

## **Abstract:**

In group-living species, social interactions with conspecifics play a crucial role in group formation and the ability to make consensus decision, which may have far reaching consequences for ecological and evolutionary processes in natural populations. Individual recognition and partner preferences based on social familiarity are important mechanisms driving a range of interactions between individual fish as well as social structure in fish populations. However, social interactions of gregarious species are also influenced by the ecological environment experienced by individuals. The aim of my theses was to define, how is social structure of fish shoals shaped by environmental based constraint presented by increased turbidity in anthropogenically impacted rivers. A freshwater, shoal-forming, visually orientated pelagic fish – bleak (*Alburnus alburnus*) – was used as a model organism. At the laboratory experiment, behaviour of 40 individuals at three different levels of turbidity (0 NTU, 30 NTU, 60 NTU) were observed. The aim of my thesis was to find out how increased turbidity influence the structure of the shoals, specifically if the turbidity reduces between individual distances in a response to the deteriorated visual conditions. The results shown, that bleaks increase the compactness of the shoal even at the medium level of turbidity (30 NTU). Such results indicated high phenotypic plasticity of the bleak and, therefore, high ability of adaptation to anthropogenic changes in riverine environment.

Key words: turbidity, social behaviour, shoal, common bleak, freshwater fish, river