Current vegetation of Danube islands refers to historical land uses and recent human interventions

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Introduction

19% of Hungary's vegetation would be alluvial forest,
→ currently **0.4%**

Effects of the past:

→ decreasing / changing riparian habitats

Present and future:

TEN-T (Trans-Eu. Network for Transport)
Loss of sediment
Flood management
Intensive land uses

Aim

To gain knowledge on

- the islands of the Hungarian Danube stretch between Vének and Budapest
- with priority attention to the landscape history and historical land uses of the islands, as well as
- to explore the current floodplain forest associations that cover the islands and their potential successional processes

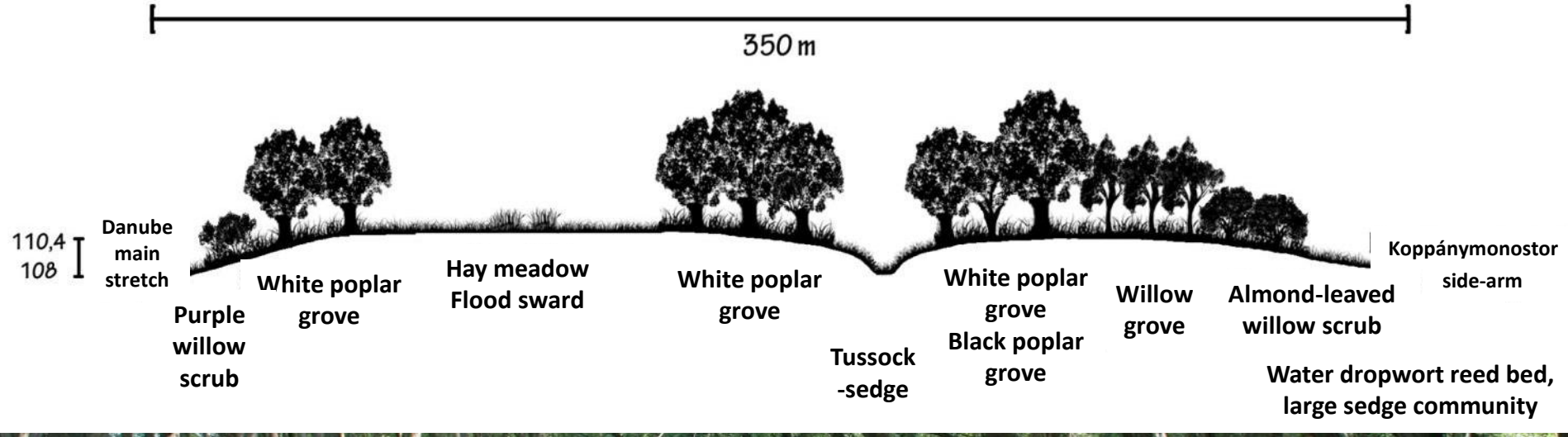
Literature review

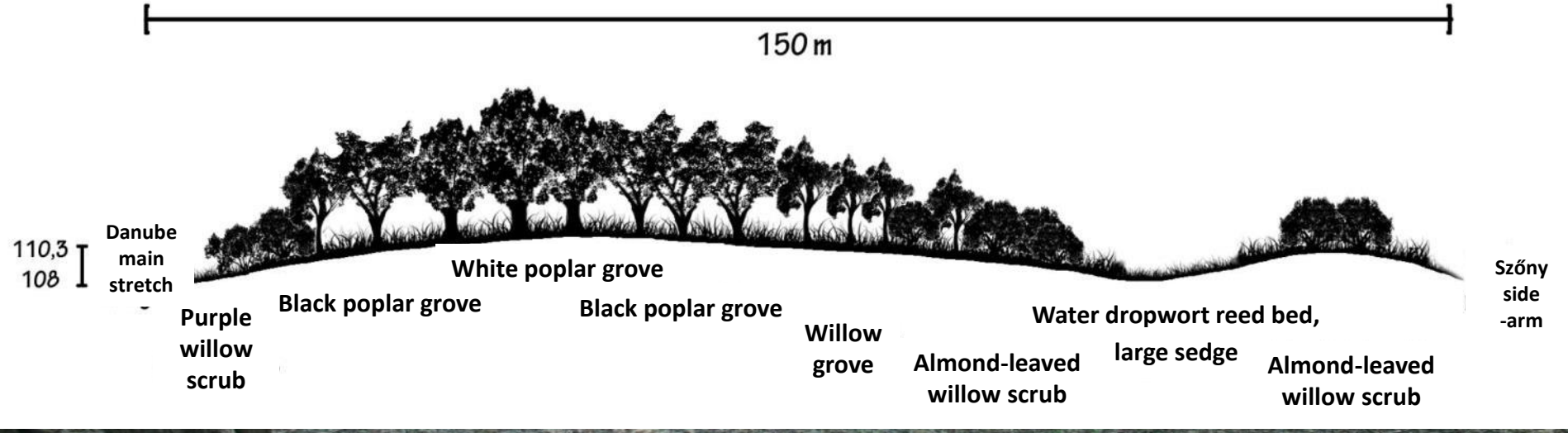
- Succession stages of the Danube floodplain in Hungary: Zólyomi 1937,
- followed by Kárpáti 1985.
- Kevey 1998, 2002 and 2003, and Kevey in Borhidi and Sántha 1999 differentiated 15 natural or semi-natural forest association types and their 40 sub-associations.
- Zonations on the upper Danube stretches were reported by Wendelberger-Zelinka 1951 around Wallsee.

Methods

