Brief Overview of Historical Non-Timber Forest Product Use in the U.S. Pacific Northwest and Upper Midwest

Marla Emery
Shandra L. O'Halek

SUMMARY. 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

---

Marla R. Emery is Research Geographer, USDA Forest Service, Northeastern Research Station, 705 Spear Street, P.O. Box 968, Burlington, VT 05402-0968 USA (E-mail: memery@fs.fed.us).

Shandra L. O'Halek is Senior Planner for Mason County, WA.

The authors are indebted to Susan Alexander and David Pilz, USDA Forest Service Pacific Northwest Research Station, for their assistance in identifying scientific names for NTFP species in that region. And to Beth Lynch, formerly with the Great Lakes Indian Fish and Wildlife Commission, Dana Richter, Michigan Technological University, and Jan Schultz, Hiawatha National Forest, for sharing their knowledge of the proper nomenclature for Upper Midwestern species.

[Haworth co-indexing entry note]: "Brief Overview of Historical Non-Timber Forest Product Use in the U.S. Pacific Northwest and Upper Midwest." Emery, Marla, and Shandra L. O'Halek. Co-published simultaneously in *Journal of Sustainable Forestry* (Food Products Press, an imprint of The Haworth Press, Inc.) Vol. 13, No. 3/4, 2001, pp. 25-30; and: *Non-Timber Forest Products: Medicinal Herbs, Fungi, Edible Fruits and Nuts, and Other Natural Products from the Forest* (ed: Marla R. Emery, and Rebecca J. McLain) Food Products Press, an imprint of The Haworth Press, Inc., 2001, pp. 25-30. Single or multiple copies of this article are available for a fee from The Haworth Document Delivery Service [1-800-342-9678, 9:00 a.m. - 5:00 p.m. (EST). E-mail address: getinfo@haworthpressinc.com].

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.

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

Non-timber forest products (NTFPs) have been important to the livelihoods of the inhabitants of North America from prehistoric times to the present. As elsewhere in the world, early inhabitants of the forested portions of North America made extensive use of the vegetation that surrounded them. Archaeological evidence indicates, for example, that by 6,000 B.C. Native American residents of the Upper Great Lakes Basin relied heavily on plant foods gathered in the region's mixed conifer-deciduous forests (Cleland, 1983).

For the last four centuries, NTFPs have continued to help sustain Native and other Americans. Early historical documents record the importance of NTFPs for the human population of North America. Missionaries writing to their European headquarters between 1610 and 1791 described the use of plant matter from the northeastern woods to meet a variety of human needs (Society of Jesus, 1898). Among other items, their reports frequently mentioned the use of birch bark (*Betula papyrifera* Marsh.) for eating utensils and bedding and as a construction material for dwellings and canoes. They also noted the use of unspecified barks for purposes as diverse as musical instruments, funeral pyres, and poultices for wounds and skin lesions. When he drafted his map of New France (northeastern North America) in 1632, Samuel Champlain (1850) recorded what he believed were the most important cultural, economic, and political features of the province. These included a "lieu ou les sauvages font secherie de framboises et blues tous les ans" ("place where indians dry raspberries (*Rubus* spp.) and blueberries (*Vaccinium* spp.) each year." Learning from the indigenous population and, no doubt, from their own need and experience, early colonists also relied heavily on berries, nuts, and other wild edibles for sustenance (Cronon, 1983; Williams, 1989).

In addition to their subsistence uses, NTFPs have long been impor-

tant in nonmarket exchanges such as barter and gift giving. For example, until the appearance of trading posts in the late 1700's, the indigenous people of the Olympic Peninsula in the Pacific Northwest were considered especially wealthy because of the abundance of land and sea resources available to them. Historical use of 300 plants from this region for food, flavorings, or spiritual purposes has been documented. Berries were gathered and eaten fresh or dried for storage. Red huckleberry (*Vaccinium parvifolium* Smith) was used for fishing bait because the round red berry simulates roe. Roots such as various fern stocks, tiger lily (*Lilium columbianum* Hanson), clover (*Trifolium* spp.), and lupine (*Lupinus* spp.) were surrounded by moist salal (*Gaultheria shallon* Pursh) and sword fern (*Polystichum munticum* [Kaulf.] Presl) and pit-cooked to convert the bitter emuline to a sweetened fructose. Materials for eating utensils, arrows, paddles, paints, dyes, and shampoos were gathered from the forest. Many of these products were traded to other tribes and, in some cases, traveled far from the Olympic Peninsula. Whether for direct consumption or exchange, ongoing harvest of NTFPs was critical and gatherers used sophisticated plant management techniques that included selective harvesting at specific life stages, replanting, pruning, and landscape manipulation. Ceremonies were performed before harvesting to show respect for plant resources and gratitude to the higher powers that provided for human needs. These practices and spiritual traditions in the region safeguarded and sustained the forest for future generations (Turner and Peacock, submitted 2001).

As the United States became integrated into the world economy, NTFPs began to have market as well as nonmarket uses. Commerce in ginseng (*Panax quinquefolius* L.) began in the early 1700's, with roots harvested throughout eastern forests and sold primarily to China. This trade reached a peak of $6 million in 1875. One measure of the importance of NTFPs in the mid-1800s is evident in government statistics. East of the Mississippi River, income from ginseng and "all other forest products"–probably including maple syrup (*Acer saccharum* Marsh.), wild fruits, and honey–was deemed to be a significant enough component of the national economy for enumeration in the 1840 U.S. census (Williams, 1989).

