Harvesting Floral Greens in Western Washington as Value-Addition: **Labor Issues and Globalization**

Heidi Ballard^{1*}, Don Collins², Antonio Lopez², James Freed³

Paper submitted for Panel entitled:

"Turning Forests into Economic Assets: Local Value-Addition and Globalization"

ABSTRACT: One of the ways that communities can use value-added activities to transform their forests into economic assets is to add their labor to the resource. To this end, ethnically diverse communities of interest in western Washington and Oregon are increasingly harvesting wild non-timber forest products (NTFP's), particularly floral greens, from both private and public lands. Harvesters, primarily from Latin American countries, hand-pick a variety of species, often using very little in the way of technology or initial capital investment. However, with new access to refrigeration containers and global markets, these floral greens are shipped primarily to Western Europe, competing directly with other floral greens species grown on plantations in the tropics. Rules of access to the land vary from landowner to landowner, and may or may not require documentation, contracts, and permitting fees that are difficult to obtain for many harvesters. Floral greens harvesters in the Pacific Northwest therefore face a variety of challenges in the face of globalization, and have developed a number of ways to approach their unique labor context. Though harvesters work primarily as individuals or small groups in their negotiations with landowners and wholesalers, recently, one group has formed an association that can collectively bargain with landowners and wholesalers for better land access and better prices for their product. Landowners are now requesting contractual agreements with this association to manage the understory of the forest for biodiversity and NTFP's, forests that have previously been managed only for timber production. The outcome of this attempt to improve harvester livelihoods and sustain healthier forests remains to be seen, but will hopefully provide lessons for local forestdependent communities dealing with the challenges of globalization.

I. **Introduction and Background of Floral Greens Harvesting Southwestern** Washington

One of the ways that communities can use value-added activities to transform their forests into economic assets is to add their labor to the resource. The non-timber

¹ Dept. of Environmental Science, Policy and Management, 151 Hilgard Hall, University of California, Berkeley, CA 94720. hballard@nature.berkeley.edu.

Contact this author with all questions and comments.

² Northwest Research and Harvester Association, W 121 Arrowhead Dr., Elma, WA 98541.

dwlacollins@centurytel.net.

3 Cooperative Extension, Dept. of Natural Resources, Washington State University, P.O. Box 47037, Olympia, WA 98504-7037. freedj@wsu.edu.

gaining momentum over the last 15-20 years as forest-dependent communities experience the consequences of declining timber harvests on public forests. Alongside these communities, land managers and scientists are turning to NTFP's as an alternative or complement to timber production in their shift from timber to ecosystem management (Kohm and Franklin, 1997). However, pressure to manage for healthy ecosystems is only one of the incentives for landowners to pursue NTFP production (also called "special forest products"); products such as edible mushrooms, leafy stems of shrubs used in the floral industry (floral greens), and medicinals have become a multi-million dollar industry in the states of Washington, Oregon, and parts of northern California.

The most lucrative of these special forest products are the floral greens, which are generally understory shrub species that grow naturally in managed or unmanaged forests. In 1989, the floral greens industry in Oregon, Washington and British Columbia at the point of first wholesale transaction was valued at over \$128 million and employed or bought raw materials from 10,300 people (Schlosser et al 1991); more recent data is not available but estimates suggest a dramatic increase since 1989. As a case example of the effects of globalization, the floral greens industry illustrates both increasing flows of labor from Southeast Asia and Latin America and increasing scales of commodities distribution to broader and broader markets. The state of Washington in 1994, specifically, exported 80% of the floral greens harvested via primarily German and Dutch wholesalers (Savage 1995). Those who harvest these plants are predominantly from the lowest socioeconomic levels of U.S. society, are ethnically diverse, and are rapidly increasing in number in the region (Von Hagan and Fight 1999). To complete the

picture, recent increases in harvesting pressure have raised concerns about ecological and economic sustainability on the part of land managers, harvesters, and conservationists alike. Not surprisingly, these stakeholders rarely communicate about their concerns and solutions to resource management issues; this often results in the group with the least power, the harvesters, becoming further excluded from management decisions, further economically disadvantaged and continually blamed for any presumed over-exploitation of resources. The labor they contribute by hand-picking floral greens in forested ecosystems is the greatest source of value added to these natural resources. The challenges harvesters face in trying to create and maintain a livelihood of picking floral greens, and the approach that one group is taking to protect and promote the resource as well as their own livelihoods, illustrate the effects of and possibilities offered by globalization.

