



CHAPTER II

Distribution, Habit, Morphological and
Floral Characters of *T. terrestris* Linn.



Hindi Name: Chhota Gokhru, Sanskrit: Gohshur, English: Caelthrops, Suleanen, in Chinese: Chi li Tsi, in French: Croix de Chavalier, Croix de melte, Herbe terrestre, Tribule Commune, Tribule terrestre, in Gujarati: Betagokhru, Gokharu, Mithagokhru, Nahan Gokhru, in Malayalam Neringil, Nerimil, in Marathi: Gokharu, Lahanagokharu, in Pajjapi: Bakhra, Bhakhra, Bhukri, Gokhrudesu, in Sanskrit: Bahukaantaka, Bhakshataka, Chandadruma, Gokantaka, Gokhrura, Gokshura, Gokshuri, Kanta, Kantaphala in Sindhi Gookhru, Trikundri, in South Africa: Devil's thorn, in Arabie: Bastitaj, Busteyrumi, in Bengali Gokhuru, in Burma: Charratte Suleaned, in Spanish, Abrojos in Tamil: Neruniji

SYSTEMIC POSITION:

Class: Dicotyledonae

Sub Class: Archiclamydeae

Order: Geraniales

Family: Zygophyllaceae

DISTRIBUTION (OCCURRENCE):

Cosmopolitan in distribution, occurs throughout in India up to 11000 feet in Kashmir, Sri Lanka, tropical and sub tropical areas, all warm



regions of the hemispheres. In India three species, i.e. *Tribulus terrestris*, *T. cistoides* and *T. alatus* are of common occurrences.

HABITAT:^E

The genus *Tribulus* comprise Linn twenty species grows as herbaceous palnts common sandy land and clayee fallow land soil, along railline sides, Kachcha road side and in agrofields etc. It is a procombant herb. Thoroughly distributed throughout India and up to Kashmir at 3600-meter altitudes very common in the upper gangatic plain in wastelands, fields and sport grounds.

Tribulus species are usually branched prostrate herbs, the stem, branches, and leaves densely covered with silky minute hairs. Leaves in opposite pairs, compound, flowers pale yellow. Leaflets are ovate flat round polygonal fruit with numerous (4-6) sharp spines (tubereulate) on it, often cling to cloths bodies of animals and wheel of vehicles.

MORPHOLOGY OF LEAF:

Leaves are pinnately compound opposite abruptly pinnate one of each pair usually smaller than the other stipulate lanceolate hairy leaflet 3-5-6 pairs, nearly round 6.12 mm long oblong mucronate with round/obleque base.



Morphology of leaf.



MORPHOLOGY OF ROOTS:

It has a slender fibrous root 10-12 cm long cylindrical of a light brown colour, the odour is faintly aromatic and taste is sweetish and astringent. From the root sprig 4-5 delicate stalks, spreading flat on the ground and have length of meter.

MEDICINAL VALUE:

Leaves are diuretic, tonic, increase the menstrual flow, cure gonorrhoea. A decoction is useful as a gargly for mount troubles and painful gum and reduce inflammatom (Kirtikar and Basu 1975).

Fruits are acidic with a disagreeable taste, diuretic, removes gravel from the wine and stone in the bladder. They are regraded as cooling, diuretic, tonic and aphrodisiac and are used in the painful micturition, Urinary disorders and impotence. In some countries they are reputed tonic and astrigent used for coughs, scabies, anaemia and ophthalmia.

The root is a good stomachie and appetser, diuretic and carminative. The entire plant but more particularly the friuts are used in midicines. It was given a good trial in Bright diseases with dropsy. It is also used combined with bdellium in a patient suffering from the gonorrhoeal rheumatism with cystilis. The diuretic property of the drug is due to the presence of large quantities of nitrates present as well as the essential oil which occures in the seeds.



Morphology of Roots.



A complete plant of *T. Terrestris* L.



The following substances are found in the fruit. Fruit contains traces of alkaloids, fixed oil 3.5% consisting mainly of the unsaturated acids, essential oil in very small quantities resins and fair amounts of nitrates.

The plant causes geeldikkop (dikgeel) in small stock, a condition characterised by oedema of head, fever and jaundice.

Preparations are Dasamularista, Giokshura di-Kwath, Gokshuradi-guggulu Gokshura-di-awaleha, Gokshuradi churna Abhayarista, Rasna-Saptak-Kwath, Haritakayadi-Kwath. Varihad varunadi-Kawath. In action it is alternative anthelmintic, anti-arthritis and aphrodisiac, conceptive (roots of white flower variety). Cooling demulcent expectorant and tonic, used in calculous affections, kidney diseases, painful micturation and urinary discharges.

MORPHOLOGY OF FLOWERS:

Flowers are auxiliary, raised on short peduncle, leaf opposite, solitary pedicels, 1.2 to 2.0cm long, slender and hairy, flowers are compound of 5 broad obtuse sepals 6 mm long, lanceolate, acute hairy yellow petals 1^{cm}, long ablong hairy, ovary bristly style short, stout, stigmatic lobes larger than diameter of the style (Figure 2). These are succeeded by roundish five cornered fruit about the size of a marble armed with prickles.



MOFYOLOGY OF FRUIT:

Fruit globose consisting of usually five hairy or nearly glabrous, often muriculate woody, cocci, each with two pairs of hard sharp spine, one pair longer than the other several seeds in each coccus, with transverse partition between them. They are acidic with a disagreeable taste.

