

[Home](#) > [Journal](#) > [Earth & Environmental Sciences](#) > [JEP](#)
[Indexing](#) | [View Papers](#) | [Aims & Scope](#) | [Editorial Board](#) | [Guideline](#) | [Article Processing Charges](#)
[JEP](#) > Vol.1 No.3, September 2010



Van Panchayats as an Effective Tool in Conserving Biodiversity at Local Level

PDF (Size: 69KB) PP. 278-283 DOI: 10.4236/jep.2010.13033

Author(s)

Vardan Singh Rawat, Yashwant Singh Rawat

ABSTRACT

Forest vegetation of a community managed forest was studied along four aspects. *Quercus leucotrichophora* and *Pinus roxburghii* was the dominant species on each of the two aspects. Across the aspects the total tree density ranged between 193 to 324.3 ind/ha, sapling density between 119 to 258.6 ind/ha and seedling density from 249.98 to 845 ind/ha. The shrub density varied from 199.99 to 406.32 ind/ha and herb density from 9466.66 to 52483.33 ind/ha. The total basal area varied from 0.06 to 7.15 m²/ha at eastern and north facing aspect for *Quercus leucotrichophora* and *Pinus roxburghii* respectively showing that the forest is in young stage. Species diversity value for tree layer varied from 0.21 to 1.23 while concentration of dominance value ranged from 0.56 to 0.94. It was noticed that with an increase in species diversity concentration of dominance value decreases indicating inverse relationship between diversity and dominance.

KEYWORDS

Van Panchayat, Aspect, Diversity, Bhatkholi, Community Managed Forest

Cite this paper

V. Rawat and Y. Rawat, "Van Panchayats as an Effective Tool in Conserving Biodiversity at Local Level," *Journal of Environmental Protection*, Vol. 1 No. 3, 2010, pp. 278-283. doi: 10.4236/jep.2010.13033.

References

- [1] H. C. Rikhari, B. S. Adhikari and Y. S. Rawat, "Woody Species Composition of Temperate Forests along an Elevational Gradient in Indian Central Himalaya," *Journal of Tropical Forest Science*, Vol. 10, No. 2, 1997, pp. 197-211.
- [2] J. S. Singh and S. P. Singh, "Forest Vegetation of the Himalaya," *Botanical Review*, Vol. 53, No. 1, 1987, pp. 80-192.
- [3] A. K. Saxena, S. P. Singh, and J. S. Singh, "Population Structure of Forest of Kumaun Himalaya: Implications for Management," *Journal of Environment Management*, Vol. 19, 1984, pp. 307-324.
- [4] H. G. Champion and S. K. Seth, "A Revised Survey of the Forest Types of India," Government of India, Pub. Division, New Delhi, 1968, p. 404.
- [5] J. E. M. Arnold and W. C. Stewart, "Common Property Resource Management in India," Oxford Forestry Institute, Oxford, 1991, p. 14.
- [6] B. S. Jina, "Monitoring and Estimation of Carbon Sequestration in Oak and Pine Forest of Varying level of Disturbances in Kumaun Central Himalaya," Ph.D. Thesis, Kumaun University, Nainital, 2006.
- [7] B. S. Jina, P. Sah, M. D. Bhatt and Y. S. Rawat, "Estimating Carbon Sequestration Rates and Total Carbon Stockpile in Degraded and Non-Degraded Sites of Oak and Pine Forest of Kumaun Central Himalaya," *Ecoprint*, Vol. 15, 2008, pp. 75-81.
- [8] K. S. Valdiya, "Geology of Kumaun Lesser Himalaya," Wadia Institute of Himalayan Geology, Dehradun, 1980, p. 291.

- [Open Special Issues](#)
- [Published Special Issues](#)
- [Special Issues Guideline](#)

[JEP Subscription](#)
[Most popular papers in JEP](#)
[About JEP News](#)
[Frequently Asked Questions](#)
[Recommend to Peers](#)
[Recommend to Library](#)
[Contact Us](#)

Downloads:	301,497
Visits:	673,154

[Sponsors, Associates, and Links >>](#)

- [The International Conference on Pollution and Treatment Technology \(PTT 2013\)](#)

- [9] A. K. Saxena and J. S. Singh, " A Phytosociological Analysis of Woody Species in Forest Communities of a Part of Kumaun Himalaya," *Vegetation*, Vol. 50, No. 1, 1982, pp. 3-22.
- [10] J. T. Curtis and R. P. McIntosh, " The Interrelations of Certain Analytic and Synthetic Phytosociological Characters," *Ecology*, Vol. 31, No. 3, 1950, pp. 438-455.
- [11] J. T. Curtis, " The Vegetation of Wisconsin. An Ordination of Plant Community," University Wisconsin Press, Madison, 1959, p. 657.
- [12] R. H. Whittaker, " Evolution and Measurement of Species Diversity," *Taxon*, Vol. 21, No. 2-3, 1972, pp. 213-251.
- [13] C. E. Shannon and W. Weaver, " The Mathematical Theory of Communication," University of Illinois Press, Urbana, 1949.
- [14] E. H. Simpson, " The Measurement of Diversity," *Nature*, 1949, pp. 163-688.
- [15] S. P. Singh, B. S. Adhikari and D. B. Zobel, " Biomass Productivity, Leaf Longevity and Forest Structure in Central Himalaya," *Ecological Monographs*, Vol. 64, No. 4, 1994, pp. 401-421.
- [16] G. Kharkwal, " Qualitative Analysis of Tree Species in Evergreen Forests of Kumaun Himalaya, Uttarakhand, India," *African Journal of Plant Science*, Vol. 3, No. 3, 2009, pp. 49-52.
- [17] N. Upreti, " A Study on Phytosociology and State of Regeneration of Oak Forests of Nainital," Ph.D. Thesis, Kumaun University, 1982, p. 481.
- [18] P. K. Ralhan, A. K. Saxena and J. S. Singh, " Analysis of Forest Vegetation in and around Nainital in Kumaun Himalaya," *Proceedings of the Indian National Science Academy*, Vol. 48, 1982, pp. 122-