

Non-Timber Forest Products: Medicinal Herbs, Fungi, Edible Fruits and Nuts, and Other Natural Products from the Forest

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Perceived as socially, economically, and ecologically sustainable, non-timber forest products (NTFPs) have held special charm as alternatives to forest management focussed exclusively on timber. This paper examines themes central to development of NTFPs as management and conservation strategies in the developing world. Following brief descriptions of seven product types, the paper reviews research on the promise of sustainable prosperity through NTFPs. Critiques of economic valuation and commercialization suggest that NTFP development strategies are not without social, economic, and ecological problems. The paper concludes with a list of eight major issues relating to the extraction and trade of non-timber forest products.

KEY WORDS. Extractive reserves, economic valuation, commercialization, third world, non-timber forest products

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Marla Emery
Shandra L. O'Halek

Non-timber forest products (NTFPs) have sustained indigenous and immigrant populations alike since their arrival in North America. This brief overview focuses

on the historical use of NTFPs in the U.S. Pacific Northwest and Upper Midwest. Drawing on sources as diverse as accounts by early European arrivals, archaeological evidence, and contemporary ethnobotanical studies, we touch on documented uses of forest vegetation from prehistory to the present century. The residents of these regions have used NTFPs for food, medicine, and cultural materials. NTFPs have met their livelihood needs through subsistence uses and both non-market and market exchanges. We conclude that in spite of U.S. incorporation into a global market-based economy, there is notable continuity in the harvest and use of NTFPs in the United States from prehistory to current times.

KEY WORDS. Non-timber forest products, environmental history, human-forest interactions, Michigan, Pacific Northwest

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in Northwestern North America: Applications and Issues 31
Nancy J. Turner
Wendy Cocksedge*

Aboriginal peoples in northwestern North America have traditionally used hundreds of different forest plants for food, materials and medicines. Plant products have also been economically important as trading goods. Today there are excellent prospects for aboriginal people to participate in the harvesting and marketing of non-timber forest products, but there are serious issues of access to and control of resources, respect of intellectual property rights, and concerns for conservation of plants and ecosystems that must be addressed. We provide an overview of past, current and potential use of NTFPs by aboriginal peoples in British Columbia and neighboring areas, and discuss the relevant issues and concerns, with recommendations about how these can be accommodated.

KEY WORDS. Traditional food, traditional medicine, indigenous peoples, basketry, British Columbia

*An Overview of Non-Timber Forest Products
in the United States Today 59
Susan J. Alexander
Rebecca J. McLain*

As people become more interested in personal health and family activities, demand for wild forest products has increased. This increased demand coupled with an increased concern for sustainable management practices has focused attention on the variety of issues and products involved in the non-timber forest products industry. Forest management organizations have gradually increased funding for research and management of non-timber forest products over the past two decades. The broad categories of U.S. non-timber forest products include floral greens, Christmas greens, ornamentals and craft materials, wild edibles, medicinals, ceremonials/culturals, and native transplants. The increase in resource pressure has had many policy reactions, including restricted access, harvesting fees, and harvest limits. Opportunities for public input to policy decisions on federal, state and private land are often unclear or nonexistent. Researchers, managers, and policy

makers are working to understand the multitude of issues surrounding non-timber forest products, including biology, management, public policy and equity issues.

KEY WORDS. Medicinals, floral greens, wild edibles, non-timber forest products

Non-Timber Forest Products in Local Economies:

The Case of Mason County, Washington

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James Freed

Non-timber forest products (NTFPs) have been a vital part of the local economies of Mason County, Washington since the first peoples came there over 9,000 years ago. First Americans used NTFPs in every fact of their lives. The new Americans, from early Euroamericans to the newest Asian Americans, have used nontimber forest products to provide subsistence resources and income support. Beginning in the 1970s, increased demand for medicinals, wild mushrooms, and floral products brought Mason County's NTFP industries back into the limelight. Unfortunately, the rise in demand for NTFPs has increased social conflict in Mason County. Indeed, disputes over harvesting practices and the tension between floral greens and wild mushroom business over across to NTFP leaves have made Mason County the floral point of recent efforts to expand government regulation of the NTFP industry in Washington. However, NTFPs may also provide opportunities for decreasing the political conflict over timber management in the region by creating financial incentives for landowners to maintain longer timber rotations.

