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An Ethnobotanical Survey of Indigenous Knowledge on Angiospermic Parasiticplants used by the Tribal People of Ahobilam Reserve Forest of Kurnool District, Andhra Pradesh, India

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Abstract:-Ahobilam Reserve Forestis a religious center of with rich in the biodiversity of the flowering plants. It is an hub of many angiospermicmedicinal plants. Parasiticplants exhibit the symbiotic association of the several angiospermic plants which are even used as a medicine by local tribal peoples of this area. In the present paper nine parasite plants species belonging to six 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 Ahobilam Reserve Forest are discussed for awareness of various uses of parasitic plant.

Keywords:-Ahobilam Reserve Forest, Chenchus, Parasitic Plants.

I. INTRODUCTION

Herbal medicines are free from side effects, adverse effects and they are economical, easily available and beneficial for the mankind over the centuries (Anonymous 1994).Parasitic flowering plants have been known and described since the days of Theophrastus. However, for a long time even esteemed botanists were doubtful about the nature of parasitic plants, Plants that grow on other living plant and absorb food materials from them are called parasites.

Parasitic plant**,** that obtains all or part of its nutrition from another plant (the host) without contributing to the benefit of the host and, in some cases, causing extreme damage to the host. The defining structural feature of a parasitic plant is the haustorium a specialized organ that penetrates the host and forms a vascular union between the plants.Among the flowering plants, there are approximately 3,900 known parasitic plant species in more than 20 plant families (Westwood et al., 2010).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 variousdiseases community of residing in Ahobilam Reserve Forest. Parasitic flowering plants exploit other flowering plants for water and nutrients with the help of one or more haustoria. Part of the haustorium, the intrusive organ, penetrates host tissue to establish contact with the conductive tissue of the host.

Ahobilam, one of the famous temple sanctity areas of South India (Fig.1), is located in Andhra Pradesh. The Ahobilam forest is divided into upper and lower Ahobilam. It is situated between long. 78°23'— 78°56'E and lat. 14°55'—15°24'N. It has an average elevation of 327 meters (1076 feet) Rainfall averages about 90 cm and is concentrated in the months of the South West Monsoon (June–Sep).According to Hindu mythology, Lord Narasimha is present in nine forms in nine temples which are on the hill ranges of Ahobilam forest.

Ahobilam is a catchment area of the Nallamalais Reserve Forest of the Eastern Ghats. It attracts several devotees from different states. The forest is rich in floristic diversity. The Ahobilam forest is a dry deciduous forest about 800 m amsl, luxuriant in vegetation and enriched with many.

The Chenchus are the major tribes inhabiting in Nallamalais. The Chenchus are a small scheduled tribe in Andhra Pradesh. Originally theChenchu s were nomadic, hunter gathers,

inhabiting Nallamala forests. Their population was 2,92,97 in 1981 of which 71% are returned from the forest and its immediate plain areas in the districts of major concentration. The rest of 29% are distributed sparsely in other districts of the state. Presently, the Chenchus live in permanent settlements known as gudems or Pentas comprising clusters of huts scattered over a wide area.The Chenchus (Telugu speaking food gathering tribe) were living in the interior parts of forests of Nallamalais of Kurnool district. They choose faith healing first, traditional herbal medicine next and modern medicine only when the first two have failed. The population of Chenchus was 28,434 (Subramanyam, 2003). The chnechus treat their ailments with their traditional ethnobotanical knowledge as a cheaper way of treatment.

Their meal is simple and usually consists of gruel made from jowar or maize and boiled tubers. They collect the firewood for marketing purpose.

II. MATERIALS AND METHODS

Plant specimens have been collected from all over Ahobilam Reserve forest through several field trips covering all seasons during 2016 – 2017. Herbarium voucher specimens are deposited in Department of Botany at Osmania UG & PG College, Kurnool Aandhra Pradesh, India. The Medicinal parasitic plants were identified by the local people with their vernacular names, photographed and sample specimens were collected for the preparation of herbarium. The Flora of Kurnool by Raju and Pullaih(1997)[17] was used to ascertain the Emphasis has also been given to the economically important species particularly the medicinal plants used as primary health-careby the Tribal people of Ahobilam Reserve Forest.