The southeastern Olympic Penninsula in particular has a long history of floral greens harvesting, but is experiencing the "growing pains" of an intensification and broadening of wholesale activity and production. The foliage of floral greens, primarily consisting of understory species called salal (*Gaultheria shallon*), western sword fern (*Polystichum munitum*), red huckleberry (*Vaccinium parvifolium*), bracken fern (*Pteridium aquilinum*), beargrass (*Xerophyllum tenax*), and evergreen huckleberry (*Vaccinium ovatum*), has been harvested on a small scale in this region since the turn of the century, but an increase in harvest intensity in the last two decades has caused a marked decrease in the availability of commercial-quality salal in some areas, according to harvesters (Brown and Marin-Hernandez 2000) and managers. These growing pains have taken the form of conflicts over resource use familiar to conservation and rural

development efforts around the world (Peluso 1996, Hecht 1988, Berry 1989): A reorganization of labor processes, new technologies, new institutional arrangements, and revised social relations of production have coalesced to create new and varying resource management systems for floral greens production. Rapid changes in the perceptions and value of the resource have also affected management and social relations in the floral greens industry. Until recently, understory shrubs harvested as floral greens have been considered "weeds" in Pacific Northwestern forests under intensive timber management; research on these species is therefore limited to their response to thinning, herbicides and fertilizers (Bailey et al 1998, He and Barclay 2000, Thomas et al 1999). However, little is known about the consequences of intensive harvesting and management on growth and reproduction of the plant.

II. Challenges to Sustainable Livelihoods in Pacific Northwest Forests

The intensification and centralization of the floral greens industry has caused a dramatic shift in the structure of rights and abilities of harvesters to access floral greens, both formal and informal. Additionally, the rapid increase and expansion of markets for floral greens, primarily in western Europe, has presented both obstacles and opportunities for harvesters. The NTFP industry in the Pacific Northwest is largely a "cash and carry" one in which land managers sell permits to contractors who then hire harvesters to pick "brush" and sell it for fluctuating prices to buying sheds at the end of each day. With little to no regulation within the industry, each land manager, public or private, has a different policy for selling and enforcing their permits. Furthermore, because the structure of labor processes is unique and continually evolving in the region, lines

between the buyers and permit-holders have become blurred. Harvesters are often trapped between the landowners and buyers, both of whom rely on the harvesters to extract the resource from the forest, but additionally have more power and capital than any individual harvester has.

A. Labor and Access to Land

In western Washington and Oregon, floral greens occur in abundance across a variety of land ownership types: public lands including National and State Forests, National and State Parks, and city and regional forest lands, and private lands, including small private lands, large non-industrial timber lands, and large industrial timber company lands. Rarely is the landowner interested in personally harvesting the NTFP's on his or her own land. They are, however, recently acutely aware of the value of these products once they are harvested from the forest. Hence, an industry has developed that relies on landless harvesters that gain access to the land for the rights to pick one or more of the non-timber forest products. Floral greens harvesters come from a variety of backgrounds, but are generally of low economic status, have limited educational backgrounds and skills, often speak very little English, and are generally excluded from venues that would give them a "voice" in the development of management approaches for public and private lands. In the early 20th century when the industry first emerged, harvesters were primarily European-Americans who needed a little extra income in economic hard times, or simply wanted to work in the woods. Not until the 1970's did the influx of labor begin from outside the U.S., at that time primarily from Cambodia and Laos. Then in the late 1980's and 1990's, immigrants from Mexico and other Latin

American countries discovered picking floral greens an alternative to agricultural work in either California or Oregon and Washington's eastern fruit orchards (Hansis 2002). This common story of chain migration has resulted in current demographics, wherein the majority of floral greens harvesters are from Latin America, with a smaller proportion of Southeast Asian and European-American making up the workforce.

