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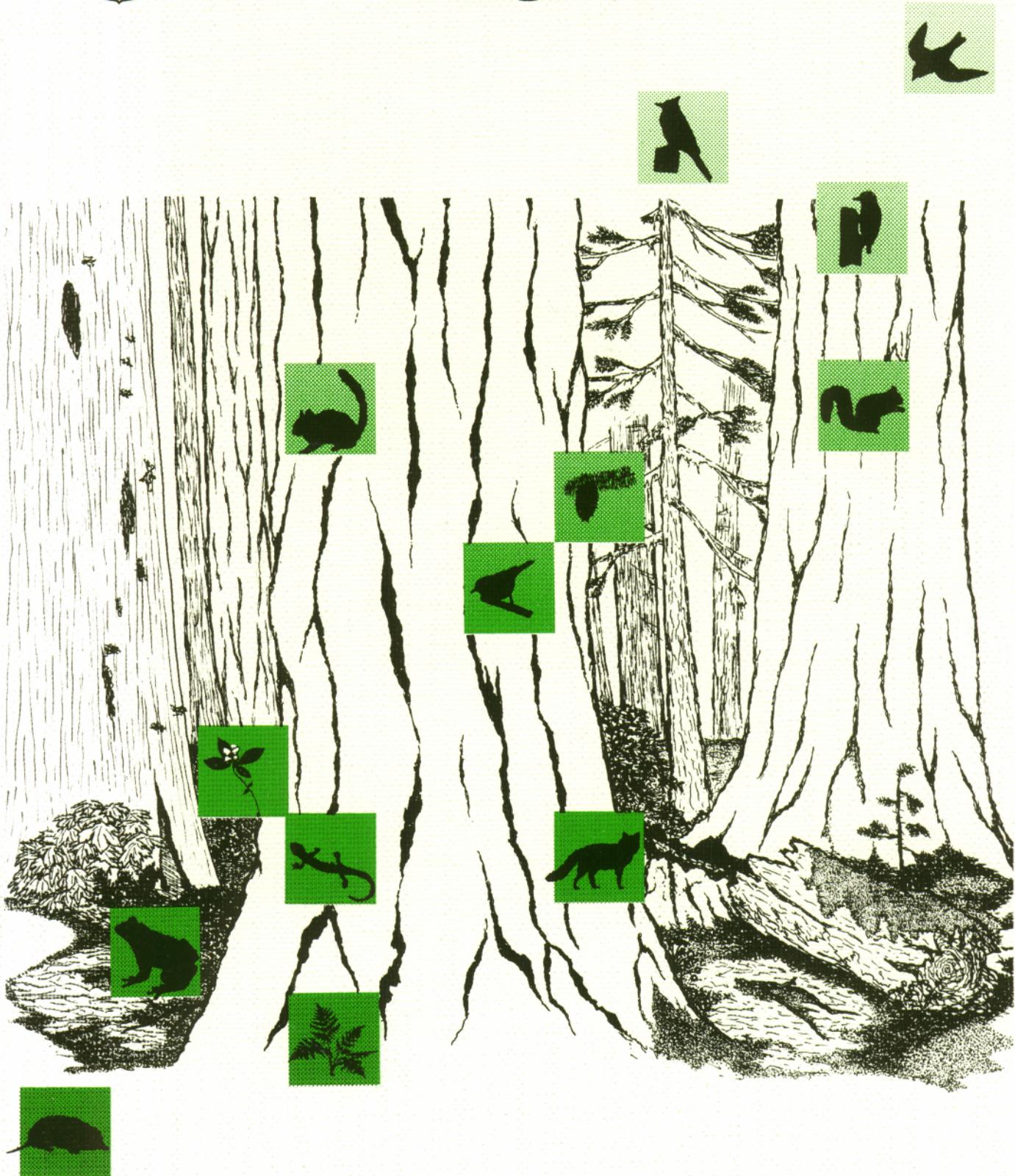
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Wildlife and Vegetation of Unmanaged Douglas-Fir Forests



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WILDLIFE AND VEGETATION OF UNMANAGED DOUGLAS-FIR FORESTS

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Preface

Old-growth Douglas-fir forests in the Pacific Northwest and their most celebrated inhabitant, the northern spotted owl, have engendered an acrimonious controversy that has been raging for over a decade. Should ancient forests be protected for their aesthetic appeal and because they provide a broad range of ecological values, including the most amenable environment for some plants and animals? Or, should they be harvested because the revenue they provide affects the economic stability of the entire region? These questions encapsulate one of the most heated and socially significant conservation and natural resource management debates of this century. This book is an outcome of that debate, and represents the major findings of the USDA Forest Service's Old-Growth Forest Wildlife Habitat Research and Development Program.

This research program began long before the term "ancient forest" added an emotional dimension to the controversy. When this research began in 1983, these forests were simply "old growth," and the debate was about whether old growth was a unique stage of Douglas-fir/western hemlock forest development that provided critical habitat for a broad array of associated species. Some people believed that upwards of 125 species were "dependent" on old growth for their survival; others maintained that although some animals might prefer old growth, none really needed it. The first of these arguments is probably an overstatement and the second is ecologically naive.

Program research has provided new insights about how nature regenerates forested ecosystems in a way that maintains aspects of the structural complexity of old-growth forests in the

new stand. These insights have changed the way old growth is perceived, and they have forever changed resource management in the Pacific Northwest through such concepts as "new forestry" and "new perspectives (in forestry)," and a clearer understanding of the ecological value of unmanaged forests in all stages of development. Land management policies, politics, and prescriptions have all been influenced in ways that were not predictable at the outset.

Much has been learned from this research about the effects of spatial variation (for example, different physiographic provinces and different elevation zones) and temporal variation (for example, differences among winters) on patterns of species abundance. Perhaps most of all, we understand clearly now that very complex issues are involved in determining the kinds, amounts, and arrangements of environments necessary to ensure the viability of plant and animal populations.

The fundamentals of population persistence and of maintaining biological diversity in managed landscapes are just beginning to be understood. Although the findings presented here are most pertinent to Douglas-fir forests in the Pacific Northwest, many of the ecological insights contained in these papers have more general applicability. We hope that this book will be an important resource for managers and researchers working in any forested ecosystem. We also hope the book will stimulate new studies to build on the information presented here.

To improve the readability of these papers, only common names for vertebrates, trees, and shrubs are used in the book. A list of the scientific names of all species mentioned is included in Appendix A at the end of the book. The papers contained in this volume were originally presented at a symposium entitled, "Old-Growth Douglas-Fir Forests: Wildlife Communities and Habitat Relationships," held in Portland, Oregon, on March 29-31, 1989. Manuscripts prepared from these presentations, however, have been reviewed by at least two technical experts. Consequently, many of the papers have undergone extensive revision, and certain aspects may differ substantially from presentations given at the symposium. Abstracts of poster presentations from the symposium are included in Appendix B.

We thank Julianne Bulgrin for her help in preparing maps and figures and Janet Jones for compiling and editing the References and assisting with desktop publishing. We would especially like to acknowledge Sharon Kuhnau for the inestimable administrative and moral support she provided during the entire tenure of the Old-Growth Forest Wildlife Habitat Program

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