Macrophyte vegetation of Danube canals in Kiskunság (Hungary)

Virág K. Sipos¹, Alexander Kohler², Mathias Köder² and Georg A. Janauer³

With 7 figures and 4 tables in the text

Abstract: South of Budapest an irrigation and drainage canal system extends from the left bank of the main river into the Kiskunság area. The canals differ in size, discharge and salinity. Management includes mowing of aquatic vegetation and dredging. Macrophyte surveys were carried out in part of the main canal (Dunavölgyi-főcsatornat), in the medium-sized Harmincas-Canal, and in the smaller Apaji-Canal. The main canal receives its water directly from the Danube River. Water flow is slow, there is no shading by riparian vegetation and the water is rich in nutrients, but usually clear. Water temperatures are relatively high in summer and are beneficial for species like Ceratophyllum demersum, C. submersum, Trapa natans, Cabomba caroliniana and Najas marina. For the first time a floristic-ecological characterization was possible for part of the canal system. The occurrence of the neophyte C. caroliniana, and the high species richness found in the canals make them interesting and valuable habitats for the aquatic vegetation, despite their anthropogenic origin.

Introduction

Wetlands of anthropogenic origin are most important near-natural biotopes in today’s Hungarian cultural landscape. Due to regulation measures at the Danube river in the early 19th century, flood plains, oxbows, riparian forests and other wetland types were lost on a great scale (Kovács 1962, 1968; Kárpáti 1963). In the less industrialized region south of Budapest the Kiskunság area is a dry “Puszta” today, where extensive flood plains spread in former times. This area is criss-crossed by a system of more than 30 artificial irrigation and drainage canals (Tóth 1979) rich in calcium-bicarbonate and they are still connected to the Danube river. They are characteristic landscape features and play an important

Authors’ addresses: ¹ Drahos J. u. 3 I/4, H-6600 Szentes, Hungary; E-mail: siposvk@freemail.hu. ² Institute for Landscape- and Plant-Ecology (320), University of Hohenheim, D-70593 Stuttgart, Germany. ³ Dept. Hydrobotany, Institute of Ecology and Conservation Biology, University of Vienna, AlthanstraBe 14, A-1090 Vienna, Austria.