

SOME ANGIOSPERMIC PARASITIC PLANT FROM NARNALA FORT WITH SPECIAL REFERANCES TO THEIR ETHANOBOTANICAL VALUE

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ABSTRACT:

Narnala forest is rich in the biodiversity of the flowering plants. And exhibit the symbiotic association of the several angiospermic plants which are even used as a medicine by tribal peoples of the area. In the present paper ten parasite plants species belonging to five families used in the folk medicine have been represented. The purpose of the present study was to record the indigenous knowledge of parasitic plants used as a medicine. The botanical name, local name, family, parts used in traditional practices by the tribal peoples of the Narnala forest are discussed for awareness of various uses of parasitic plant.

Key: Parasitic plants, Ethnobotany

INTRODUCTION:

Narnala is an ancient fortress in the hills in the north of Akola, taluka at a point where a narrow tongue of Akola District runs a few miles in to the Melghat. The Narnala forest comprising of only 12.35 Sq Kms lies nestled in the Satpura Hill Ranges barely 60 Kms away from Akola. The Sanctuary, touching a maximum altitude of 933.50 msl, has temperature varying from 35 to 43 degree Celsius and an annual rainfall that varies from 500 to 900 mm. Narnala fort is rich in biodiversity of ethnomedicinal plants. Ethnobotany can be very broadly defined as the study of the interactions between plants and people in their local environment [1]. Author has conducted Ethnomedicinal researches in different regions of Akola district during 2010-2011. The present work is a part of that which encompasses some important parasitic medicinal plants collected from Narnala forest ranges. Plants that grow

on other living plant and absorb food materials from them are called parasites.

Some are total parasites and others are partial parasites. Total parasites are non green in color and they cannot produce their own food. For this purpose they twine around a host plant and absorb as much food as possible. Partial parasites are green in color and can manufacture little food. They can depend entirely on the host plant. The present paper deals with the indigenous information about the parasitic plants used against the various diseases community of residing in Narnala Fort ranges.

Material and Methods:

During the investigation, the Author visited and interviewed the Medicinemen and vaidoos in tribal community residing in near by villages of Narnala fort to obtain the information about the use of parasitic plant and plant parts on various diseases and disorders. The Author have collected the plant material from the forest ranges and identified by the local Taxonomist with the

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help of flora of Maharashtra (MS) and flora of Marathwada (Naik 1986). The specimen vouchers of collected plants were deposited in Department of Botany, Shri Shivaji College Akola. The collected Ethnomedicinal information was thus interpreted in the light of recent researches and presented in this paper.

Observations and Discussion:

The present paper deals with Ethnomedicinal uses of 10 parasitic plant species from 5 families. The botanical Name, family, parts use and disease on which the medicine is given, and modes of administration are given. Although above plants are common and ethnomedicinally investigated from various regions of Indian subcontinent, the present study is focused mostly on the view of ethnomedicines of tribal community which live in Narnala forest ranges. This area is lacking proper health care systems rendered by Government. During the investigation, authors have collected about several different plant species of which only 20 parasitic plants have presented here. The collected indigenous information is mostly found true and analogous to the reports of [2], [3]. However, the present study needs further phytochemical investigation which might prove beneficial for improving the life style of Narnala fort tribal peoples and to enrich the basic researches leading modern medicinal biology. Plants have been used in traditional medicine for several thousand years [4]. Drugs obtained from plant are believed to be much safer and exhibit a remarkable efficacy in the treatment of various ailments [5]. Plants have always been the source of medicines and have many uses to mankind. According to some earlier workers [6-8].

1. *Cuscuta reflexa* Roxb.

Vernacular Name : Amar-bel, Amar-vel.

Family: Cuscutaceae



Locality: Narnala Fort

Habitat: Occasional on bushes.

Description:

Stem parasites with greenish-yellow, leafless, twining and hanging pale yellow, fleshy stems. Flowers white or creamy-white, solitary or in umbellate clusters in short racemes. Capsules globose 0.5-0.8 cm across, glabrous, circumsessile near the base.

Ethnomedicinal uses:

The decoction of seeds in high doses causes abortion. Plant paste is applied on swollen testicles (**Banjara**). **Bhils** take orally the decoction of stem (30 ml) to cure jaundice, urinary disorder and stomachache. Plant paste applied on the scalp to prevent hair fall. **Andh:** Tribals take orally the decoction of stem to cure diarrhoea, cholera and asthma, fever, cough and cold.

2. *Viscum verrocosum*

Family: LORANTHACEAE

Vern. Name: Hadjod, Harjor.

Locality : Narnala Fort

Habitat : Obligate semi-parasite on *Boswellia serrata* Roxb. and on other trees.

Description: dichotomously branched, pendulous; branches articulated, yellowish-

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green, longitudinally furrowed, narrow at both ends. Flowers minute in axillary clusters. Berries 0.1-0.5 cm across, globose, smooth, greenish-yellow.

Ethnomedicinal Significance:

Andh: Paste of shade dried powder of the plant with water is applied on the chest to cure swellings, intense burning sensation and difficulty in breathing. **Bhil:** Paste prepared from the entire dried plant is applied to heal fractured bone, dislocation and cancerous wounds.

3. *Alectra thomsoni* Hook.



Family: SCROPHULARIACE

Vern.Name: *Alectra*

Locality : Narnala Fort

Habitats: Rare, along stream-banks in hill forests, parasitic on roots of Acanthaceous plants.