Floral greens can be harvested commercially from July through April, because the new leaves and shoots have set and are better able to endure the harvest, processing and storage process. Therefore, the harvesters can be long-time residents of the area in which they harvest, but many travel seasonally, picking brush in the winter, and other crops such as apples, strawberries, Christmas trees throughout Oregon and Washington (Brown and Marin-Hernandez 2000). When "community-based management" of these nontimber resources enters the rural development discussions in the Pacific Northwest, definitions of what constitutes a "local community" must be called into question. Definitions that are bounded by how long an individual has lived in a location and/or by discrete lines on a map may not appropriate when determining who has a vested interest in the sustainability of a resource (Richards and Creasy 1996, McLain and Jones 1997). Migrant populations often return to the exactly the same site year after year to pick, though are not considered permanent residents of the "community". Many of the immigrant harvesters may have been living and picking in the area for a long time, however a large proportion of harvesters are relatively recent arrivals of the last 10-15 years, as compared to many of the Anglo pickers who have learned to pick from their parents and grandparents (Brown and Marin-Hernandez 2000). The dynamics between these ethnic groups, who often cluster in trailer parks or neighborhoods in the nearby

State Capital of Olympia, Washington, plays a large role in determining where in the landscape picking is done and by whom. Often people harvest with their family and friends, such that access to land is determined by social networks as well as legal and business documentation. It is important to note that the duration of time in the region does not necessarily reflect a harvester's intention to stay in the area, continue to harvest, or commit to manage a piece of land for floral greens over a longer term if given the opportunity.

Access to Land and Landowner Relations

Because the industry has expanded so rapidly in recent years, there is little coordination in permitting structures in the mosaic of land ownerships in western forestlands; therefore, nearly every landowner has a different and fluctuating set of access qualifications required for harvesters to gain access to land. This creates a dizzying variety of tenure regimes with which harvesters must contend in order to have access to enough land to sustain a livelihood for an entire year. Depending on the landowner, this permit could last for only one week to 10 years, and could cost from \$20 to several thousand dollars. For example, some National Forest district rangers attempt to fit non-timber forest product management into either their recreational system of one-time use permitting, where harvesters get an "over-the-counter" permit for two weeks at a time with only an ID required, even a Mexican or other ID. Other National Forest Districts are trying to fit floral greens into the timber contract system, where only large one-time bids for a three-year lease to thousands of acres are accepted. Recently the issue of non-timber forest product permitting and access has been complicated by a provision to P.L.

106-113 passed by the U.S. Congress in 1999, which initiates a pilot program for which National Forest districts charge "fair market value" for permits to harvest forest botanicals, which will likely place the fees for permits far out of the financial capabilities of most NTFP harvesters (Antypas et al, 2002). This will likely have significant effects on the floral greens industry, the harvesters, and the National Forests.

On private lands, some timber companies arrange short or long-term leases with individual harvesters, who may then manage their area for several years of production. Other large industrial timber companies attempt to simplify the process by giving longterm contracts to floral greens companies, who have the large capital required for such an investment, such that the buying companies now have control over the access to large tracts of land. In order to get access to that land, harvesters have to join crews that pick wherever the buying company tells them to, and then must return to that company with their product. This means that although harvesters are purported to be independent contractors who may sell their product to anyone they choose, in fact they are completely tied to the buyer who has given them a permit to the land. If the harvesters don't sell to that buyer, often for a lower price than they could get elsewhere, then they don't get a renewal of the permit. Though buying companies deny this relationship exists, harvesters and others inside the industry know it is standard practice. Recently, many of the buying companies are under investigation by the Federal and State Department of Labor and Industries because they are not paying insurance and worker's compensation benefits for these harvesters who clearly have an employee-employer relationship with the company.

Despite the abovementioned formal and/or informal regulation and enforcement of these rules of access to land, the landscape is in fact a sea of forested lands that

represent a significant income to anyone who wants to step off the road and gather it. In the face of increasing resource demand, as the Olympic Peninsula, Washington is facing, these open-access tenure regimes are resulting in extensive "unpermitted harvest" (also called poaching or stealing); they are also likely to foster unsustainable levels of harvest and eventual system collapse (Bromley 1994; Ostrom 1990). Many harvesters do not have a vehicle, so they are driven to a site, dropped off to pick all day, and picked up in the evening to be taken to the buying shed. Whether or not they possess a permit for the site they are dropped off at is questionable in many cases, as some permits are given for stands with no commercial-quality salal, which other stands nearby have plenty but have no one picking at the time. Property lines may not be well-marked in a given area, so pickers are often found on sites they have no permit for. Some have no awareness that they are "stealing," others are fully aware of it, and still others who may not know have been dropped off by drivers who knew it was the wrong site but did not reveal it.