III. RESULTS AND DISCUSSION

The present paper deals with Ethno medicinal uses of 9 parasitic plant species from 6families. The botanical Name, family, parts use and disease on which the medicine is given, and modes of administration are given.The morphological features and ethno medicinal importance of collected plants were discussed individually.

A. Cassithafiliformis L.

Vernacular Name *:*Seethammavaripogulu
Family: Lauraceae
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.Its common host are Carissa spinarum, Azadirachtaindia.

Ethnomedicinal Use:
The decoction of seeds in high doses causes abortion. Plant paste is applied on swollen testicles. They take orally the decoction of stem (30 ml) to cure jaundice, urinary disorder and stomacache. Plant paste applied on the scalp to prevent hairfall.ChenchusTribals take orally the decoction of stem to cure diarrhoea, cholera and asthma, fever, cough and cold.In Africa it is used to treat cancer.Africantrypanosiasis and many other diseases(HoetS, StevignyC,Blocks et al.2004)(19)

B. Dedropthoe Falcate Varfalcate (L.F)

Vernacular Name**:** Bhajanika
Family*:* Loranthaceae
Description *:*The large, branched, partial parasite growing on trunk of the trees. Leaves simple, alternate, variable in shape, leathery, elliptic-ovateo or lanceolate with cuneate at the base. Flowers are large, tubular, orange yellow ,scented in axillary cymes. orange in axillary raceme, bracts minute, ovate. Fruit berry 1 cm long, black, when riped, oblong. The parasitic infestation reduces the growth, vigour and productivity. Its common host are Hardwickiabinnata.

Ethnomedicinal Use:Bark of this plant is used in impotency.Bark juiceis applied in leucoderma and other skin infection. The decoction of bark is used for asthma and to regulate menstrual cycle in women. The whole plant is used in indigenous system of medicine as cooling, bitter, astringent, aphrodisiac, narcotic and diuretic (Alekutty e al., 1993).It is used medicinally in Ayurveda. Its bark has narcotic properties. The leaves are used in wounds, urinary troubles, menstrual disorders, and asthma.while women used the extracts of the vine as a colouring agent or as a dye to provide a black color for the fabrics(Schroede 1967).They possess several aporphine alkaloids that was often used in the African folk medicine to treat certain diseases such as a cancer, African trypanosomiasis and other diseases as mentioned above.(Quetin et al.,2004). In the traditional ayurveda, Cassythafiliformis is used as the major substitute for Cuscuta(Sakshy Sharma eta .,2010)].

C. Dedropthoe falcate varpubescens (L.f)

Vernacular Name*:* Bhajanaka
Family*:* Loranthaceae
Description*:* Epiphyticshurubs; leaves elliptic oblong or oblong, pubescent, obtuse; flowers scarlet or orange or white in unilateral racemes.

Ethnomedicinal uses: Whole plant is used for Haemorrhage, urinary, calculi wounds, Barkastringent, narcotic(Madhavachetty et al.2008).

D. Stigaangustifolia

Family: Scrophulauraceae
Vername: Ratibadanika

Description: leaves 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. Its common host are sorghum and zeamays.

Ethnomedicinaluse*:* The sap of Srtigaangustifolia is used to dye skins blue-blank in mali The flower yield a pink colour which can be used for painting. As fodder S. angustifolia 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. The whole plant is burned and the preparation is inserted rectally for treating haemorrhoids, or the smouldering smoke is used to killoff warts, or the charred remains are used as a dressing on woundsto dry, or rubbed on legs for oedema.
(Mahwasane.S.T Middleton .L 2013),

E. Viscumnepalenis Spreng.Syst

Family; *Viscaceae*
Ver Name: *Banda*
Description:Leafless compact stem parasite bush with jointed branches ,internodes gradually narrowed below,widened above ,3.-5X 0.2-0.4 cm; flowe3rs greenish –yellow ,triads in axillary fascicles ; berries ovied –globose.