Description:

Erect root parasitic herbs, 15-30 cm tall; stem rigid, flexuous, scaberulous. Leaves reduced

to scales, oblong. 2.5-6 mm long, obtuse, passing upward into bracts. Flowers 5-7 mm long, in terminal, lax-flowered, spicate racemes reaching 25 cm long; bracts minute; pedicels slender, 4-5 mm long. Calyx hemispheric. 3-4 mm long; teeth broadly triangular, acute. Corolla yellow with red venation; tube short; limb oblique, 5-lobed; lobes spreading, ovoid-orbicular, obtuse. Stamens 4; anthers touching in pairs; cells parallel

Ethnomedicinal Significance:

The flowers and roots (haustoria) of *A.thomsoni* have been used by rural people to dye cloths and other textiles. A golden yellow dye is extracted which is used for colouring wood. In traditional medicine leaf sap is taken to hasten childbirth and plant ash mixed with castor oil is rubbed onto scars caused by leprosy. A root decoction is used as a mouthwash against toothache and given to small children to treat diarrhoea.

4. *Dendrophthae falcata* (L.f.)

Family: LORANTHACEAE

Vern, Name: Dhawada bandha (K), Banda



(H), Vanda (M).

Locality : Narnala Fort

Habitat : Commonly met during the cold and hot season on a good number of host plants such as *Buchanania lanzan*, *Pongamia pinnata*, *Holoptelia intergrifolia*.

Description :

The large, branched, partial parasite growing on trunk of the trees. Leaves simple,

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alternate, variable in shape, leathery, oblong, obtuse with cuneate at the base. Flowers orange in axillary raceme, bracts minute, ovate. Calyx tomentose, shortly five lobed. Corolla tube curved, lobes five, reflexed. Stamens exerted. Style quadrangular, stigma knob shaped. Fruit berry 1 cm long, black, when ripened, oblong.

Ethnomedicinal significance:

Bark of this plant is used in impotency by Gond tribes. Korku tribes applied juice in leucoderma and other skin infection. Korku tribes also use the decoction of bark in asthma and to regulate menstrual cycle in women.

5. *Santalum album* L.

Family: SANTALACEAE

Vern. Name : Safed Chandan (H), Chandan



(M).

Locality : Narnala Fort

Habitat : Common in forest, also planted in gardens.

Description :

A glabrous perennial evergreen small trees with drooping branches, bark smooth aromatic. Leaves simple, alternate, lanceolate, acute, entire, petiolate, shining. Flowers small in axillary pedunculate cyme, greenish, crimson, inodorous, perianth campanulate with 4 valvate segment, disc, lobed and thick. Stamen 4 polyandrous,

exserted. Fruit drupe, globose, purpleblack. (The yellowish-brown strongly- scented heart wood constitute the well-known sandal wood).

Ethnomedicinal significance:

Leaf extract of this plant used in dysentery by the local tribes. Wood-ground up with water into paste applied to the temples in headache, fever and local inflammation and in skin diseases. Wood also used in bilious fever.

6. *Striga gesnerioides*

Family: SCROPHULARIACE

Vern.Name: : cowpea witchweed, tobacco



witchweed

Locality: Narnala fort

Habitat: parasitizes on sorghum, sugarcane, rice, legumes

Description:

S. gesnerioides of typical Scrophulariaceous form, are borne in opposite pairs or alternately in a terminal leafy inflorescence. The underground part of the stem is purple, cylindrical, somewhat thicker than the aerial part and 2.5-7.5 cm long. The roots are white and closely attached to the host roots by haustoria .

Ethnomedicinal significance:

The sap of *Striga gesnerioides* is used to dye skins blue-black in mali.

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The flower yield a pink colour which can be used for painting. As fodder *S. Gesnerioides* is useless, cattle will not graze it and only camels browse it reluctantly when nothing else is available.

The stem is said to be used as toothbrush. In traditional medicine, the powdered plant is sprinkled on wounds.

7. *Buchnera hispida*

Family: SCROPHULARIACEAE

Varn. Name: wuta wuta



Locality: Narnala fort

Habitat: a facultative root parasite of grasses and graminaceous crops, mostly on sorghum vulgare

Description: Facultative hemiparasitic, erect annual herb up to 1 m tall with simple or branched, hairy or scabrid stem. Leaves in a rosette at base in young plants, alternate on the stem, simple, sessile, rigid-hairy to scabrid; stipules absent; rosette leaves elliptical to almost circular, margin entire, Fruit an ovoid capsule up to 5.5 mm × 3 mm, many-seeded. Seeds longitudinally striate.

Ethnomedicinal significance:

The whole plant of *B. Hispida* turns blue-black if bruised and becomes black after drying. The dried plant is used as source of black dye for skin and textile. dried powder is mixed with castor oil and applied externally to scabies eczema.

8. *Sophubia delphinifolia*

Family: SCROPHULARIACEAE

Varn. Name: sophia



Locality: : Narnala fort

Habitat: Occasional, along the margins of ponds, lake and in moist places among grasses.

Description:

Erect, glabrous, semi parasite, herb, stem 4-angled ribbed. Leaves sessile, pinnatisect, segment filiform. Flowers purplish or pinkish, large, showy, solitary, axillary or in terminal racemose, capsule, globose, many seeded.

Ethnomedicinal significance:

Its juice is reported to possess healing properties for sores caused by moisture and is also reported to be an abortifacient.

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