The immigrant status of the majority of the labor force provides still more obstacles to access to land. Because many harvesters are newly arrived in the U.S., they can be exploited by earlier immigrants or others who take advantage of an immigrant's undocumented status. Many are told they cannot get a driver's license without legal documentation (which is false in Washington), so they must pay for a ride into the forest each day. Those who are not confident speaking English are at a huge disadvantage when trying to approach landowners for a permit, so they again can be exploited by those who can get permits and then charge newcomers for a copy. Harvesters can feasibly make a good income if they have their own transportation into the forest and can negotiate with landowners for permits and for good prices from buyers. However, many

end up paying for transportation from a driver, paying an inflated price for a copy of a permit, and giving a percentage of the day's product to the liaison with the buyer. As mentioned above, harvesters may also find themselves tied to a buying company that offers them low prices in exchange for access to land leases. In all these cases, the most frequent victims are harvesters who don't speak English well, are from an ethnic minority and therefore subject to discrimination, don't have enough money to pay for vehicles, permits, business licenses and insurance, and/or are not documented U.S. citizens.

, if a picker has no guarantee that he'll be able to come back to the same site in coming years, there is very little incentive to manage the plant for future years. It is more economically efficient to pick the highest grade possible from each stem regardless of whether that stem will regrow in subsequent years. Public and private land managers are painfully aware of this and the unsustainable levels of harvest occurring in some areas; so are harvesters, who are finding it more and more difficult to gain legal access to high quality commercial product. Those who rely on this industry for a long-term livelihood are concerned that the industry is threatened by poor quality product flooding the market, an increasingly globalized market that includes competing replacement products from far away tropical countries not contending with the same labor and access challenges.

B. Labor and Access to Markets

The market for floral greens in the early 1900's was focused locally, expanding only when the technologies became available to transport products more regionally.

When refrigeration containers and more rapid transportation systems became available, the market expanded to broader and broader regions of the United States, until eventually

the European market became the primary destination for most of the floral greens products. Various products are more popular in the U.S. than abroad, and vise versa, but in many cases it is the seasonal demand for floral greens in the Netherlands that determines the price for harvesters on a daily basis. Harvesters know when to increase their efforts according to when markets in Europe will need florals for holidays like Valentine's Day and Mother's Day. Buying companies in Washington that buy directly from harvesters can then refrigerate the product for weeks or even months until the prices are highest in Europe, then ship them for the three week trip to the Netherlands. This means that harvesters often receive only a fraction of the true price of the product because they have no capital to invest in refrigeration systems of their own; and buying companies in the U.S. have the majority of the control over prices in the floral greens industry.

Many floral greens are categorized into several commercial grades according to length of the stem. For example, salal "tips" are the smallest grade at 14 inches in length, 3/4 lb. per bunch, and are sold by harvesters to buyers at \$US 0.35-1.10 per bunch. "Long salal" is 18-20 inches long, weighs 1 1/2 lbs. per bunch and is sold to buyers for \$US 0.85-1.75 per bunch. These are then sold by European wholesalers to florists for \$US 2-3 per bunch, and florists may sell the salal as part of a bouquet or separately for \$US 1.00 or so for just five stems. In terms of effects on the plant, the farther down into the woody stem a plant is cut, the less likely it will be able to generate new growth in the next year. Therefore, demand for particular commercial grades has an effect on the sustainability and management of the plant. In addition, because the quality of floral greens products has been decreasing in the industry overall, buyers in several European countries have

been expressing interest in a "premium quality" product that ensures they get high quality greens consistently for a slightly higher price. As there are currently no regulations or standards regarding product quality in the major markets in Europe and the United States, buyers and wholesalers have begun reaching out to smaller companies in Washington who have close relationships with harvesters and can arrange for high quality product via particular harvest practices. Not coincidently, these practices are also hypothesized to have a positive rather than negative impact on the resource sustainability.

