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At Work in the Woods: Occupational Hazards of Harvesting Non-Timber Forest Products in the Pacific Northwest

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ABSTRACT

Harvesting timber for lumber produces is among the most dangerous occupations in the United States. While not exhaustive, the literature on these dangers is substantial. However, several other smaller harvesting forest based industries put workers at risk in unique ways. Relatively little research has been published on these activities, but preliminary exploratory research, summarized here, suggests that besides the risks inherent in being in the forest, workers face some unique workplace risks, the frequency and consequences of which are augmented by the social determinants that characterize the workforce. This paper provides a brief overview of the workplace safety risks to forest green and mushroom harvesters and cedar block cutters in the Northwest. We also point out the social characteristics of these workforces that potentially aggravate these risks and the health impacts therefrom.

KEYWORDS

Forestry; immigrant workers; workplace injuries; contract workers

Introduction

By all measures, timber harvesters suffer the greatest number of severe and disabling injuries in the forestry industry. However, there are other forest-based harvesting activities that are common and yet have received little attention in the occupational health literature. These should be included, at least briefly, in any discussion of forest-based occupational hazards. These are mushroom collectors, forest greens gatherers, and cedar block cutters. The United States Forest Service (USFS) refers to these products as special forest products and estimated the total wholesale value of these products from US Federal lands at $1 billion in 2013.[1] Unfortunately, there has been few studies or documentation on the hazards associated with these small, but important, non-timber forestry activities. Likewise, there are little data currently available through sources such as workers' compensation. These activities are generally conducted by self-employed workers paid by piece work or through direct sale of the product. Workers are often immigrants with limited English proficiency, and they may not opt to or may not know how to self-insure for workers' compensation.

While forest greens and mushroom harvesters are subject to health risks inherent in being in the forest such as insect stings, rhus dermatitis (from poison oak, sumac, and ivy) falls, falling branches and trees, and ergonomic hazards of repetitive motion, block cutters face these and other unique and sometimes life-threatening hazards. Deaths from occupational injuries have occurred during block cutting due to the hazards associated with the tools used in the harvesting and product transport process. This brief review characterizes these workforces, offers case examples of injuries to harvesters, and provides study results with block cutters. The aim is to build awareness on these issues and inspire future occupational health research partnerships with non-timber harvester communities.

Forest greens and mushroom harvesters

Forest greens include products such as salal (a leathery-leaved shrub in the heather family), evergreen boughs, huckleberries, ferns, Oregon grapes, rhododendrons, mosses, beargrass, pine cones, and bark. A 2006 economic report published by the Evergreen State College Labor Center cited Farm Bureau estimates that some 10,000 individuals

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were involved as forest greens vendors (pickers) in 2002 in Canada, Washington, Idaho, Oregon, and California.[2] Hoare, in a brief article for a Pacific Northwest Agricultural Center publication in 2007, identified the Pacific Northwest forest brush industry as a $150 million dollar industry, which collects and markets 2.8 to 4.0 million pounds of forest greens (1991–2000 data) that are used for floral arrangements, largely in Europe. This paper emphasized the risks that workers, many immigrants and many undocumented, faces in getting to the remote sites where gathering takes place. One example sited was a head-on collision of a van carrying 10 people that occurred in 2005. Five people died, and the remaining five were severely injured. Only the driver (one of the deceased) was wearing a seatbelt.[3,4] A review of the Washington State Department of Labor and Industries' workers' compensation data found several exemplary cases under "picking of forest products." These included falls from trees while collecting cedar boughs and back strains and shoulder injuries from lifting heavy bundles. In Washington, injuries among forest harvesters and block cutters rarely reach Labor and Industries' records, because the workers are largely independent contractors who do not purchase worker compensation insurance on themselves (2018, personal communication, D. Bonauto, Research Director, Safety and Health Assessment and Research Program, Washington Department of Labor and Industries).

While abundant literature is available addressing the toxicity of wild mushrooms, not a single peer or non-peer reviewed publication was located that addressed the health issues affecting the mushroom harvesters. Information on the size of the industry is also difficult to obtain. A report by the USFS shows that Oregon and Idaho stand out above the rest for highest quantity of permitted mushrooms harvested, with Idaho accounting for 222,901 (35%) pounds and Oregon accounting for 391,724 (62%) pounds out of a national total of 635,894 pounds harvested.[1] The only other document located addressed British Columbia's mushroom harvesting. It can be assumed that the task of forest mushroom harvesting exposes workers to all standard forest hazards such as insect stings, animal bites, and falling timber as well as exposure to sensitizing plants, slips, trips and falls, and eye injuries from wayward branches.

The Bureau of Labor Statistics has a category for "Forest nurseries and gathering of forest products" and in 2016 identified an incidence rate for nonfatal occupational injuries and illnesses of 5.4/100 FTE. This was comparable to rates in "cattle ranching and farming" at 5.5/100 and "vegetable and melon farming" at 5.3/100. However, it can safely be assumed that these numbers come from organizations with actual and sufficient employees to compel reporting to the Occupational Safety and Health Administration (the source of such numbers) and, therefore, likely do not reflect the experience of the self-employed, contract, special forest product workers who make up the majority of the workforce. Unfortunately, these reports, which may mirror the workplace injury and illness experience of the contract employees, provide no detail on the nature of the maladies of these non-fatal injuries.

