Abstract

Present research work was carried out in order to determine the phytosociological potential of plant species of Bhagwanpura Bela forest of Gujranwala Forest Division, Punjab. This Bela forest has its unique feature that it remain under heavy stress of natural calamities just like floods and thus only have forest cover over of 100 acres across of 890.80 acres. By the quadrat analysis the quantitative attributes of the plant communities were determined viz., IVI, FIVI, Similarity index and diversity indices alongwith TWINSPAN Analysis. Seventy nine plant species were found to be distributed among thirty one different plant families among which one plant species was represented by family Marchantiaceae of bryophytes having FIVI 0.543 and two plant species of family Pteridaceae having FIVI 0.233. Rest of the plant families were distributed in between monocots and dicots. Among which eleven plant species were found in two monocot families i.e., Poaceae (1.853) having nine plant species and Cyperaceae (1.047) with two plant species. Rest twenty seven families belonged to dicots with sixty five plant species. Moreover, through Two Way Indicator Species Analysis (TWINSPAN), it was found that these plant species were making thirteen assocations and two major groups. Physico chemical properties of the soil was determined for future reference in which soil had Sandy loam texture, its water holding cacpcity is 44.020 %, moisture content is 12.662 %, organic matter is 0.812%, its PH is 8.088, Electrical conducitity is 1.850, carbonates were absent, bicarconantes were 13.181 (meq/L), Calcium and Magnesium ions were 12.722(meq/L), Sodium (meq/L) of study site is 6.319, Chlorides of study site is 1.865 and SAR value of study site is 8.79.