- Danube stretch between Vének (1797 riverkilometer = rkm) and Budapest (1648 rkm)
- Hungarian geographical researches and references
- 29 maps from Map Archive of the Military History; National Archives of Hungary; Danube Museum; Special Library of Water and Environmental Protection; online Hungaricana (Hungarian Cultural Heritage Portal), Mapire (Historical Maps Online) and Fentrol.hu (Online Aerial Photo Archive)
- plant associations' names follow the Hungarian Associations Red Book

Results


350 m
110,4
108
Danube main stretch
Purple willow scrub
White poplar grove
Hay meadow
Flood sward
White poplar grove
Tussock -sedge
White poplar grove
Black poplar grove
Willow grove
Almond-leaved willow scrub
Koppánymonostor side-arm
Water dropwort reed bed, large sedge community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Szőny side -arm

Purple willow scrub *(Rumicio crispo-Salicetum purpureae)*

gravel sediment
permanent water cover

banks along the main stretch: **bank defence**

closing the side-arms: silt instead of gravel
riverbed regulating tools: **service**
main floodplain between dykes

bigger stands are rare

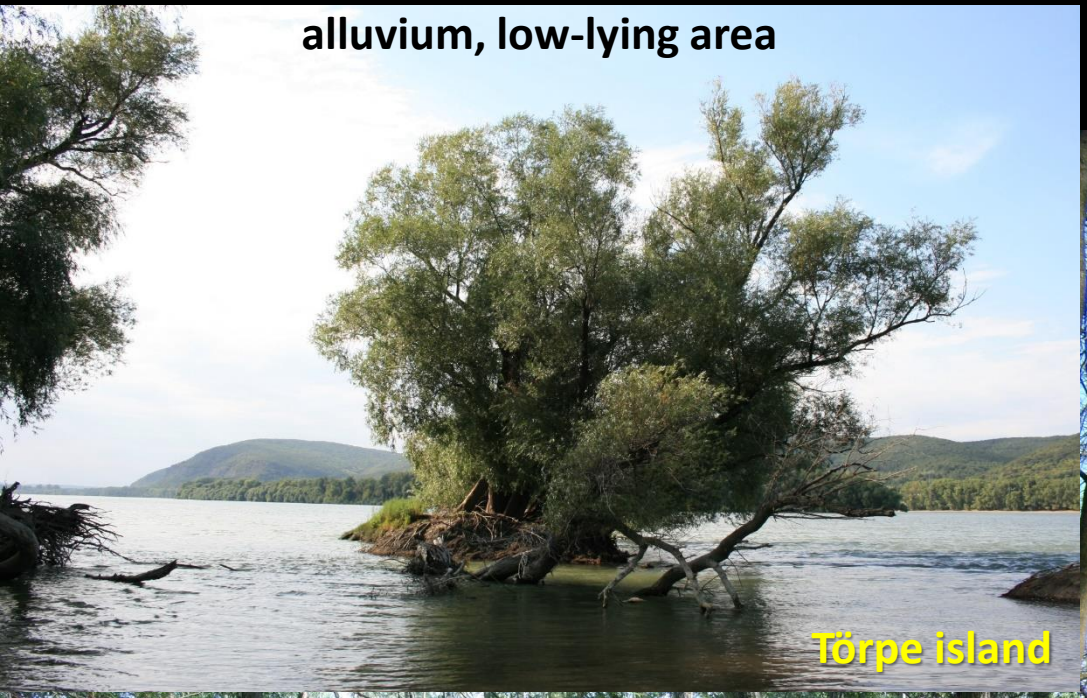
=> black poplar grove (Kevey 2004)