The effects of globalization on natural resource management in western Washington become clearer when one considers that floral greens from the tropics are in direct competition with products from Washington in the market-place; boxes of "leatherleaf" fern from Costa Rica sit on the same shelf in the Netherlands as boxes of salal from Olympia, Washington. Leather-leaf, however, is generally grown on plantations without forest overstory, using shade-producing netting, pesticides, fertilizers, and machinery in addition to labor. Preliminary interviess suggest that as product quality from Washington decreases due to over-harvest in some areas, European markets can easily turn to the mass-produced tropical products like leather-leaf as a replacement. This market change could have dramatic consequences for the livelihoods of thousands of harvesters in the Pacific Northwest, not to mention the environmental consequences of promoting inputladen plantations over multiple-species management of biodiverse temperate forests. Several social justice and natural resource management approaches have emerged to address both the concerns for the sustainable livelihoods of harvesters and the concern for the resource and ecosystems on which they rely.

IV. Approaches to Labor and Environmental Challenges

As mentioned above, the relations and non-communication between harvesters, landowners, and floral greens buyers have evolved into a situation of environmental degradation, labor-tying, exploitation of harvesters, and an apparent downward spiral of the long-term sustainability of this use of natural resources, a use which ironically has great potential for promoting economic development and biological diversity in intensively managed forests. Several organizations have formed in the region in an attempt to harness this potential of non-timber forest products, in addition to the policy makers and land managers discussed above who attempt to regulate and manage public and private lands. In an effort to address the social justice issues arising from the NTFP industry, such as the labor-tying and obstacles to access to land, the Alliance of Forest Workers and Harvesters spans Washington, Oregon and California. This non-profit works to promote workers' rights, provides a forum for harvesters and other forest workers to express their concerns and a vehicle to address policy-makers. The organization seems to be struggling with the large region it is designed to serve, though the voice it provides for forest workers is crucial and has enormous potential to effect change. Other organizations have taken the approach that harvesters who use "sustainable practices" (though these have not been defined formally by any scientific research) can be certified as "stewards" such that landowners will give preferential access to such harvesters, and buyers will pay a premium to certified products. While these approaches also have potential to improve the conditions of the resource and the lives of harvesters, if the certification is not generated by harvesters themselves and endorsed by landowners and buyers, there is little incentive for harvesters to become certified. In both

cases, either organizing or certifying, what harvesters need most, and what seems to offer the most promise for sustainable harvest practices, is missing: secure, long-term access to land.

V. Managing the Commons: The Northwest Research and Harvester Association

The Association as an Experiment

The Northwest Research and Harvester Association (hereafter "Association) is truly an experiment on the part of the harvesters, landowners, and buying companies involved to address the myriad of social, economic and environmental challenges arising in the floral greens industry. It is an organization founded by and for NTFP harvesters in the Pacific Northwest, specifically originating in southwestern Washington on the southeastern corner of the Olympic Penninsula. The Association by-laws state that the Association will provide members with:

- Land provide members, when possible, with areas to harvest specific products,
- 2) Research research the land and products to improve the harvestability of the land,
- 3) Training harvest and research training to improve the harvest, increase productivity, and protect the lands,
- 4) Monitoring to provide continual information on the harvest and the land,
- 5) Communication a means by which landowners, harvester, and buyers can meet and communicate to further the industry and promote better cooperation.

Land - The philosophy of the Association founders is that either simply organizing harvesters, or training them as "stewards" to improve relations with land owners and buyers, are only pieces of the puzzle of NTFP labor and environmental concerns. The Founders felt that to improve harvesting and management practices, ensure sustainable livelihoods for harvesters, and even improve timber management practices, the Association must provide secure access to the land for harvesters. In order to provide their members with land access, the solidification of the Association occurred in August of 2001 when a five-year Cooperative Research Project Agreement (hereafter called "the Agreement") was signed by the State of Washington Department of Natural Resources (DNR), Washington State University (WSU), and the Northwest Research and Harvester Association (NRHA). The Agreement essentially contracts the Association to manage the understory species of the Hood Canal and Green Mountain State Forests, which total in excess of 40,000 acres of land. These forests have been under varying NTFP harvest permit structures, but had been closed for the year preceding the Agreement due to concerns by the local State Forest land managers that many understory species were being over-harvested. Resulting from several years of negotiation between the three parties, the Agreement represents a remarkably progressive step toward addressing the concerns of NTFP management and harvesters' land access problems.

