

## Project Update: December 2017

In the past few months we have been working intensively to process all the information we received from field research and to obtain one part of the results.

A total of 50 randomly selected transects (each 25 m long) were carried out independently for each of the three sites in Posavina of B&H: Čardak, Okanovići and Gromiželj. Population density estimation was made on three test areas of the total area of 6.000 m<sup>2</sup> (0.6 ha) and indicates the average density of the population: (1) 703 individuals per habitat hectare on Čardak (min.491-max.1006), (2) 191 individuals per habitat hectare in Gromiželj (min.111-max.326) and (3) 309 individuals per habitat hectare in Okanovići (min.194-max.491).

We performed stomach flushing method on 124 individuals of *Pelobates fuscus*. 49% of individuals (n = 60) had a content of animal origin in their stomach. Vegetation remains was found in 20% analysed individuals (n = 21), so as the minerals (n = 10; 10%) and soil (n = 6; 7%). The total number of prey individuals in females is 97 (Mean 3.2), while in males is 103 (Mean 3.7). Three phylum representatives were identified: (1) Arthropoda with 164 individuals representing 80% of the sample, (2) Mollusca with 29 individuals with 14% and (3) Annelida with nine individuals or 5% of the sample. Only 1% of animal material was unidentified. Within the phylum Arthropoda significantly stands out the members of the class Insecta (47%) and Diplopoda (46%). Food analysis confirms that *P. fuscus* is a generalist, but two facts seems to be quite interesting in their diets. First one is the presence (in very large percentage) of animals from the class of the Diplopoda. They are known to secrete some toxic compounds such as alkaloids, phenols, hydrogen cyanide, tepenoida and benzoquinone. The second, and the most significant result are findings of representatives of the families Cydnidae (Heteroptera) and Elateridae (Coleoptera). They are known as a serious agricultural pests which are difficult to remove, even with insecticides. Since they do not have serious natural predators, *P. fuscus* may prove to be very effective predator and can be used in integrated pest management programme. So, now we can start with the educational programme during the upcoming period and will continue to process other information from the field research (clay models and influence of predators, influence of moisture, temperature and morphometry).



Clay models of *Hyla arborea*