Abstract

The current work on ethnoecology was designed to document the indigenous knowledge on the wild flora including their percentage cover and frequency of eight districts of Central Punjab, viz; Faisalabad, Pakpattan, Lahore, Nankana Sahib, Narowal, Sahiwal, Sialkot and Vehari, by interviewing local people through a questionnaire (Annexure III) during 2008-12. The people of this area had their unique customs, way of life, believe and culture. A total of 286 species belonging to 69 families were recorded in the study area, with Poaceae and Asteraceae as the most abundant families. People were found utilizing local plants for various purposes, viz., agricultural implements, roof thatching, mats and baskets, religious purposes, particularly as medicinal plants from generations. The plant species were photographed, collected, properly pressed, identified, fixed on herbarium sheets, assigned voucher number and submitted to Dr. Sultan Ahmad Herbarium, Department of Botany, GC University, Lahore.

Regardless of the abundant species recorded in the study area, the number of frequent species was not very great. Only a limited number of species exhibited dominance throughout the study area. The dominant species e.g., *Acacia nilotica, Dalbergia sissoo, Ricinus communis, Calotropis procera, Withania somnifera, Parthenium hysterophorus, Amaranthus viridis, Trianthema portulacastrum* and *Cynodon dactylon* indicated wide ecological amplitude in the study area. However, there were differences in the rank of frequency and cover of these species in different districts due to variegated soils and diversified climate of each district.

The floristic data, analyzed by TWINSPAN, Computer program provided baseline information and classification of the study area. Two major (plant associations) and at least three sub communities (sub associations) were identified in each district.

The soil in the study areas was generally neutral to alkaline, the lowest pH i.e., 7.4 in Lahore District and highest, i.e. 8.7 in Nankana Sahib District. The lowest pH values in water samples from Faisalabad District and highest, 8.19

from Pakpattan District. Electrical conductivity of the soil samples in different districts ranged between 0.73 dS m^{-1} to 15.73 dS m^{-1} with a mean value of 8.23 dS m^{-1}, being highest in Sahiwal district due to the presence of high concentration of salts in soluble form, while, least in Vehari district. The electric conductivity was observed highest in water samples from Pakpattan District due to the presence of high concentration of salts in soluble form while Faisalabad District, had least value. The water content of the soil ranged from 08 % to 14 % with a mean value of 11 %. The soils of study areas were brown, light Yellowish and light Brown in colour, indicating less amount of organic matter. The impact of any environmental variable in grouping together of vegetation, as determined by CANOCO analysis was not found well pronounced. Overall, by analysis of the biplot figures for all the eight districts, the impact of water pH and EC, Soil pH and water content seemed to influence the distribution of species reasonably well along two axes.

The study concluded that the area was under heavy biotic and abiotic pressure. Low rate of regeneration and overexploitation of economically and medicinally important plants has caused many plant species to reach the brink of extinction. Conservation of wild flora can best be achieved after proper time of sustainable harvesting, which is possible with the participation of local communities.