In the Pacific Northwest, the influx of trappers, loggers, and railroads created demand for new products and the region's forest materials assumed a commercial worth. By 1871, the harvesting of conifer

seeds for reforestation efforts became an important industry in the Pacific Northwest (Gerdes, 1996). The earliest commercial harvesting of floral greens–which remains the most enduring and stable year-round NTFP industry in the region–can be credited to Sam Roake, an enterprising immigrant from England who saw the usefulness and beauty of the elegant fronds of the Northwest sword fern, also known as "brush" (Heckman, 1951). In 1915, he bought an old horse barn by a railroad in Castle Rock, Washington, and began shipping brush to California. Brush sheds sprang up over night and soon other products such as glossy sprays of huckleberry and large-leafed salal boughs were sought by restaurants, stores, and funeral parlors all over the United States. In the years that followed, plants such as Oregon Grape (*Berberis nervosa Pursh*), bear grass (*Xerophyllum texnas* Nutt.), and scotch broom (*Cytisus scoparius* [L.] Link) moved into the brush sheds for sale to international markets.

Industrialization did not eliminate NTFPs as an important livelihood strategy for North Americans. Frances Densmore (1974) documented the use of wild plants for food, medicine, dyes, crafts, and utensils by Native Americans in the Upper Midwest during the first quarter of the 20th Century. Photographs from that period and region attest to the continued importance of NTFPs for much of the European American population as well. They were particularly critical for many households during the Depression. For example, older residents of Michigan's Upper Peninsula relate stories of how blueberries helped sustain their families and refugees from the region's cities during this difficult period, and of how individuals and entire families spent summers camped in the blueberry fields. From their first ripening to the first freeze, children and adults picked berries from morning until evening (Emery). These berries provided for local households in three ways: they were eaten fresh, dozens of quarts were canned for family consumption during the winter, and berries were sold to buyers who sent them by truck or rail to Chicago and other regional metropolises.

Reliance on NTFPs for food, medicines, and other needs persists to this day. Native and other Americans throughout the country have continued to harvest, use, trade, and sell NTFPs. In the early 1970's, the Foxfire books documented the contemporary ginseng trade and seasonal use of wild plant foods in the southern Appalachians (Wigginton, 1975). Currently, more than 100 NTFPs are gathered in the forests of Michigan's Upper Peninsula (see Emery, this issue). U.S.

forests also continue to provide raw materials for the pharmaceutical industry, as they have for more than 100 years. One example is Cascara sagrada (*Rhamnus purshiana* DC.). Named by monks in California (its common name means "holy bark"), Cascara was first extracted for use in laxatives in 1877 by researchers at Parke-Davis Company (Hinterberger, 1974). Recently, the Pacific yew tree (*Taxus brevifoli* Nutt.) was used by the pharmaceutical company Bristol-Meyers Squibb as a source of taxol, a drug used in ovarian and breast cancer treatment (Vance, 1995).

As this brief overview suggests, NTFPs have sustained indigenous and immigrant populations alike and there is notable continuity in their harvest and use in the United States from prehistory to current times. In the past few decades, the abundance of products in forest understories have been looked to as both regular livelihood sources and as buffers in times of economic difficulty. The remainder of this issue draws on recent research in the Pacific Northwest and the Upper Midwest that explores the social and ecological characteristics of NTFPs in northern North America at the end of the 20th century.

REFERENCES

Cleland, C.E. 1983. Indians in a changing environment. In S.L. Flader (ed.). The Great Lakes forest: an environmental and social history. University of Minnesota Press, Minneapolis.

Cronon, W. 1983. Changes in the land: Indians, colonists, and the ecology of New England. Hill & Wang, New York.

Densmore, F. 1974. How Indians use wild plants for food & crafts (formerly titled Uses of plants by the Chippewa Indians). Dover Publications, Inc., New York.

Emery, M.R. 1998. Invisible livelihoods: Non-timber forest products in Michigan's Upper Peninsula. UMI, Ann Arbor, Michigan.

Heckman, H. 1951. The happy pickers of the high cascades. Saturday Evening Post, October 6, 1951.

Hinterberger, J.J. 1974. A claim to distinction: tons of cascara bark. Seattle Times, June 27, 1974.

Society of Jesus. 1898. Travels and explorations of the Jesuit missionaries in New France, 1610-1791: the original French, Latin, and Italian texts, with English translations and notes; illustrated by portraits, maps, and facsimiles. The Burrows Brothers Company, Cleveland.

Turner, N.J. 1982. Northwest coast root foods. Personal communication.

Turner, N.J. and S. Peacock. Submitted 2001. "The Perennial Paradox": Traditional Plant Management on the Northwest Coast. In Duer, D. and N.J. Turner (eds.).

"Keeping it living": Indigenous plant management on the Northwest Coast. University of Washington Press, Seattle, WA.
Vance, N.C. 1995. Medicinal plants rediscovered. Journal of Forestry 93(3): 8-9.
Wigginton, E. 1975. Foxfire 3. Anchor Books, New York.
Williams, M. 1989. Americans & their forests: A historical geography. Cambridge University Press, Cambridge, UK.