

gene concept? (Molecular genetics of disease resistance: an end to the gene-for-gene concept?, Chapter 19). The gene-for-gene concept refers to the differential responses of plants to different races of pathogens. This differential response of plants implies that the recognition stage is involved as mutations in the later stages of signal transduction and plant defense response would affect all pathogen races similarly. Thus, so far, the findings of molecular biology can easily be reconciled with the gene-for-gene concept.

This book presents a nice overview of various developments related to the gene-for-gene concept in plant-pathogen interactions. Efforts to combine molecular, natural populations and agricultural problems are welcome as only then can one understand the impact of the gene-for-gene concept in plant biology. I strongly recommend this book to anyone interested in plant-pathogen interactions. — Johanne Brunet, Department of Botany and Plant Pathology, Oregon State University, Corvallis

The Ferns and Fern Allies of New England
Tryon, Alice F., and Robbin C. Moran, 1997. ISBN 0-932691-23-4 (cloth US\$49.95) 325 pp. Massachusetts Audubon Society, 208 South Great Road, Lincoln MA 01773 — As a resident of western New England and an avid hiker of Massachusetts woodlands, I looked forward with great anticipation to receiving this book to review, and I was not disappointed. Tryon & Moran have put together an exquisite book on the ferns and fern-allies of New England that should be on the shelf of every botanist, ecologist, horticulturalist, and field naturalist. This book should be admired not only for its scholarly treatment of the plants by two acknowledged experts in the field, but also for the astonishingly beautiful photographs of each species, most taken over 50 years ago.

The Ferns and Allied Plants of New England describes the ninety-two native species and several additional varieties of ferns and fern-allies (Equisetaceae, Lycopodiaceae, Selaginellaceae, and Isoëtaceae) that occur in the six-state New England region of the United States (Maine, New Hampshire, Vermont, Massachusetts, Connecticut, and Rhode Island). Following a brief introduction, which includes references to ferns in literary works, a workable key to all the genera in the book is provided. Nomenclature follows the recent *Flora of North America, North of Mexico* (vol. 2, Pteridophytes and Gymnosperms). Each genus is treated separately, following standard botanical ordering (unlike the standard field guide for the region, Boughton Cobb's *A Field Guide to the Ferns and Their Related Families*, Houghton-Mifflin, 1956). For genera with more than one

species in the region, a key to the species precedes the species descriptions. Presentation of each species' description is standardized, and includes: distinguishing characteristics; a description of the habitat in which it can be found; its range in New England; its global range; chromosome number; spore structure; and additional remarks to aid in identification and distinction; discussion of its nomenclatural derivation; and interesting accounts from history and lore. County-level dot maps illustrate the New England range; the data for creating these maps are based on collections in the herbarium of the New England Botanical Club, with additions from other regional herbaria and other published (and unpublished) works. Because the ranges of many ferns and fern-allies of New England extend outside of the region, their global ranges are plotted as well.

Each species is illustrated with a photograph of the plant in its natural habitat. All but two of the ferns were photographed between 1934 and 1942 by the amateur naturalist and photographer, Robert L. Coffin, of Amherst, Massachusetts. These photographs, mostly from the Amherst area, were taken with a large-format (9 x 12 cm negatives) camera, and so the details are not obscured by the minimal enlargement needed for printing. The fine level of preservation of these photographs is a tribute to Coffin's careful work; they were rediscovered in Coffin's son's home by Walter Hodge (of the University of Massachusetts) and the authors. Hodge himself took most of the photographs of the fern-allies, while other photographs were provided by David Barrington (University of Vermont), W. Carl Taylor (Milwaukee Public Museum), and the late William Drury (College of the Atlantic).

The book closes with several appendices of additional value. First is a set of scanning electron micrographs of the spores of all the species of ferns and fern-allies described in the text. Like the plant photographs, these SEM images are brilliantly printed. Second is a description of the geology and climate of New England that places the regionally high species diversity of ferns and fern-allies into the appropriate temporal context. The last appendix is a short section on gardening with ferns, with emphasis on purchasing ferns and spores from reputable nurseries as opposed to illegally collecting them in the field (as many species are rare or endangered). A glossary of technical terms and short, but useful reference list end this book.

There's no denying the lasting value and utility, and the sheer beauty of *The Ferns and Allied Plants of New England*. Buy a copy today, buy more for your friends and colleagues, and carry it with you in the field. And call your local Audubon Society preserve or office and make sure they have a ready supply on hand to sell. — Aaron M. Ellison, Department of Biological Sciences, Mount Holyoke College, South Hadley, MA 01075.

