FLOODPLAIN FORESTS OF THE TEMPERATE ZONE OF EUROPE

EDITED BY
Emil Klimo
editor in chief

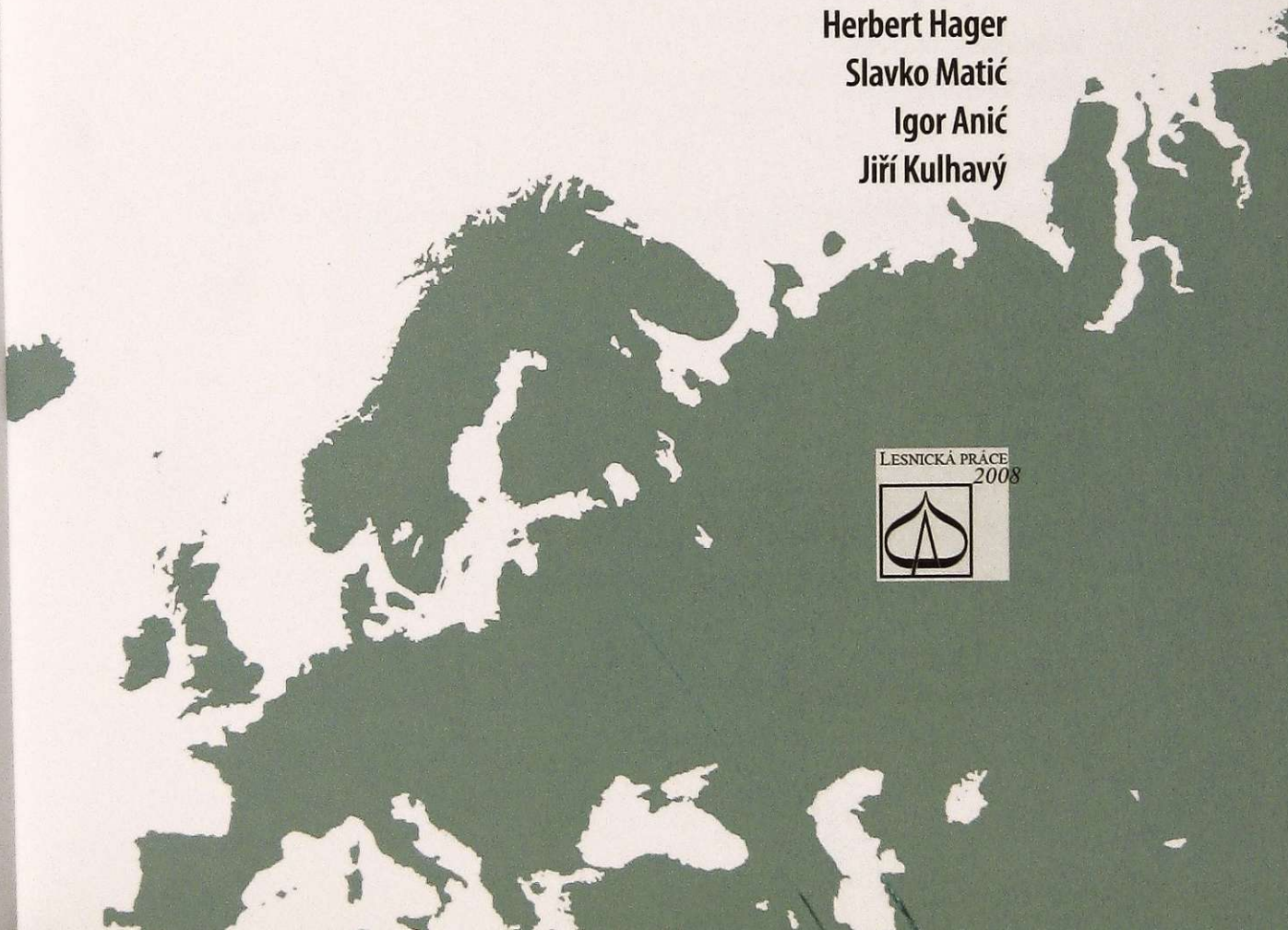
Herbert Hager
Slavko Matić
Igor Anić
Jiří Kulhavý

