

# **Marchfeld Canal: the importance of a near-naturally designed watercourse for breeding birds**

**Karin Pfeiffer**

karin.pfeiffer@univie.ac.at

*MSc Student in Zoology*

*Supervisor: Christian Schulze*

*Department of Botany and Biodiversity Research*

The Marchfeld Canal was built at the end of the 20th century primarily to irrigate the agricultural region Marchfeld. Near-natural structures like artificial bays, islands and zones of shallow water were designed aiming to create an ecologically valuable watercourse in this otherwise monotonous human-dominated farmland area. This study investigates whether the created structures attract birds using the watercourse and the bordering vegetation structures as breeding habitat. Hence, a total of 30 channel stretches (each with a length of 200 m) were selected between Langenzersdorf and Deutsch Wagram and surveyed for breeding birds. The proportions of the structural variables like shrubs, trees, reed, and vegetation overhanging the watercourse were assessed for each transect and the shoreline length was measured by using google maps. During the bird surveys a total of 43 breeding bird species were recorded, including 10 species using the linear wetland habitat and 33 species using the vegetation structures bordering the channel. A generalized linear model evaluating the importance of habitat variables indicate a significant strong positive effect of the shoreline length and the cover of trees along the channel and a weak positive effect of the reed cover on bird species richness. The 2 most common wetland species were the moorhen (*Gallinula chloropus*) and the mallard (*Anas platyrhynchos*). The most common species of the vegetation structures along the channel were the nightingale (*Luscinia megarhynchos*) and the blackcap (*Sylvia atricapilla*). This study demonstrated that designing complex shorelines within artificial water channels by creating bays and small islands and maintaining a strip of woody vegetation along such channels positively affect bird species richness. Hence, artificial watercourses such as the structurally diverse Marchfeld Canal can contribute substantially to increase bird species richness within urbanised or intensively used agricultural landscapes.