Trials and Tribulations From a Hardwood Forestry Literature Junkie: The Hardwood Information Project

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Abstract

The Hardwood Information Project (THIP) involves the accumulation and organization of literature under the broad categories of ecology, silviculture, and management of hardwoods. The goal of THIP is to have the best collection of hardwood literature in the world located in one place in a logical and easily retrievable format. The cornerstone of THIP is *Forestry Abstracts*. I have developed and use a system that involves *Forestry Abstracts* and the National Agricultural Library to identify and retrieve hardwood and related literature for storage and future use. This system is based on lecture topics from a college course in hardwood management. I will describe THIP, including success in literature retrieval through *Forestry Abstracts* and the National Agricultural Library, and how articles are filed for easy retrieval and use. I also welcome suggestions for improvements to THIP.

Introduction

I taught a senior-level hardwood management course for 10 of the 12 years I was on the faculty at the University of Arkansas - Monticello and Louisiana State University. The emphasis of the course was on the ecology, silviculture, and management of hardwoods, especially bottomland hardwoods, in the southeastern United States. Assigned readings were heavily emphasized in this course. Citations for these readings, along with all other pertinent literature I could find relating to the topic, were listed in the course lecture notes (these notes were given to the students via Blackboard web-based software – see Lockhart (2001) for more detail). One objective of this course was to provide students with a large listing of literature for future reference. The accumulation of literature for this course, along with my general interest in hardwood literature (basically a hobby), led to the development of a hardwood literature search and retrieval system called The Hardwood Information Project (THIP). The objectives of this paper are to describe THIP and seek ideas for improving THIP to better serve the natural resource professions.

THIP

THIP is centered on *Forestry Abstracts* (FA). FA is a monthly journal covering the world literature on all aspects of forestry. It is one of the most complete listing of forestry literature, with about 10,000 abstracts added each year from the CAB Abstracts database. A disadvantage of using FA is the citation listings are usually six months to one year old. I consider this acceptable as it allows the receipt of a more complete coverage of the literature. I could subscribe to the table-of-contents of specific journals for up-to-date contents but this would complicate THIP by receiving publication updates from different journals, at different times, and from different databases, especially regarding retrieving articles from lesser-known journals.

Abstracts selected from FA are based on use in the hardwood course or my general interest. A current listing of lecture topics is found in Table 1. This listing represents more topics than covered in the course as I collapsed my hardwood literature filing system into the course. Lecture notes, which are still being developed or improved, now represent "summary reports" as my way of keeping up with the state of knowledge pertaining to the ecology, silviculture, and management of hardwoods. These summary reports and associated PowerPoint® presentations are now used for a variety of service-oriented endeavors, such as guest lectures, workshops/shortcourses, and presentations to professional and lay organizations. They are also used for manuscript and research proposal preparation.

While reviewing an issue of FA, I mark selected abstracts, then copy the pages containing the abstracts of interest. I prefer paper copies for the tracking purposes described below. We, Center for Bottomland Hardwood Research Work Unit, do not receive an electronic copy of FA and searching CAB (which contains FA among other literature citations) is an unnecessary step. Foreign language articles are also selected if they have an English-based abstract.

Article Review

After selecting abstracts, three attempts are made to retrieve the article. The first attempt is through the World Wide Web via the National Agricultural Library (NAL). NAL is one of four national libraries of the United States and is one of the world's largest and most accessible agricultural research libraries. Its mission is to increase the availability and utilization of agricultural information for researchers, educators, policy makers, consumers of agricultural products, and the public. U.S. Department of Agriculture employees have full access to NAL and can download articles in pdf format from over 500 journals, including *Forest Ecology and Management* and the *Canadian Journal of Forest Research*. The NAL does not subscribe to all forest resources journals. For example, NAL does not currently have subscriptions to journals from the Society of American Foresters (*Journal of Forestry*, *Forest Science*, and the regional forestry journals) and the Ecological Society of America (*Ecology*, *Ecological Monographs*, and *Ecological Applications*). Fortunately, I personally receive these journals and have on-line access for pdf copies of all on-line articles.