LESNICKÁ PRÁCE
2008

FLOODPLAIN FORESTS OF THE TEMPERATE ZONE OF EUROPE

Edited by
Emil Klimo
editor in chief

Herbert Hager
Slavko Matić
Igor Anić
Jiří Kulhavý



LESNICKÁ PRÁCE
2008

Editors

Emil Klimo in chief, Herbert Hager, Slavko Matić, Igor Anić, Jiří Kulhavý

Technical editor

Jaroslava Tesařová

Reviewers

Julius Oszlanyi, Miroslav Martiš, Zvonko Seletković

Language editors

Mark Davies, Stephen Hindlaugh, Alan M. Westcott

Photographers

Igor Anić, Dario Baričević, Michal Horsák, Emil Klimo,
Petr Macháček, Boris Maringer, Václav Pižl, Darko Prokeš, Branimir Prpić,
Jiří Schlaghamerský, Tomislav Starčević, M. Šivel, Ivan H. Tuf, Pavle Vratarić,
Joso Vukelić, František Zoubek, Žarko Španiček

Publisher

Lesnická práce, s. r. o., publishing house for forestry, Kostelec nad Černými lesy

Responsible redactor

Pavla Neuhöferová

Cover photo

Mosaic of Floodplain Forests in the Croatien Danube Watershed (Pavle Vratarić)

Cover

Martin Březina

Production

Oto Lasák

ISBN 978-80-87154-16-8

PREFACE

Emil Klimo[1], Herbert Hager[2]

[1] *Institute of Forest Ecology, Mendel University of Agriculture and Forestry, Brno, Czech Republic*
[2] *University of Natural Resources and Applied Life, BOKU, Vienna, Austria*

Floodplain forest ecosystems represent an important part of European natural heritage and therefore deserve great attention in terms of the scientific analysis of their history, condition, protection, conservation and revitalization. These ecosystems have considerable production potential and a great diversity of ecosystems, communities and species. In many places, the history of floodplain forests in Europe can be traced back in terms of their natural development to the period 8000–6000 BC and the change of rivers into meandering types and sandy islands in valley floodplains becoming the preferred residential areas of Mesolithic hunters and fishers. This marked the beginning of anthropogenic processes influencing the floodplain landscape.

Central-European valley floodplains and plant communities in the Holocene alluvia of rivers and streams can be roughly divided into lowland floodplain and upland floodplain vegetation. Submontane and, to a certain extent, montane valley floodplains with flooded Holocene sediments can be classified as floodplain upland stands if plant communities have the characteristics of such floodplain stands (e.g. communities of alder forests and ash communities along streams, etc. [Mezera, 1956]) This use of terminology is not, however, unambiguous. As a result of anthropogenic impact, the commonly used term floodplain forest has lost its cardinal character, i.e. periodic flooding. Therefore, the term alluvial forests is more general because it can include forests in both flooded and unflooded areas. An even more general term is lowland forest, which was used by Rauš. Forests occurring outside alluvial regions can also be included under this term. The term riparian forests refers to forests occurring in the immediate vicinity of rivers. In our book, we shall use the term floodplain forests, although we are aware of a certain discrepancy between the term and the actual situation in nature.

The species composition of floodplain forests, although differentiated according to the part of Europe, is also markedly affected by local hydrological conditions concerning river length, topography, groundwater table and development under the effect of climate change during the Holocene period. In terms of site conditions, the terms „soft-wood broadleaf floodplains" and „hard-wood broadleaf floodplains" have been used where poplars and willows are the dominant species in the first case and oak, ash and elm in the second. Often original „soft-wood floodplains" change by natural or anthropogenically affected processes into „hard-wood floodplains" in consequence of changes in the water regime. The last-mentioned forest type is more favourable from the economic standpoint and predominates in the majority of floodplain forests at present. A considerable amount of alluvial areas are used for poplar plantations. In particular, these were established in the 1950s of the last century.

CONTENTS

Part 1

Part 2