



Research Paper

Crotalaria L. in Haroti Region, South-East Rajasthan

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Abstract: *Crotalaria* L. is a genus of flowering plants in the large and economic family Fabaceae. It is cosmopolitan genus. Mostly species of *Crotalaria* L. are wild while *Crotalaria juncea* L. is cultivated sometimes. The present paper deals with ecological status, habitat and systematic enumeration of various species of *Crotalaria* L. of Haroti region of south-east Rajasthan.

Keywords: Angiosperm, *Crotalaria* L., Deciduous, Fabaceae, Haroti region, Raceme

Introduction:

The Fabaceae is commonly known as the legume or bean family, are a large and agriculturally important family of flowering plants. It includes trees, shrubs, and perennial or annual herbaceous plants wild as well as cultivated plants. *Crotalaria* L. is commonly known as rattlepods belongs to family Fabaceae. The various species of *Crotalaria* L. are mainly found in open areas, grassland, dry habitat, roadsides, fields and wasteland especially in along edges of swamps, marshy places and moist areas. Habitat and systematic enumeration of various species of

Crotalaria L. of Haroti region is considered in this communication.

Haroti plateau is situated at the edge of the Malwa plateau at 23°45' to 25°53' N latitude and 75°9' to 77°26' E longitude in the south eastern corner of Rajasthan. It covers Kota division of Rajasthan and includes Kota, Bundi, Jhalawar and Baran districts respectively. Moisture availability, hilly region, higher elevation, characteristic topography and forest cover makes important reasons for richness of angiosperms flora of the area. The climate of the area favours the growth of dry deciduous forests.

The most common dicot and monocot weeds of Haroti region are: *Amaranthus viridis* L., *Amaranthus spinosus* L., *Parthenium hysterophorus* L., *Argemone mexicana* L., *Achyranthes aspera* L., *Celosia argentea* L., *Chenopodium album* L., *Chenopodium murale* L., *Ageratum conyzoides* L., *Xanthium strumarium* L., *Echinops echinatus* Roxb., *Convolvulus arvensis* L., *Euphorbia hirta* L., *Launaea aspleniifolia* (Wild.) Hook. f., *Phyllanthus fraternus* G. L. Webster., *Phyllanthus maderaspatensis* L., *Tridax procumbens* L., *Heliotropium supinum* L., *Crotalaria medicaginea* Lam., *Sonchus asper* (L.) Hill., *Tephrosia Purpurea* (L.) Pers.,

Senna tora (L.) Roxb., *Cleome viscosa* L., *Justicia adhatoda* L., *Evolvulus alsinoides* (L.) L., *Verbascum chinense* (L.) Sant., *Solanum nigrum* L., *Solanum virginianum* L., *Malvastrum coromandelianum* (L.) Garcke, *Cenchrus setigerus* Vahl., *Commelina benghalensis* L., *Cynodon dactylon* (L.) Pers. and *Cyperus rotundus* L. In this observation occurrence and morphological description of different species of *Crotalaria* L. in Haroti region have been pointed out.

Materials and Methods:

To record the relevant informations, different areas of whole region were visited in different seasons by author from 2019 to 2022. Herbarium specimen of different species were collected and preserved in herbarium chamber, Govt. College Bundi by author. Considerable account of *Crotalaria* L. of region are discussed in this communication.

Important ecological and floristic studies of various part of India have been made by various authors (Das and Bhimaya, 1964; Vyas, 1967; Champion and Seth, 1968; Agarwal, 1971; Kanodia and Gupta, 1972; Jain and Rao, 1977; Bell, Shetty and Singh, 1987-93; Kumar, 2012; Meena, 2012; Sikarwar, 2014; Sharma, 2017, 2018, 2021 and 2022).

Results and Discussion:

Crotalaria L. is usually annual or perennial diffuse herb. It bears ovate-elliptic or linear lanceolate, alternate leaves, yellow flowers and elongate, obovate, cylindrical or globose fruit pods. In present observation eight species of *Crotalaria* L. of area are enumerated. The observed plant species are arranged alphabetically according to botanical name, and described along with common name, morphological characters, locality and flowering and fruiting time.