Almond-leaved willow scrub (*Polygono hydropipero-Salicetum triandrae*)

=> willow grove (Kevey 2004)

Willow—poplar alluvial forests: white willow groves (*Leucojo aestivi-Salicetum albae*)

alluvium, low-lying area



Törpe island

wider abiotic claims

Koppánymonostori island

grass layer and rate of invasive species depends on water level

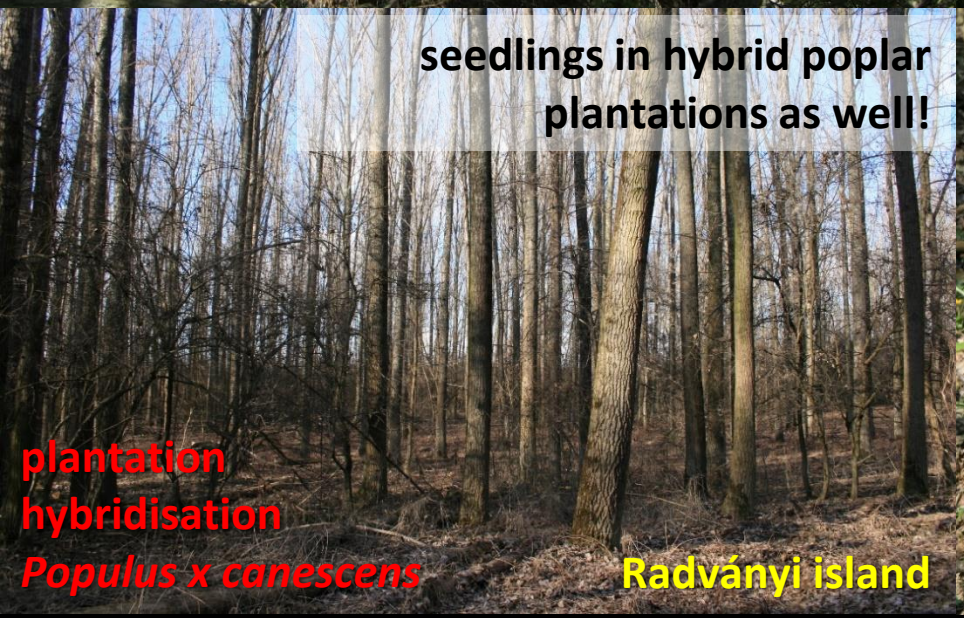
Helemba island

=> white poplar grove (Kevey 2004)

Willow—poplar alluvial forests: black poplar grove (*Carduo crispi-Populetum nigrae*) **rare**

=> white poplar grove (Kevey 2004)

Willow—poplar alluvial forest: white poplar grove (*Senecioni sarracenici-Populetum albae*) rare



=> oak-ash-elm alluvial forest (Kevey 2004)


Thank you for your attention.