



PHYTOGEOGRAPHICAL DISTRIBUTION OF *ALOE VERA* IN SHEKHAWATI REGION, RAJASTHAN

Mukesh Kumar Sharma and *Snehlata Sharma

Maharani Girls P.G. College, Rampura, Alsisar, Jhunjhunu

*Bloom College, Chirawa, Jhunjhunu

ABSTRACT

The distribution of economically important *Aloe vera* in relation to habitat was studied in the Shekhawati region of Rajasthan, along with factors affecting its distribution.

INTRODUCTION

Several medicinally important plant species grow in the arid and semi-arid regions of Rajasthan (Bhandari 1990, Charan 1992, Sharma 2007) but their abundance in different habitats is not well documented. *Aloe vera* is medicinally as well as cosmetically important plant species is in great demand in the country because of industrial use. Since this species grows wild in the Shekhawati region of Rajasthan, its abundance in different habitats was explored to find out ideal habitat for commercial cultivation.

STUDY AREA

Shekhawati region is located in the north-eastern part of Rajasthan state and the region has geographical extension from 26°26' to 29°20' north latitude and 74°44' to 76°34' east longitude. The study area falls in three districts, namely Churu, Jhunjhunu and Sikar. Out of 7 tehsils of Churu district, only 3 tehsils (Churu, Rajgarh and Taranagar) fall under Shekhawati region. All the 6 tehsils (Buhana, Chirawa, Khetri, Jhunjhunu, Nawalgarh and Udaipurwati) of Jhunjhunu district including of new Buhana tehsil formed in the year 2001 are in

Location Map

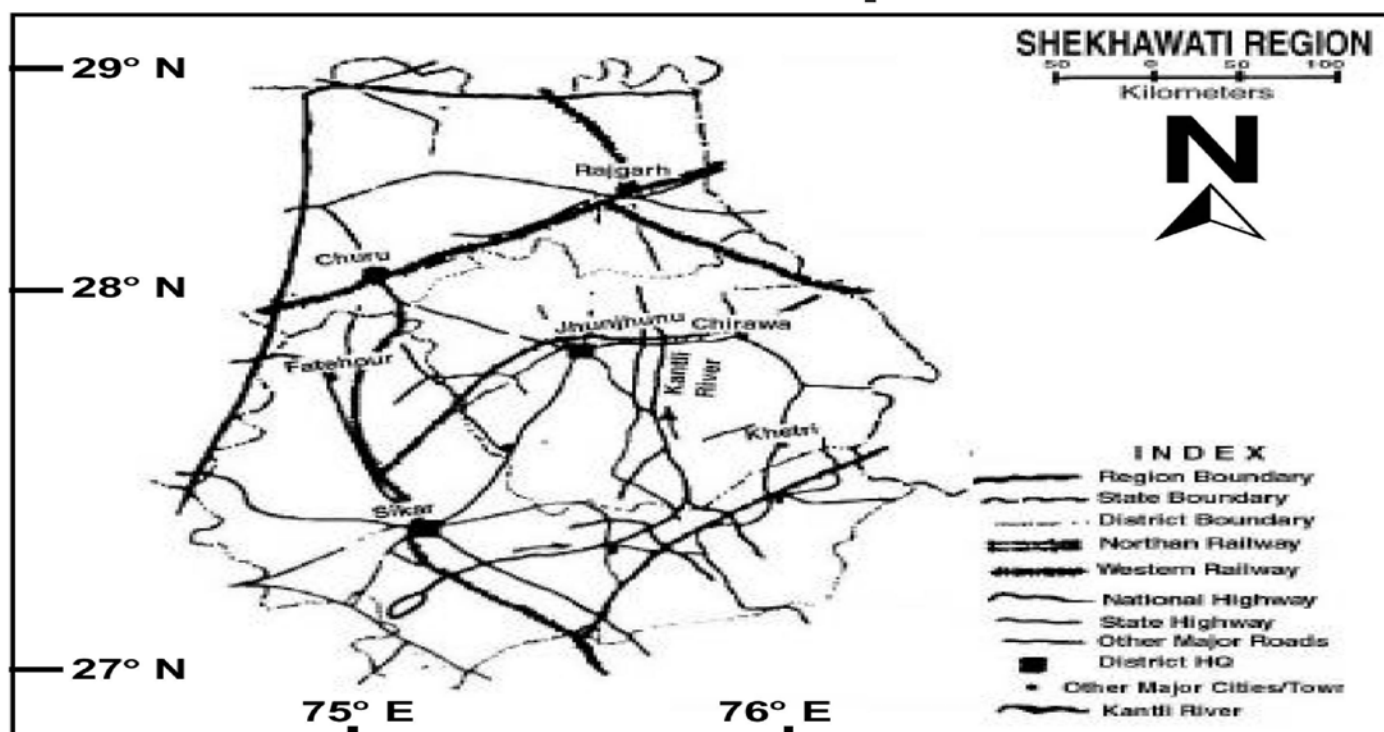


Fig. 1.1. Map of study area

Shekhawati region. All 6 tehsils (Data Ramgarh, Fatehpur, Laxmangarh, Neem ka Thana, Sikar and Shri Madhopur) of Sikar district are also included in Shekhawati region.

