



## Study looks at huckleberry productivity

by Michael E. Keefer, Keefer Ecological Services Ltd.

**H**uckleberries are undoubtedly the favourite of all the wild berry species found in the Kootenays and are revered by both people and bears alike. Over the last decade, First Nations, recreational berry harvesters, and wildlife managers have all become increasingly concerned about a berry supply that many believe is dwindling.

Until the age of fire suppression, which began in the 1940s, fires burned large tracts of land at a relatively high frequency. Unlike the 2003 wildfires, these fires did not typically exhibit "extreme fire behaviour." Rather, they were patchy fires, killing some stands of trees and skipping through others. As a result, tree cover was reduced and shrubs were more abundant over large areas.

Once we began suppressing wildfires, the main mode of shrub regeneration became logging. Until recently, cutblocks at higher elevations were commonly treated with fire following logging as a silvicultural prescription. This practice has ceased due to concerns over air quality from smoke and general liability around the use of fire. From the perspective of huckleberry production, this infrequent use of prescribed fire has been unfortunate.

Black huckleberry (*Vaccinium membranaceum*) is a fire-adapted plant that rapidly regenerates following fire. The plant has an extensive root system: its roots grow up to 1 metre deep, protecting the plant from all but the hottest of fires. Following a top kill of the plant from a burn, the rhizomes (underground stems that are part of the root system) grow rapidly to recolonize the burnt site and this, plus the lack of competition from

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Michael Keefer photo

Black huckleberry fruiting in a burnt cutblock in Lamb Creek.

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# Research strives to save huckleberries



Michael Keefer photo

Ecologist in training, Sam Keefer assists in photo monitoring of huckleberries.

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other plants that were destroyed by the fire, allows the plants to regenerate rapidly.

As for many other plants and animals, science has more questions than answers about huckleberries. Although researchers believe that fire enhances huckleberries, there is currently a lack of robust science to confirm this. We are also unsure about what levels of fire intensity most benefit the plant and how effective different logging treatments are at enhancing huckleberries. Uncertainty also exists about why the berry crop is abundant one year, yet fails the next, and about what makes a good huckleberry site.

In the interest of closing some of our knowledge gaps, Keefer Ecological Services Ltd. and the B.C. Ministry of Environment are working together on what is called the "Huckleberry Abundance and Productivity Study." This project is funded by the Forest Investment Account–Forest Science Program and the Habitat Conservation Fund. Our work is focused in Lamb Creek (a valley well known by East Kootenay residents for high huckleberry productivity) and the Flathead Valley (an area with concerns for grizzly bear management). Within the study area, we are sampling fire areas of different

ages and cutblocks of different ages, silvicultural treatments, elevations, and aspects.

This project is in its first year and has two more field seasons ahead. By the end of the project, we should have answered many of the above questions and should also be able to provide scientifically based information on how best to manage for huckleberries and in what ecosystems these efforts should be most worthwhile. This information will be valuable for forest managers, private land owners, wildlife managers, First Nations, and others. 🌲

For more information please contact:  
Michael Keefer, M.Sc., P.Ag.  
Keefer Ecological Services Ltd.  
Ph. 250-489-4140 / cell 250-420-7532  
Email: [mkeefers@shaw.ca](mailto:mkeefers@shaw.ca)

This article contains information on the ecology and management of non-timber forest products. In promoting implementation of this information, the user should recognize the equitable sharing of benefits derived from the management and use of this product [Article 8(j) of the United Nations Convention on the Conservation of Biological Diversity]. Where possible, the reader should involve the keepers of this knowledge and encourage customary use of biological resources in accordance with traditional cultural practices that are compatible with the conservation and sustainable use requirements [Article 10(c)].