Chapter 7

CONCLUSION

Garhwal Himalayas represents a rich diversity of the wild edible species which are capable of supplementing the food requirements of the hill communities. However, there is scope to enhance the diversity of these species through survey/exploration of unexplored areas and interviews/interactions with the local communities of the Garhwal Himalayas.

Adequate information on population biology (i.e. habit, habitat, life form, distribution range, population size, phenology, reproduction, pollination, seed biology, seedling ecology and several other aspects) for potential species is essential.

The documentation of indigenous knowledge and evaluation of the use of plants for a variety of purposes as described in this investigation assumes greater significance not just to store it, but also to keep it alive and make it available for future use because of rapid socio-economic and cultural changes.

There is an urgent need to protect the fast disappearing wild plants based on traditional knowledge, which is still abundant in the high altitude region. Like the biological diversity of the region, the product of several years of evolution, it is necessary to protect indigenous knowledge related to traditional health care system and cultural diversity as well.

Further, it is recommended that there should be a check on the livestock population of Gujjjars as well as the people residing near the forest areas, as the number of animals that can live in an area is determined by that area’s carrying capacity. Lack of employment opportunities and low income are the major causes for rural people’s dependency on forests for their livelihood. This dependency is causing degradation of forests and is forcing people to migrate to cities in search of jobs. As agricultural and livestock productivity is sustained by inputs derived from forests, continued depletion of forest reserves in the long run will result in poor returns from agriculture and dairy farming.
In the study areas, 81–86% of fodder is also extracted from nearby forests. Increased resource dependency on surrounding conventional forests has affected the status of most of the preferred species. Fodder and fuelwood plantations should be established on terraced land under an agro-silvicultural system and on community land.

An effective method of eco-restoration incorporating involvement by local people is needed so that pressure on the forests can be reduced. Design of technology jointly by biological, physical and social science researchers will resolve this issue. A proper understanding of the socioeconomic necessities of the population is essential. Attempts should be made to establish a local framework for generating a sustainable forest economy.

Considering the ecological importance and population status of important wild edible species, we recommend the preparation of micro-plans for each important wild species, including data on best harvesting practice and quantity to be harvested. Most of this data is unknown for most wild plants. Propagation of plants using tissue culture techniques and conventional methods to allow for their transplantation into natural habitats and niche areas of the species will be an important step towards their conservation.

Additional ecological studies, including population assessments using standard ecological methods are needed to effectively plan the conservation and management for threatened, rare and endangered species. The development of agro-production techniques for certain species of Garhwal Himalaya can help to meet the requirement of raw material for commercial use and reduce the pressure on the existing populations in natural habitats.

Mass scale propagation of wild edibles in the nurseries, arboreta and botanical gardens through asexual and sexual methods need to be popularised among the hill communities for their conservation and management. Proper evaluation of the dissemination of this information package to hill communities need to be prioritized.

Wild edible species may prove a good root stock for the commercial cultivars of the fruit crops due to their wider adaptability to abrupt climatic variations, vigour, growth and resistance to insects and pests. Hence, these may be utilised as good breeding material for the improvement of horticultural crops as well as restoration and reclamation of degraded land and revised cropping systems.
To maintain the ecosystem equilibrium, awareness of the sustainable utilization of these species needs to be created among the hill communities. New models of multidimensional ethno-medicinal studies should be designed on the basis of community needs rather than by national or global priorities.