Most importantly, from the perspective of the harvesters in the Association, the Agreement with the State DNR and other landowners guarantees that harvesters will have access to land with a variety of NTFP's for a maximum of five years, provided they adhere to the requirements of their membership as described above. This security of long-term access to land is unprecedented in the region for NTFP harvesters, save for a

select few who have individual agreements with private landowners. As described under Challenges to Sustainable Livelihoods, harvesters without secure access to productive land often resort to heavy – intensity harvesting illegally without a permit on private and public lands, or at least are forced to work for large crews where much of their earnings go to the vehicle driver, the middleman, and whoever provided the copy of a permit. With respect to the ecological concerns of over-harvesting, secure access to land allows harvesters to pick a variety of products with lower intensity and frequency, and allows for conscientious management of the resources. Interviews of harvesters before the formation of the Association suggest that most would choose to harvest less intensely if they knew they would be able to return to the same area for several years.

Research and Monitoring - The stated purpose of this agreement is "to conduct a cooperative research project within the Hood Canal and Green Mountain State Forests in order to:

- Inventory understory plants and develop management regimes for non-timber forest products (NTFP's),
- 2) Develop markets for NTFP's,
- 3) Integrate NTFP management regimes with timber and stand management regimes,
- 4) Develop a workforce of skilled, conscientious harvesters."

In exchange for this security of land tenure, harvesters in the Association agree to go beyond just harvesting their product; they become research assistants as well. Every single harvester is trained to fill out a simple but thorough harvest report form, recording the date, location, type and quantity of product harvested, every day that they pick.

Inventory and yield information of this magnitude and detail doesn't exist on public lands

anywhere in the region, and likely doesn't exist for private lands as well. This information can be used by both the Association and the land manager/owner to assess timber and stand management regimes, as well as build predictive models of NTFP and timber co-management yields. Further, as the Association increases its research capacity through collaborations with ecologists and economists, harvesters will be trained to take more detailed ecological and economic data. For example, the Association and a collaborating researcher (Ballard, co-author), are currently conducting research on the impacts of different harvest intensities on a major floral green, salal (*Gaultheria shallon*), to eventually provide management recommendations and a template for future research by the Association. This training and data collection will not only further the goals of the Association and the landowner, it will provide harvesters with a way to improve their skill set and potential to get field technician jobs in the off-season or when they can no longer perform the hard labor of harvesting.

Communication – Since the Association began actively managing the understory of the two State Forests, several DNR personnel have remarked that the Association's help in patrolling and monitoring the forest has reduced unpermitted harvest (often referred to as "poaching") and garbage dumping on State Forest lands. A cooperative partnership relationship exists between the harvesters in the Association and the State Forest rangers; this type of amiable relationship is nearly unheard of in other forested land ownership scenarios. For example, harvesters notify the rangers when they observe poaching or evidence of poaching, and the DNR keeps the harvesters informed of timber management activities so that maximum NTFP production can be achieved. In response to the DNR's satisfaction with the cooperative agreement with the Association, several

other landowners, both private and public (National Forests as well as State Forests), have approached the Association requesting a similar agreement. The Association now has similar contracts with several other landowners, but these are in the early stages and most active management is still occurring on the original two State Forests.

Additionally, by providing a mechanism for harvesters to collectively bargain with buyers, harvesters can get a better price for their product because they can guarantee the buyer larger quantities than an individual could. Furthermore, because harvesters in the Association are trained specifically to harvest only high quality product, members are often given a better price for their product because buyers are confident in the high quality standards of the Association.

VI. Lessons Learned by the Association and Lessons Still to Come

The success of the Northwest Research and Harvester Association remains to be seen, but will hopefully provide lessons for other local forest-dependent communities dealing with the challenges of globalization. The principles on which it is based, those of providing harvesters with land, information and communication, and providing landowners with responsible and sustainable management of their understory species, will hopefully prove to be a solid foundation on which to build a cooperative organization of harvesters. In addition, those participating in the Association's functioning have already learned several lessons. First and foremost, there seems to be an unexpectedly high demand for this type of approach to forest management, on the part of land managers/owners, harvesters, and buyers, such that the Association is having to refuse offers of land access at this time because the organization is still working on its

infrastructure. As more and more landowners are turning to the Association with offers of exclusive access to land in exchange for sustainable management of resources, some large floral greens buying companies that have held the leases for these large tracts of land in the past are very threatened by the Association. They are threatened not only by the Association's relationship with landowners, but also their relationship with other buying companies. Many companies have remained buyers only, not crossing the line into land leasing; these buying companies are working with the Association by offering higher prices to members with higher quality product, as well as more predictable orders and prices several weeks in advance.

