

Fruit trees were a very important source of food in some European cities during and after World War II. Nowadays, their role has changed and, while they are still a meaningful component of urban flora, they are viewed from different perspectives; esthetic (as ornamental trees) and practical - ecosystem services (e.g. as a food resource for birds). Unfortunately, trees (including fruit trees) in the urban and rural space are being largely removed due to political and social pressure because they are treated more as a problem (e.g. shade or the need to clean up leaves and fruits) and even as a biological threat (e.g. causing allergies). The consequences of this might be significant not only for humans and birds but also for smaller “inhabitants” of urban and rural areas.

In each annual cycle of a fruit tree there comes the moment when the fruits fall. The next step of this process is decomposition, during which a characteristic smell is given off, attracting numerous invertebrates. What is most interesting is that this process may have greater implications on the functioning of the ecosystem. But how? Metamorphosis is a critical stage of an amphibians' life during which they begin to feed intensively before the first hibernation. That is why food availability influences physical growth during these first months of terrestrial life. It has been shown that greater post-metamorphosis size of amphibians ensures greater survivability during hibernation.

Taking this into account, it can be assumed that since fermenting fruits attract many types of invertebrates, the presence of fruit trees close to a breeding site might influence faster post-metamorphic growth of amphibians and their dispersion near a breeding area. In order to analyze whether this assumption is true, the three kinds of research previously discussed will be carried out. The first will combine information about the distribution of fruit trees and amphibian guilds in the suburban landscape and rural areas. This will help to explain the possible role of environmental patches with diverse species composition and the number of fruit trees. The next two types of research will be experimental studies. Juveniles of three amphibian species (common spadefoot, green and common toad) will be kept in one out of three types of cages: 1) enclosure with fleshy fruits, 2) enclosure with synthetic fruit models and 3) enclosure without fleshy fruits. During two experiments (which will last for 30 days), body mass and body length of each juvenile will be measured. This will help to explain whether the presence of fallen fruits effects the faster growth due to the presence of more varied food such as invertebrates or by the presence of additional hiding places that increase the efficiency of foraging.