KEY WORDS. Native Americans, medicinals, mushrooms, floral greens, wild edibles, forest management

SECTION II: RESEARCH ON NON-TIMBER FOREST PRODUCTS IN THE PACIFIC NORTHWEST

Research in Non-Timber Forest Products: Contributions of the USDA Forest Service, Pacific Northwest Research Station

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Nan C. Vance

Non-timber forest products (NTFPs) have emerged as a complex set of issues reflecting changes in society and how natural resources are regarded. These issues range from the sustainability of forest management practices to the relationship of diverse cultures and communities to public lands and their resources. Research and its relationship to this set of issues is a relatively unknown aspect of NTFPs. This paper reports on early NTFP research by scientists in the USDA Forest Service's Pacific Northwest Research Station. It characterizes efforts over approximately five years and identifies their key elements. It also discusses the role research has and could play in addressing the problems and questions associated with NTFPs and sustainable forestry

KEY WORDS. Pacific Northwest, non-timber forest products, USDA Forest Service, native forest plants, native forest fungi

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Mushrooms: Current Biological Research and New
Directions in Federal Monitoring* 83
David Pilz
Randy Molina
Michael P. Amaranthus

The commercial harvest of wild edible forest mushrooms has increased dramatically in the Pacific Northwest United States during the last decade, creating public and managerial concerns about potential over-harvesting. These concerns have prompted Federal land management agencies and research organizations to undertake a variety of research projects addressing the ecological impacts and long-term sustainability of widespread harvesting. This article lists and briefly describes 25 ongoing research projects investigating the three most important forest mushroom genera of commerce; matsutake, morels, and chanterelles. We finish by describing future Federal directions in regional research and monitoring designed to ensure sustainable harvests through long-term cooperative monitoring involving multiple stakeholders, especially interested publics.

KEY WORDS. Mushrooms, sustainable harvest, research, monitoring

- Socio-Economic Research on Non-Timber Forest Products
in the Pacific Northwest* 95
Susan J. Alexander
Rebecca J. McLain
Keith A. Blatner

The non-timber forest products industry in the Pacific Northwest has been viable for nearly a century. Although it is a small part of the regional economy, the industry involves many people in the region and products are exported worldwide. Harvest of non-timber forest products has become more scrutinized as landowners, forest managers, and harvesters struggle to meet their sometimes conflicting needs and requirements, and deal with growing demand for many wild products. Much of the research on non-timber forest products has focused on biology and ecology, although there has been some research on the social and economic aspects of non-timber forest products over the past several decades. There are several social and economic studies of the industry that are underway or just being completed in the Pacific Northwest. Current research includes studies on product yield, market surveys, price analysis, product management and silviculture, recreational use, and policy analysis. Recommendations for future research are outlined. The non-timber forest product industry is a highly varied and frequently changing industry, with issues ranging from biological sustainability to equity. Social and economic research helps resolve questions surrounding management, harvesting, production and marketing of these highly demanded and often poorly understood products.

KEY WORDS. Non-timber forest products, NTFP industry, NTFP markets, NTFP socio-economics

SECTION III: SOCIO-POLITICAL CONSIDERATIONS
FOR NON-TIMBER FOREST PRODUCT MANAGEMENT

- Why Is Non-Timber Forest Product Harvesting an “Issue”?
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of Temperate Forestry* 105
Thomas Love
Eric T. Jones

