

Regenerating the Canadian Forest

Principles and Practice for Ontario

Edited by

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and

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Published by



Fitzhenry & Whiteside Limited
Markham, Ontario, Canada

in cooperation with



Ontario

Ontario Ministry of Natural Resources

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Fitzhenry & Whiteside acknowledges with thanks the Canada Council for the Arts, the Government of Canada through the Book Publishing Industry Development Program (BPIDP), and the Ontario Arts Council for their support of our publishing program.

The Sustainable Forestry Initiative and the Forest Management Branch of the Ontario Ministry of Natural Resources provided funding for this book.

Editors:

Wagner, R.G. (Robert Gordon), 1955-
Colombo, S.J. (Stephen John), 1954-

Graphics, typesetting, and page layout:

Carmen Misasi, Carmen Misasi Design, Sault Ste. Marie, Ontario

Copy editing, plain-language editing, and indexing:

Freya Godard, Toronto, Ontario

Canadian Cataloguing in Publication Data

Regenerating the Canadian forest: principles and practice for Ontario

Includes index.

ISBN 1-55041-378-3

1. Forest regeneration – Ontario. 2. Reforestation – Ontario. I. Wagner, Robert G. II. Colombo, S.J. (Stephen John).

SD409.R45 2001 634.9'56'09713 C00-932089-X

Mention of trade names or products does not constitute endorsement by the authors, the editors, the publisher, the Ontario government, or other sponsoring agencies.

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Preface

During the past decade, forest sustainability has been a focus of concern for forest management and research in Canada and around the globe. At the core of sustainable forestry is the ability to successfully regenerate forests that have been harvested or have been disturbed in other ways. Regeneration practices are vital to shaping the composition and quality of forests, determining levels of sustainable harvest, managing and protecting wildlife habitat and aquatic ecosystems, and restoring severely disturbed ecosystems.

Successfully regenerating forests to meet society's increasing needs is a complex task. It is a highly interconnected process requiring the knowledge and application of biological, ecological, and economic principles; access to the latest technology; substantial planning and execution; and a significant political commitment. This book was undertaken to synthesize and summarize the tremendous progress that has been made by generations of foresters and forest researchers in regenerating the Canadian forest.

This book follows in the tradition of three earlier books on this subject: *Regenerating Oregon's Forests* (1978), edited by B.D. Cleary, R.D. Greaves, and R.K. Herman; *Regenerating British Columbia's Forests* (1990), edited by D.P. Lavender, R. Parish, C.M. Johnson, G. Montgomery, A. Vyse, R.A. Willis, and D. Winston; and the *Forest Regeneration Manual* (1991), edited by M.L. Duryea and P.M. Dougherty. Despite the usefulness of these guides for the Pacific Northwest and the southern U.S. States, there was no guide for reforestation applicable to the northeastern portion of North America. Although this book focuses on the province of Ontario, much of the information contained in it is equally applicable to many parts of western Canada, Quebec, the Maritime provinces, and the U.S. Lake and Northeastern states. In contrast to earlier guides, it includes chapters on a broader range of topics, such as the

effects of regeneration practices on wildlife, aquatic ecosystems, and recreation.

The book is divided into eight parts, each organized around a major topic relevant to forest regeneration. Each chapter begins with a summary of main ideas covered. Throughout the text, other chapters are cross-referenced to indicate where additional information about a topic can be found in the book. At the end of most chapters, a "Future Directions" section describes the future challenges and directions for that field. Two special "Discussion" sections are also presented, one in Part IV contrasting the use of bareroot and container seedlings in planting programs, and the other in Part V comparing natural and artificial regeneration practices. Each chapter also includes an extensive reference section where supporting or additional literature is listed. Two Appendices provide maps of Ontario relevant to forest regeneration issues and a list of the common and scientific names of plants, animals, and disease-causing organisms referred to in the text.

This book is not intended to provide a formula for regenerating the forest; rather, it is designed to be a comprehensive synthesis of the principles and practice of forest regeneration, with special reference to the province of Ontario. It is intended as a guide for practising foresters, forestry students, wildlife biologists, and others who wish to understand reforestation problems and feasible solutions. During the preparation of this book, there have been changes to some of the policies and guidelines affecting forest regeneration in Ontario. Readers interested in keeping abreast of more recent developments should consult the *Crown Forest Sustainability Act* of Ontario, the series of published guidelines for forest management, and *Ontario's Living Legacy* documents, copies of all of which are available from the Queen's Printer of the Ontario government.
