

عنوان مقاله:

Fire Ecology of Ground Vegetation in *Pinus roxburghii* Sargent Plantations in North-West Himalaya – Floristic Composition and Species Diversity

محل انتشار:

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خلاصه مقاله:

Effect of fire on phyto-sociology of understorey vegetation in chir pine forests of three different silvicultural characteristics was compared with pure grassland. ۱۵ grasses, ۱ sedge, ۵ legumes and ۲۱ non-legumes were recorded in the four study sites. Floristic composition gradually increased from June to August and then declined slowly by October in all the plots. Maximum number of species was in twice-burnt plots followed by once burnt and unburnt plots. Least similarity index was recorded for twice burnt plots and unburnt plots. Density of vegetation increased from June to mid-rainy season and thereafter decreased till October. Density of vegetation in four sites decreased in order: open grassland > sapling chir pine stand > pole stage chir pine stand > mature trees chir pine stand. Density of vegetation increased when fire was imposed in plots. It decreased in the order: twice burnt plots > once burnt plots > unburnt plots. It was recorded that fire in chir pine forests are good for herbage growth and development. REFERENCES Anderson, R. C., Loucks, O.L. and Swain, A.M. (۱۹۶۹) Herbaceous response to canopy cover, light intensity and throughfall precipitation in coniferous forests. Ecology ۵۰: ۲۵۵-۲۶۳. Anita (۲۰۰۱) Effect of forest fire on species diversity of chirpine (*Pinus roxburghii* Sarg.) forests in mid-hills of Himachal Pradesh. MSc. Dissertation, Dr. Y. S. Parmar University of Horticulture and Forestry, Nauni, Solan (H.P.), India. Anonymous. ۲۰۰۴. Indian Council of Forestry Research and Education, Dehradun. Chir pine (*Pinus roxburghii*). Dehradun, Forest Research Institute. ۲۱ p. National Forest Library and Information Centre, FRI Dehradun, India. Bawa, R. (۱۹۸۶) Structural and functional studies of three semi-arid grassland communities near Shimla. Ph.D. Thesis, H. P. University Shimla, India: ۴۰۴ p. Brockway, D. G. and Lewis, C.E. (۱۹۹۷) Long-term effects of dormant season, prescribed fire on plant community diversity, structure and productivity in a long leaf pine wire grass ecosystem. Forest Ecology and Management, ۹۶: ۱۶۷-۱۸۳. Dalai, D. (۱۹۹۶) Productivity of grasses in relation to site quality in *Pinus roxburghii* Sargent plantations. M.Sc Thesis. Dr. Y. S. Parmar University of Horticulture and Forestry, Nauni, Solan (H.P.), India. ۷۴ p. Dix, R. L. (۱۹۶۰) The effects of burning on the mulch structure and species composition of grasslands in northwest of Dakota. Ecology ۴۱: ۴۹-۵۶. Dutt, V. and B. ... Gupta. ۲۰۰۵. Interaction between trees and ground flora in different aged chirpine stands of subtropical region in India-I: Density of herbage and

کلمات کلیدی:

Fire ecology, Phyto, sociology, *Pinus roxburghii*, North, West Himalaya

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