Ethnomedicinaluses: whole plant used for wounds, cuts, blood ulcers(Madhavachetty et al.2008)

F. Viscumarticulatum Willd.

Family:*Viscaceae*
Ver name: *Chettubadanika*
Description*:* Dense globoseepiphyte ;leavesobovate, acute, entire, flowers green in axillary cymes; berriesobovid.

Ethnomedicinal uses: used in treatment of Bone fracture tendril paste is used as external application for insect sting.(Sudhakar Reddy C**,** K.N. Reddy**,** et al2007)

G. Satalumalbum

Family: *Santalaceae*
Vername: *Gandamchettu*
Description: A glabrous perennial everygreensmalltrees with drooping branches, bark smooth aromatic. Leaves simple, alternate, lanceolate, acute, entire, petiolate, shining. Flowers small in axillary pedunculate cyme, greenish, crimson, inodorous, perianthcampanulate with 4 valvate segment, disc,lobed and thick. Stamen 4 polyandrous, Fruit drupe, globose, purpleblack. (The yellowish-brown strongly-scented heart wood constitute the well-known sandal wood).

Ethnomedicinal uses*:*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.The wood, root, bark and leaves of the plant used for the treatment of the liver disease like jaundice by the tribal healers(James A Duke, Mary Jo Bogenschutz 2002).

H. Taxillusbracteatus (Waal)

Family**:** *Loranthaceae*
Description: Grey tomatoes, partial stem parsite; leaves orbicular; flowers pink in axillary fascicles
Ethnomedicinaluses: whole plant is used for skin cancer, leaf paste is used for leprosy and skin diseases, flowers and fruits are for mental disorders (Madhavachetty et al.2008)

I. Orobanchecernua: Loelf

Family*: Orobanchaceae*
Description :Annual ,erect,leafless root parasitic herbs, up to 40cm tall.scales ovate- lanceiolate; flowers creamish,sessile in cylindric dense spikes ;seeds numbrous,blackish brown.

Ethnomedicinal uses*:* Used to remove Kidney stone , scabby ulcer(TahirIqbal, GulRiaz Khan M et al 2014).

Results and Discussion: Medicinal plants constitute an effective source of both traditional and modern medicines, herbal medicine has been shown to have genuine utility and about 80% ofrural population depends on it as primary health care .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 Ahobilam 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 (Bhogaonkar 2002,Ibrar,M2002).However, the present study needs further phytochemical investigation which might prove beneficial for improving the life style of chenchus tribal peoples and to enrich the basic researches leading modern medicinal biology. Plants have been used in traditional medicine for several thousand years Pei, S.J. (2001). Drugs obtained from plant are believed to be much safer and exhibit a remarkableefficacy in the treatment of various ailments(Siddhiqui, M 1995).Plants havealways been the source of medicinesand have many uses to mankind. According to some earlier workers(Jain, S.K. (1965), Kirtikar, K.R (1999), Nadkarni, K.M. (2001).

IV. CONCLUSION

The age old tribal knowledge of plants is an important aspect of ethnobotany. It is evident from this study that the medicinal plant splay a vital role in the primary healthcare of indigenous people in the study area In recent years, use of ethnobotanical information in medicinal plant research has gained considerable attention in segments of the scientific community(Heinrich 2000).The information may be useful to researchers in the filled of ethnobotany, taxonomy and pharmacology.

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Fig.1.Ahobilam Forest

Fig.2. Tribal People of Ahobilam Forest

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Parasitic Plants

Fig.3.1Dendrophthoe falcate (L.f)var.falcataFig.3 .2Dendrophthoe falcate(L.f)var. pubescens


Fig.4 .1ViscumnepalenseSprengeFig.4 .2ViscumorientaleWilld**.**


Fig.5.1 Taxillusbracteatus(Wall.)Fig.5.2Taxillustomentosa (Heyne.ex.Roth)


Parasitic Plants

Fig.6.Santalum Album L.Fig.7 Cassytha Filiformis L


. Fig.8.Srtiga Angustifolia(D.Don.) Fig.9.Orobanchecernua Loefl.