1. *Crotalaria albida* B. Heyne. ex. Roth.
Family: Fabaceae

An annual diffuse herb or woody, erect, leaves oblong, obtuse and hairy. Flowers in racemes, minute, yellow, bracts and bracteoles minute, pods obovate, glabrous, seeds few.

Occasionally found in open areas, grass lands and wasteland.

Fls. and Frs: July to October.

2. *Crotalaria hebecarpa* (DC.) Rudd (Syn. *Goniogyna hirta* (Willd.) Ali.)

Family: Fabaceae

Common name: Gorakh buti

A prostrate herb, branches pilose, leaf sub sessile, ovate, pilose. Flowers yellow, pods sub glabrous, flattened and pilose.

Common weed dry areas, sandy soils and grasslands.

Fls. and Frs: September to March.

3. *Crotalaria hirsuta* Willd.

Family: Fabaceae

A hairy annual herb, branchlets are shortly hispid, hirsute, leaves ovate –elliptic, pointed, entire, marinate. Flowers borne in slender racemes, yellow, ovary hirsute, pods obovoid, hairy.

Common in marshy places.

Fls. and Frs: August to November.

4. *Crotalaria juncea* L.

Family: Fabaceae

Common name: Sunn

An annual erect, tall shrub, branched, ribbed, leaves simple, linear lanceolate, hairy, spirally arranged. Flowers in a raceme, yellow, fruit pod cylindrical, many seeded and hairy.

Fls. and Frs: December to March.

Occasionally found in escape of cultivation. It is mainly cultivated as a fibre crop like manufacture of ropes, floor mat, etc. Sometimes grown as green manure, crop rotations and for forage. It is fastest growing species and propagated by seeds.

5. *Crotalaria medicaginea* Lam.

Family: Fabaceae

An annual hardy herb, young plants with spreading habit, soon ascending, getting stiff and erect, hairy, leaves trifoliate,

pulvinate, stipulate, stipules free- lateral, soon falling, leaflets minutely stalked, oblong, obovate. Flowers racemes, pentamerous, odd sepals anterior, vexillary, yellow, stamens 10, all the filaments are fused to form a staminal tube, ovary unilocular, marginal placentation, pods sub globose, silky, beaked, broad.

The most common weeds, occurs in fields, open areas, wastelands and gardens. It is a very hardy plant, behaving generally as an annual. The weed persists in the fields even after crops are harvested and often its hardy bare twigs are visible.

Fls. and Frs: July to October.

6. *Crotalaria orixensis* Rottler ex Willd.

Family: Fabaceae

An annual or perennial diffuse herbs, branched, covered with brown bulbous based hairs, leaflets obovate-oblong, gland dotted, hairy beneath. Flowers in racemes, 3-12 flowered, yellow, pod oblong, seeds 8-10.

Occasionally found in grasslands and moist areas.

Fls. and Frs: July to October.

7. *Crotalaria prostrata* Rottl. ex Willd.

Family: Fabaceae

An annual herb, hairy, sessile leaves, leaflets obovate. Flowers yellow, in racemes, pods linear, turgid.

Rare, found in open forests.

Fls. and Frs: July to November.

8. *Crotalaria senegalensis* (Pers.) Bacle. ex DC.

Family: Fabaceae

An annual diffuse herb, prostrate or sub erect, branched, leaflets linear. Flowers in terminal racemes, yellow, pods oblong.

Rare, found in grasslands and dry areas.

Fls. and Frs: October to February.

Some species of *Crotalaria* L. can be an invasive weed and act as a noxious weed. Several species of *Crotalaria* L. are currently being cultivated for economic uses. *Crotalaria juncea* L. is a source of natural fibre and also known as Sunn hemp

and Indian hemp. It is utilised as a source of green manure, fibre, and fodder which are obtained from its stem. Sunn hemp is grown for fodder to feed cattle, in area. *Crotalaria juncea* L. is also beneficial for improving soil fertility.

Different plant species of angiosperms grows in different habitat. These species invading the various agricultural fields, gardens and sub-moist vegetations of area. Dence species diversity of various herbs and shrubs are found in Haroti region of south-east Rajasthan. The four, out of the eight species of *Crotalaria* L. are abundantly and frequently distributed in Haroti region. This paper communicates information about general account of various species of *Crotalaria* L. in the area.

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