

Distribution of *Rhododendron arboreum* var. *arboreum* Sm. in Shimla District, Himachal Pradesh

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Abstract—*Rhododendron arboreum* (Ericaceae) is one of the aesthetical, economical and medicinally important plant species to the people of Himachal Pradesh. Anthropogenic pressure and climate change has led the species existence in stake as the species distribution has been dwindling year by years. Among 1157 species in the world about 25% are under threat of extinction in its wild habitat. Out of 80 species in India approximately 50% are under endangered, rare and threatened category. Four species which are found in the State are also in threat and fighting for its existence due to multifold human development activities and to the changing environmental conditions. *Rhododendron arboreum* as a keystone species to the sub-temperate and temperate region of the State, it is imperative to make efforts in the direction of its conservation and survival in the near future. Keeping in view the facts in consideration an endeavour has been made to study the distribution status as a baseline data for the State Forest Department (SFD's) and the think tank for making research and planning activities in the line of its conservation in wild. The study was carried out in district Shimla of Himachal Pradesh covering seven divisions viz. Shimla (Rural), Shimla (Urban), Rohru, Chopal, Theog, Kotgarh and Rampur. A total of 231 sites have been explored to study the distribution of the species with GPS coordinates along with other site specific parameters like aspect altitude, slope and aspect. Out of them sixty one sites has been assessed in Rampur division followed by forty in Shimla Rural, thirty one in Theog, thirty in Chopal, twenty Nine in Rohru, twenty in Kotgarh, sixteen in Shimla Urban and six sites in Shimla Wildlife Sanctuary. A single map was also generated using ArcMap 10.4 Geographic Information System (GIS) software to depict the distribution pattern of the species.

Keywords: *Rhododendron*, anthropogenic, distribution, conservation, regeneration.