Cedar block cutters (bloqueros)

Cedar block cutters, or "bloqueros" as they are referred to by the largely Hispanic workforce, harvest blocks of old growth cedar from remnant stumps or abandoned fallen or felled trees left after the logging harvest of old growth cedar trees. These stumps, often left from cuts many decades earlier, are resistant to rot – an attribute of Western Red Cedar. Viable wood can be harvested from them for production of high-grade shingles for roofs and siding. With the substantial reduction in available old growth due to extensive harvesting and the restrictions on new cutting imposed by the Endangered Species Act, often the only viable source of old growth cedar is stump cutting or block cutting. The process involves using a chain saw to cut blocks of cedar from the stumps that are then sent to mills for shingle production. The transport of the blocks is often accomplished by a helicopter lifting large bundles of blocks attached by sling ropes to a hook that is lowered by the helicopter pilot. A YouTube video of the process of block cutting and helicopter transport can be found at https://www.youtube.com/watch?v = 5Z0uVmYD8y0.[5] The helicopter arrives when the blocks are ready to be transported; the bloquero attaches the sling rope to the hook on the lift line

and blocks are lifted and carried to a waiting truck for transport to the mill.

The only, and therefore the most thorough, treatment of the injury experience of block cutters in the Pacific Northwest was provided by Campe et al. in 2009.[6] This qualitative study reported on nine interviews with bloqueros and explored perceived work-based risk factors that the workers identified as impacting their safety. Identified risks were consistent with the location and environment of work such as injuries due to weather, terrain, and forest risks like falling snags. They also described risks due to the tools of the trade including chainsaws, mauls, and splitting wedges. The study reported that the workers believed that loading blocks on trucks were among the most exhausting of their work tasks, but that the helicopter transport of the cut blocks was one of the most dangerous aspects of their jobs. They reported that finished cedar blocks falling from the airborne transport sling as well as entanglement in the sling presented life-threatening hazards, and these are evidenced by reports of deaths from such events. They described that the problem was worsened by challenges of non-English speaking bloqueros who attempt communication by handheld radio with English-speaking helicopter pilots. Others identified chainsaws, axes. and wedges as important sources of injuries.

Campe et al.[6] emphasize that the marginalization of these workers exacerbated the risks described above. The authors listed five factors that aggravated the workers' situations. (1) As self-employed workers, they valued the autonomy of being their own bosses, but the status of being a self-employed individual setup the workers to be unaware of or unable to access the benefits of employment that might have ameliorated some risks. For example, they reported using personal protective equipment rarely. (2) Poverty, a driving force, led several to report that pressure for rapid work increases the likely hood of error and injury. (3) None reported having an understanding of or being covered by workers' compensation and its potential benefits, and none reported benefiting from health insurance. (4) The bloqueros identified lack of documentation (legal papers) as interfering with their ability to obtain health insurance, and the fear of being caught by immigration led to reduced work hours, which aggravated the issues described above. (5) Finally, one respondent pointed to racial differences as the reason that whites, such as helicopter pilots, devalue the Hispanic workers and, as a result, pay less attention to their safety.

Campe et al.[6] conclude with a discussion pointing out the important synergy between socioecological factors such as poverty, marginalization, and fear of deportation and actual work hazards such as chain saws, helicopter transport, isolation, and challenging terrain, which compound the risks bloqueros face. This, however, is a unique study of this forest activity and, though published in 2011, remains the only published study to date about this dangerous profession.[6]

The existing literature on the work safety of forest gatherers such as mushroom collectors, forest green collectors, and cedar block cutters is sparse to non-existent. What does exist has been gathered through interviews of workers and does not constitute a representative sampling of the industry. Workers' compensation sources have little to no data to share, as the majority of the workers in these industries are contract workers who are self-employed, rarely availing themselves of workers' compensation insurance. The few case reports we do have suggested that forest green gatherers are likely exposed to all the usual forest hazards and ergonomic issues arising from lifting bales of greens and falls from trees when harvesting boughs. Cedar block cutters appear to have unique hazards that make the profession even more dangerous than other non-timber forestry professions.

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References

1. Chamberlain J, Teets A, Kruger S. *Nontimber Forest Products in the United States: An Analysis for the 2015*

National Sustainable Forest Report. U.S. Department of Agriculture, Forest Service, Southern Research Station; 2018. https://www.srs.fs.usda.gov/pubs/gtr/gtr_srs229.pdf. Accessed July 24, 2018.

2. Draffan G. *Report on the Floral Greens Industry*. The Evergeen State College Labor Center; 2006. http://www.endgame.org/floral.pdf. Accessed July 24, 2018.
3. Hoare L The Changing Work Force in Pacific Northwest Forests: Salal Harvesters, Northwest Forest Worker Safety Review, Pacific Northwest Agricultural Safety and Health Center, University of Washington. Issue 5, March 2007.
4. Fatal Hazard- Transporting passengers in unsafe vehicles. Washington state department of labor and industries hazard alert, 2003. https://www.lni.wa.gov/safety/hazardalerts/Brushpicker.pdf. Accessed July 24, 2018.
5. Cedar Salvage Operations. Ida Lake Salvage, Ltd. Updated 2016. https://www.youtube.com/watch?v=5Z0uVmYD8y0. Accessed January 17, 2019.
6. Campe J, Hoare L, Hagopian A, Keifer M. Using community based methods and a social ecological framework to explore workplace health and safety of bloqueros on the Olympic Peninsula. *Am J Ind Med*. 2011;54:438–449. doi:10.1002/ajim.20933.