The region under study has 15 tehsils spread in 15343 sq. km. geographical area which makes 5.6% of the state's total. The district-wise contribution to Shekhawati region; Churu district = 29%, Jhunjhunu district = 31% and Sikar = 40%. From the point of view of tehsil area, Churu tehsil is largest one and Buhana is the smallest. District-wise area, Sikar stands at first position, followed by Jhunjhunu and lowest contribution is made by Churu i.e. 1683 sq. km. only.

MATERIALS AND METHODS

The field surveys were made extensively in the study area. Raunkier's frequency classification has been followed to explain distribution of *Aloe* as rare, frequent, common or abundant in the study area. The nature of habitats was also examined. From phytogeographic study point of view, a cartographic interpretation of this multi-purpose plant species will be dealt at both macro and microlevel.



Plate 1.1. *Aloe vera* growing in the natural habitat

RESULTS AND DISCUSSION

Aloe vera locally known as Ganwar patha, Grith kumari, Ghigwar, Barbados Aloe (Plate 1.1) belongs to the family Liliaceae. It is a perennial 'under shrub' generally 1 to 2 feet tall but under favourable climatic conditions and suitable habitat, it attained up to 1m height. Leaves are fleshy (Length = generally 50 cm, Width = 8 cm) with small spines at the margin. It is a xerophytic latex bearing species. Flowers are cylindrical and yellow in colour. The plant at fruiting stage bears pods of light yellow colour.

The distribution of *Aloe vera* in Shekhawati region is shown in Fig. 1.2. It grows abundantly in the hilly patches located in south-eastern part of Shekhawati region. Surrounding these hilly patches occur wide gravel habitats and also compact soil formations, particularly in the eastern part of study area (Khetri and Udaipurwati tehsils (Jhunjhunu district) and Neem ka Thana, Shri Madhopur, Danta Ramgarh and north-eastern Sikar Tehsil (Sikar district). On such type of habitats the under-shrub had frequent distribution.

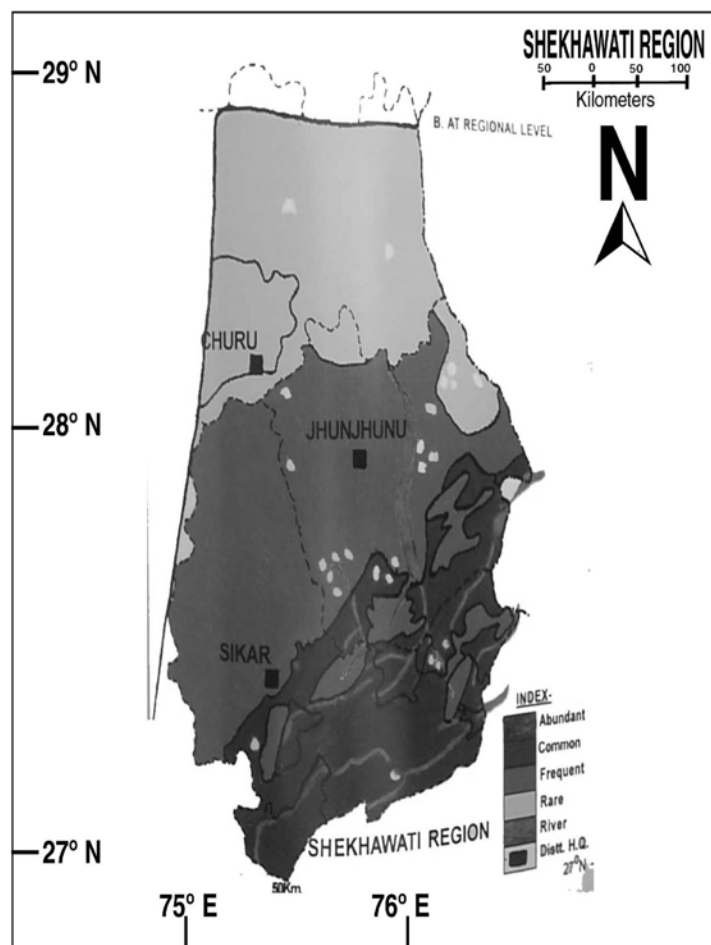


Fig. 1.2 Phyto-geographical distribution of *Aloe vera*

It is very interesting to mention here that plant species grows rarely in Rajgarh, Taranagar and Churu tehsil. Riverine habitat is also not found favourable for growth of *Aloe vera*. In aquatic habitat such as Ajit Sagar dam in Khetri tehsil (Jhunjhunu district) which lies in hilly patches, *Aloe* has frequent to common occurrence. *Aloe vera* fencing on the boundary of cultivated fields can be observed in sandy plains of Shekhawati Region (Fig. 1.2). It is either absent or rare in occurrence in human settlement areas, hence, it is naturalised in the area under study.

Aloe vera occurrence is declining in the natural vegetation Shekhawati region because of irregular rainfall, public interference, soil erosion (wind and water) and high temperature. Its increasing use in herbal medicines and cosmetic preparations has led indiscriminate felling of under

shrub that decreased its frequency in the vegetation cover, including its biomass production. People's participation in conservation of *Aloe vera* is essential. Further, hilly patches located in south-eastern part of Shekhawati region, where it grows abundantly, may be used for its commercial cultivation.

REFERENCES

- Bhandari M.M. 1990. Flora of the Indian Desert (Revised edition). MPS Repros, Jodhpur.
- Charan, A. K. 1992. Plant Geography. Rawat Publication, Jaipur
- Sharma, M.K. 2007. Medical Plant Geography. Rachana Publication, Jaipur.