Another lesson that is already apparent is that an organization by and for harvesters must have a strong leader with natural resource management and human resource management skills. Harvesters are enthusiastic about participating in the Association because of the well-known respectability and knowledge of the President of the Association, who has experience picking all the commercial NTFP's of the region and working with harvesters of every ethnicity for over 50 years. Without his expertise and interpersonal and management skills in working with Latin American, Southeast Asian, and white harvesters with a variety of backgrounds, the Association would not be functioning. The challenge will be to institutionalize the expertise of the President and other members so that Association will be self-sufficient for years to come.

References

Antypas, Alexios; McLain, Rbecca J.; Gilden, Jennifer; and Dyson, Greg. 2002. Federal Nontimber Forest Products Policy and Management. In *Nontimber Forest Products in the United States*, Jones, E.T.; McLain, R.J.; Weigand, J. (Eds.). Kansas: University Press of Kansas.

Bailey, John D.; Cheryl Mayrsohn; Paul S. Doescher; Elizabeth St. Pierre and John C. Tappeiner. 1998. Understory vegetation in old and young Douglas-fir forests of western Oregon. *Forest Ecology and Management* 112, 2: 289-302.

Berry, S. 1989. Social Institutions and Access to Resources. Africa 59 (1): 41-55.

Bromley, D.W. 1994. Economic dimensions of community-based conservation, in Western, D. and R. M. Wright (eds) *Natural Connection: Perspectives in Community Based Conservation*. Island Press, Washington, D.C. p. 428-47.

Brown, B.A. and A. Marin-Hernandez. 2000. *Voices from the Woods: Lives and Experiences of Non-Timber Forest Workers*. Jefferson Center for Education and Research.

Hansis, Richard. 2002. Case Study, Workers in the Woods: Confronting Rapid Change. In *Nontimber Forest Products in the United States*, Jones, E.T.; McLain, R.J.; Weigand, J. (Eds.). Kansas: University Press of Kansas.

He, Fangliang and Hugh J. Barclay. 2000. Long-term response of understory plant species to thinning and fertilization in a Douglas-fir plantation on southern Vancourver Island, British Columbia. *Canadian Journal of Forestry* 30: 566-572.

Hecht, S.B.; A.B. Anderson and P. May. 1988. The subsidy from nature: shifting cultivation, successional palm forests, and rural development. *Human Organization* 47 (1): 25-35.

Kohm, Kathryn A. and Jerry F. Franklin. 1998. *Creating a Forestry for the 21st Century: The Science of Ecosystem Management*. Island Press, Washington, D.C., USA.

McLain, R.J. and E.T. Jones. 1997. Challenging 'community' definitions in sustainable natural resource management: The case of wild mushroom harvesting in the USA. *Gatekeeper Series* no. SA68, International Institute for Environment and Development. 17 p.

Ostrom, Elinor. 1990. *Governing the commons: The evolution of institutions for collective action*. Cambridge; New York: Cambridge University Press.

Peluso, Nancy Lee. 1996. Fruit trees and family trees in an anthropogenic forest: ethics of access, property zones, and environmental change in Indonesia. *Comparative Studies in Society and History* 38 (3): 510-548.

Richards, R.T.; Creasy, M. 1996. Ethnic diversity, resource values, and ecosystem mangagement; matsutake harvesting in the Klamath bioregion. *Society and Natural Resources*. 9(4): 359-374.

Savage, M.. 1995. Pacific northwest special forest products: An industry in transition. *Journal of Forestry* 93 (3): 6-11.

Schlosser, W., K. Blatner and R. Chapman. 1991. Economic and marketing implications of special forest products harvest in the coastal Pacific Northwest. *Western Journal of Applied Forestry* 6 (3): 67-72.

Thomas, Sean C.; Charles B. Halpern; Donald A. Falk; Denis A. Liguori and Kelly A. Austin. 1999 Plant diversity in managed forests: Understory responses to thinning and fertilization. *Ecological Applications* Aug. 1999. 9 (3): 864-879.

Von Hagen, Bettina and Roger D. Fight. 1999. *Opportunities for Conservation-Based Development of Nontimber Forest Products in the Pacific Northwest*. Gen. Tech. Rep. PNW-GTR-473. Portland, OR: U.S. Department of Agriculture, Forest Service, Pacific Northwest Research Station.