If the article from the selected abstract is from a journal not available from NAL and I do not subscribe to the journal, then an e-mail is sent directly to the contact author requesting a copy of the article. A pdf copy if preferred, but a paper reprint will suffice. The contact author's e-mail address is usually listed in FA. If a response is not made from the contact author within three weeks then a second e-mail request is sent. Upon receipt of the article, a follow-up thank you e-mail is sent to the sender without the attached file.

If, after about three weeks from the second e-mail request, no response is made by the contact author, then the article is requested through the NAL inter-library loan service. This service is automated and articles are usually received in one to three days in pdf format through e-mail.

Filing

When a pdf is received it is printed and filed in an individual manila folder within its specific lecture topic. The pdf copy is kept in a subdirectory with the same lecture topic. Reprints received instead of pdf copies are scanned to create pdf copies. As with articles received in pdf format, reprints are filed in their associated lecture topic while the scanned pdf file is kept in a subdirectory with the same lecture topic. In essence, storage by lecture topic serves as my hardwood literature filing system for other uses as previously mentioned.

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Scope of THIP

THIP is not exclusive to hardwoods. Literature from southern pines, western conifers, tropical species, etc., are also included. Research findings, silvicultural practices, and other observations from forest cover types throughout the world may have applicability to hardwood management. The goal of THIP is to have the best collection of hardwood literature in the world located in one place in a logical and easily retrievable format. My personal goal, a life-long goal, is to have the lecture notes, including the literature citations, available on the World Wide Web so that all interested in hardwood management can benefit.

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Literature Cited

Lockhart, B. R. 2002. Teaching a hardwood silviculture and management course: experience and ideas including using Blackboard web-based courseware. Pgs. 41-54 *in* G. B. Blank (compiler), Proceedings of the Fourth Biennial Conference on University Education in Natural Resources, Natural Resources and Environmental Issues, Volume IX, S. J. and Jessie E. Quinney Natural Resources Research Library, College of Natural Resources, Utah State University, Ogden, Utah, 109p.

Table 1. Lecture topics for a course on the ecology, silviculture, and management of hardwoods. These topics also serve as headings for literature filing.

Part I. Introduction

1. Course Overview
2. Hardwood Resource
3. Hardwood History
4. Hardwood Organizations
5. Disturbance, Succession, and Stand Development Review
6. Silviculture Review

Part II. Hardwood Ecology

7. Site
8. Soils
9. Species
10. Species-Site Relationships
11. Succession
12. Seed Biology, Ecology, and Ecophysiology
13. Seedling Biology, Ecology, and Ecophysiology
14. Ecosystem Functions and Values
15. Stratified Mixture Concepts
16. Stand Development Patterns
17. Old Growth

Part III. Hardwood Silviculture

18. Site Quality Evaluation
19. Silvicultural Systems
20. Reproduction Methods - Even-Aged
21. Reproduction Methods - Uneven-Aged
22. Natural Regeneration
23. Natural Regeneration Evaluation
24. Artificial Regeneration (overview, decision, site prep)
25. Direct Seeding
26. Nursery Practices
27. Tree Improvement/Genetics
28. Planting
29. Afforestation/Reforestation
30. Underplanting
31. Regeneration Development (up to 5 years)

Part III. Hardwood Silviculture (continued)

32. Plantation Development
33. Artificial Mixtures
34. Density and Stocking Relationships
35. Release Operations
36. Log Grading
37. Tree Class Systems
38. Thinning
39. Tree Degradation
40. Fertilization
41. Herbicides and Herbicide Application
42. Prescribed Burning
43. Other Intermediate Operations

Part IV. Hardwood Management

44. Landowner Objectives
45. Inventory
46. Biomass, Growth and Yield
47. Economics
48. Management Decision Trees
49. Hardwood Decision Models
50. Diameter Limit Harvesting/High Grading
51. Hardwood Management Ethics
52. Rehabilitation and Restoration
53. Forest Health
54. Wildlife
55. Wildlife Habitat
56. Lumber Grading
57. Products
58. Policy
59. Resource Sustainability
60. Best Management Practices
61. Certification
62. Hardwood Management Principles (a listing of 10 principles to wrap-up the course)