

Abstract

The sexual segregation, defined as different use of space by sexes is widespread phenomenon in the animal tree of life. As a result of segregation there is a different use of resources such as habitat, prey items or different threat by predation. Nevertheless it is not well studied in fish taxa except in marine environment. The common and widespread freshwater species such as a bream (*Abramis brama*), a bleak (*Alburnus alburnus*) and a roach (*Rutilus rutilus*) so far have not never been studied from the perspective of sexual segregation too. This thesis aims to examine the sexual segregation of these species and to test premises of sexual segregation such as sexual size dimorphism, age composition and differences in food. Afterwards the different space use of sexes in the Římov reservoir was tested. The gillnet sampling was used to collect data. Gillnets were installed to four localities in longitudinal gradient of reservoir in epilimnion where is the highest abundance of fish. Sampling was performed in August from 2009 to 2016. Results of this thesis show that females and males have different life histories and that bleak and roach are significantly bigger and older than males. The size dimorphism in bream was confirmed but not age difference between sexes. Sexes of bream had different diet. Males preferred more Copepoda and *Daphnia* spp. than females did and females preferred Chironomid larvae. These differences can be related to dissimilar growth pattern of sexes and the possible differences in branchial sieve apparatus which can cause different composition of diet are discussed too. The sexual segregation of bream and bleak has not been confirmed by this thesis. Females of roach preferred pelagic habitat more than males. This spatial sexual segregation could be caused by a combination of two main factors which are the food supply in food rich pelagic habitat and the different predation risk by fish piscivores in pelagic habitat caused by sexual dimorphism in size. Differences in body size between sexes probably allow to females inhabit pelagic habitat in higher extent in comparison to males. This thesis described as a first, the spatial sexual segregation of roach between pelagic and littoral habitat in canyon shaped reservoir. This thesis added a new piece to the mosaic of less studied part of freshwater fish ecology.

Key words: ecology, distribution, bream, roach, bleak, sex, segregation