Despite an encouraging trend in North America of growing interest across a range of disciplines in non-timber forest products (e.g., this volume), NTFP harvesters' knowledge and practices continue to be poorly understood and undervalued, if not ignored, both by research scientists and forestland policy-makers and managers. This article explores why NTFP harvesting suddenly emerged in North America as an “issue” in the early 1990s. Drawing from a three-year study of chanterelle mushroom harvesters on the Olympic Peninsula Biosphere Reserve (Washington, USA), we discuss a variety of forces which intersected in this period to bring NTFP harvesting to wider attention. Unfortunately, harvesters continue to be excluded as knowledgeable actors in, if not legitimate co-managers of, temperate forest ecosystems, resulting in both passive and active harvester resistance to research and management, a devaluing of local harvesting traditions, and missed opportunities for collaboration. We reluctantly conclude that despite “New Forestry” co-management rhetoric, given existing institutional barriers and positivist scientific categories, NTFP workers will likely remain excluded from active roles in temperate forest research and management-contributing in turn to the ongoing legitimacy crisis of public and private forest management entities.

KEYWORDS. Chanterelle mushroom, forest management, legitimacy crisis, local knowledge, non-timber forest products

- Who Knows? Local Non-Timber Forest Product Knowledge
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Marla R. Emery

Non-timber forest product (NTFP) literature frequently laments the absence of an information base for policy and management decisions. While formal scientific data on the biological and social ecologies of most NTFPs are limited to nonexistent, long-time gatherers often have extensive experiential knowledge bases. Researchers and managers may overlook this expertise because of assumptions about the nature of knowledge and the identity of individuals who possess valuable information. These assumptions are explored and contrasted to the concept of local knowledge. A case study of gatherers in Michigan's Upper Peninsula found that many possess extensive knowledge of the products they harvest and observe stewardship practices to assure their sustained availability. The paper is illustrated by descriptions of four gatherers and concludes with recommendations for incorporating the local knowledges of individuals from a variety of cultures into policy, research, and management.

KEYWORDS. Non-timber forest products, local knowledge, sustainable use, Michigan

- Recent Trends: Non-Timber Forest Product Pickers
in the Pacific Northwest* 141
Richard Hansis
Eric T. Jones
Rebecca J. McLain

The Pacific Northwest is a region where commercial demand for a variety of NTFPs—floral greens, mushrooms, berries, mosses—has expanded rapidly over the past fifteen years, creating space for new types of harvesters. These are mainly recent Southeast Asian and Latino immigrants who find this work allows them some degree of self-direction and income. Tensions have arisen between Native Americans, Euro-Americans, and recent immigrants over access rights to NTFPs as competition for these previously abundant resources has increased. Increased harvesting has also brought concerns about sustainable harvesting forward.

KEYWORDS. *Immigrants, participation, conflict*

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Rebecca J. McLain
Eric T. Jones

During the past decade, a variety of new state and federal laws and regulations have been developed to regulate the use and management of NTFPs on federal and state lands. A growing body of literature on the social aspects of NTFPs indicates that few NTFP harvesters and buyers are involved in the development of these rules. This policy overview draws upon the authors' five years of ethnographic research on the politics of NTFPs and wild mushrooms in the Pacific Northwest region of the United States to describe and analyze barriers to NTFP harvester and buyer participation in NTFP policy fora. Three case examples of efforts by participants in NTFP industries to organize themselves politically so that they can have a voice in policy and management decisions are discussed. The overview concludes with a series of recommendations for steps that non-governmental organizations and public land management agencies can take to support harvester/buyer efforts to expand their influence over forest policy and management decisions.

KEYWORDS. *Participation, public involvement, wild mushrooms, forest policy, non-timber forest products*

- Synthesis and Future Directions for Non-Timber Forest
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Rebecca J. McLain
Susan J. Alexander

During the past decade, NTFPs have begun to appear on mainstream scientific research agendas in a variety of disciplines. Development of a strong NTFP re-

search capacity will require the construction of links between on-going and emerging NTFP research programs focused on U.S. NTFP issues, establishment of strong ties to international NTFP research programs, and the use of interdisciplinary and collaborative research approaches. Understanding forests as bio-physical systems that also include humans will enhance the effectiveness and relevance of U.S.-oriented NTFP research efforts.

KEYWORDS. NTFP research, science