OJF> Vol.2 No.4, October 2012

OPEN ACCESS

Bloodroot (Sanguinaria canadensis L.) Extent and Sustainability in Western North Carolina

PDF (Size:480KB) PP. 213-218 DOI: 10.4236/ojf.2012.24026

Author(s)

Jill Furgurson, Fred Cubbage, Erin Sills, Peter Bates

ABSTRACT

Bloodroot distribution and abundance were assessed in the Waynesville watershed in Western North Carolina. This high quality site provides a benchmark for bloodroot populations in the region. Summary data from an inventory of nine stands of bloodroot in the watershed are presented. Analysis of inventory data reveals that both petiole height and petiole diameter are negatively associated with overstory tree DBH, suggesting that there is an optimal overstory structure for bloodroot. In the Waynesville watershed, seven out of nine stands have an average tree DBH between 27.38 cm and 36.17 cm. Allometric equations relating belowground biomass to bloodroot petiole height and diameter have strong explanatory power, indicating that harvesters could selectively harvest large rhizomes by targeting plants with larger petioles. These results in combination with natural history, field observations and literature provide insights on the sustainability of bloodroot harvest in Southern Appalachia. Wild bloodroot is likely becoming scarce due to loss of favorable sites, such as rich cove forests, as well as harvest pressure.

KEYWORDS

Bloodroot; Nontimber Forest Product; NTFP; Sustainability; Waynesville Watershed; Western North Carolina

Cite this paper

Furgurson, J. , Cubbage, F. , Sills, E. & Bates, P. (2012). Bloodroot (Sanguinaria canadensis L.) Extent and Sustainability in Western North Carolina. *Open Journal of Forestry, 2,* 213-218. doi: 10.4236/ojf.2012.24026.

References

[1] Bond-Lamberty, B., Wang, C., & Gower, S. T. (2002). Aboveground and belowground biomass and sapwood area allometric equations for six boreal tree species of northern Manitoba. Canadian Journal of Forest Research, 32, 1441-1450. doi:10.1139/x02-063

[2] Cech, R. (2002). Growing at-risk medicinal herbs: Cultivation, conservation and ecology. Williams, OR: Horizon Herbs.

[3] Chamberlain, J. (2004). Special forest products: A southern strategy for research and technology transfer. Washington DC: USDA Forest Service Publication.

[4] Conservation Trust for North Carolin (2005). Waynesville ' s clean drinking water protected. Raleigh, NC: Conservation Trust for North Carolina.

[5] Greenfield, J., & Davis, J. M. (2004). Medicinal herb production guide: Bloodroot (Sanguinaria canadensis L.). Raleigh, NC: North Carolina Consortorium on Natural Medicines and Public Health.

[6] Hayden, L. (2005). The role of herbalism in the loss of native plants of the northeast. Rhode Island Naturalist, 12, 1-3.

[7] Kerns, B. K., Liegel, L., Pilz, D., & Alexander, S. J. (2002). Biological inventory and monitoring. In E. T. Jones, R. J. McClain, & J. Weigand (Eds.), Non-timber forest products in the United States. Lawrence, KS: University Press of Kansas.

[8] Marino, P. C., Eisenberg, R. M., & Cornell, H. V. (1997). Influence of sunlight and soil nutrients on

• Open Special Issues
• Published Special Issues
• Special Issues Guideline

OJF Subscription

Most popular papers in OJF

About OJF News

Frequently Asked Questions

Recommend to Peers

Recommend to Library

Contact Us

clonal growth and sexual reproduction of the understory perennial herb Sanguinaria canadensis L. Journal of the Torrey Botanical Society, 124, 219-227. doi:10.2307/2996609

[9] Naud, J., Olivier, A., Belanger, A., & Lapointe, L. (2009). Medicinal understory herbaceous species cultivated under different light and soil conditions in maple forests in Southern Quebec. Agroforestry Systems, 79, 303-326.

[10] Nihal, A., Gupta, S., & Husain, M. M. (2000). Differential antiproliferative response of sanguinarine for cancer cells versus normal cells. Clinical Cancer Research, 6, 1524-1528.

[11] Ott, R. L. & Longnecker, M. (2001). An introduction to statistical methods and data analysis (5th ed.). Duxbury: Thomson Learning.

[12] Persons, W. S., & Davis, J. M. (2005). Growing and marketing ginseng, goldenseal, and other woodland medicinals. Fairview, NC: Bright Mountain Books.

[13] Peters, C. M. (1994). Sustainable harvest of non-timber plant resources in tropical moist forest: An ecological primer. Biodiversity Support Group.

[14] Predny, M. L., & Chamberlain, J. L. (2005). Bloodroot (Sanguinaria canadensis): An annotated