



## AN INVENTORY OF SOME TANNIN YIELDING PLANTS OF VIJAYNAGAR FOREST IN SABARKANTHA DISTRICT OF NORTH GUJARAT.

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### ABSTRACT

Vijaynagar forest region of Sabarkantha district is situated in north eastern part of Gujarat state. It is rich in plant diversity which has a great economic value. The present research work is based on tannin yielding plants. The plants are: Neem (*Azadirachta indica*), Karanj (*Derris indica*), Aval (*Cassia auriculata*), Babul (*Acacia nilotica*), Mishwak (*Salvadora persica*) and Kamboi (*Phyllanthus reticulatus*). The main aim of this study is to document the of morphological characterization and ethnobotanical importance as well as traditional knowledge about wild tannin yielding plants. Results were arranged in systematic order of botanical names, English name, local or vernacular name, family, locality, occurrence, habit, habitat, flowering and fruiting season and traditional ethnobotanical uses. Ethnomedicinal data were collected from local Vaidiyas and Bhagats. Photographs of plants have been presented. In preliminary survey, the data were collected during the fieldtrip. The purpose of this article is to documentation of general information and utilization of six tannin yielding plants have also been presented in a broader scale.

**KEYWORDS:** *Vijaynagar, Traditional, Tannin Yielding Plants, Survey, Uses, Documentation*

### INTRODUCTION

Vijaynagar forest is a dry mixed deciduous wild plants region in Vijaynagar Taluka of Sabarkantha district in North Gujarat. Abhapur Polo forest area and Polo Jain temples are well known region of this forest. The region is bounded by Rajasthan state to the northeast, southern to Aravalli district and Idar-Vadali taluka of Sabarkantha district to the west. There are a few parks, banks, schools, stores, Hindu temples, and mosques, as well as a bus station in the Vijaynagar area. An ancient time the Vijaynagar is a big state a gateway of Rajasthan state. Minimum temperature about 9° to 10° C in winter, maximum temperature about 45° to 46° C in summer, generally temperate climate. The region is hilly and rocky. The Vanaj reservoir is constructed on the Harnav river located near Abhapur village whose origin is in the Aravali hills and water from the river alone was bifurcated into 2 canals namely Mamrechi and Canyonata in the middle of forest. Polo forest is a natural and scenic tourist place located near Abhapur village. The major tribes of the region are Bhils, Rabari, Bharwads, Damor, Garasia, Katharoti, Chaudhary and Patel. Adivasi settlements, their lives rooted in their connection to the forest, from whom you might learn to listen to the deep hum of the world that envelops these scattered whispers of human constructions. Crops grown in Vijaynagar include paddy, millet, cotton, wheat, sorghum, tobacco, groundnut, castor and vegetable crops are tomatoes, brinjal, potato and cauliflower. The forest is well known for floristic diversity of herbs, shrubs, climbers and trees like Teak, Timru, Katas, Umiyo, Sisam, Aal, Mahuda, Ankol, Kesudo, Jamun etc. Forest products include medicinal herbs, timber, firewood, foliage, Timru pan, Mahuda flowers, gum etc. The tannins are present in both flowering and seed-producing plants, in particular in many Dicotyledons. The tannin compounds are widely distributed in many species of plants, where they play a role in protection from predation and might help in regulating plant growth. Six tannins yielding

plants like Neem, Aval, Babul, Karanj, Kamboi and Mishwak along with their ethnomedicinal uses reported from this region. We can find these substances in significant amounts, so much so that these species constitute the source of material for the production of many commercial production.

### METHODOLOGY

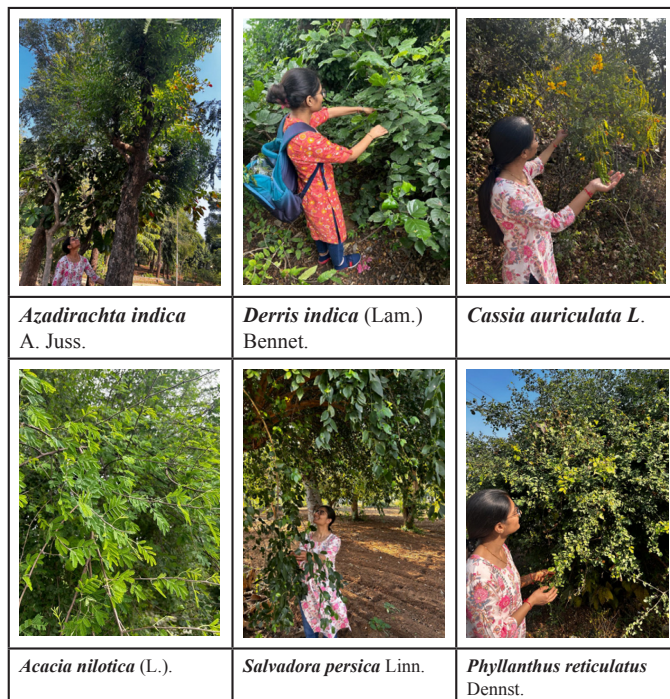
In the field, find out the status of six tannin yielding plant species were documented and photographs of plants and to collect information regarding the medicinal values of the plants from tribals residing in the forest area. Identification of plants with the help of Gujarat flora by G. L. Shah (1978). Ethnomedicinal information confirmed were considered as fairly authentic original and were also compared with the literature of Jain (1987), Sinha (1996), B. L. Punjani (2002) and classical literature such as Aryabhishak (1996).

### OBSERVATIONS

In ancient India, Neem (*Azadirachta indica*), Karanj (*Derris indica*), Aval (*Cassia auriculata*), Babul (*Acacia nilotica*), Mishwak (*Salvadora persica*) and Kamboi (*Phyllanthus reticulatus*) sticks are an oral hygiene tool made that used as a teeth cleaning twig. Chewing sticks of plants contain “volatile oils, tannins or tannic acid, sulphur, and sterols, which attribute to antiseptic, astringent and bactericidal properties that can help to prevent tooth decay and reduce plaque formation, provides anti-cariou effects, eliminates bad odour, improves sense of taste, and cure many other systemic diseases of mouth and also our body.

1.	Botanical name	<i>Azadirachta indica</i> A. Juss. It is native Indian fast-growing, wide spreading branches tree that can reach a height of 15–20 meters (49–66 ft), evergreen, shedding many of its leaves during the dry winter months.
	Local name	Limdo
	Family	Meliaceae
	Part used	Stem, Bark and Leaves
	Ethnomedicinal uses	It helps in killing the harmful microorganisms in your mouth. The leaf and bark are effective in many skin problems as treating eczema, ringworm, acne, anti-inflammatory, antihyperglycemic properties and it is also used to heal chronic wounds, diabetic food and gangrene developing conditions. Plant used to remove toxins from the body and neutralize free radicals.
2.	Botanical name	<i>Derris indica</i> (Lam.) Bennet. A tree, 7-15 mt. tall tree, with greenish-whit or light black, rough soft, green bark. Leaves 15-40 cm. long and pale-green.
	Local name	Karanj
	Family	Papilionaceae
	Part used	Stem
	Ethnomedicinal uses	The importance of dental health and oral hygiene has been identified through centuries. It has been used in folk medicine as antimicrobials, antiseptics, as liniment for rheumatism and diabetes, or even to cure tumours, skin ailments, bronchitis, and whooping cough.
3.	Botanical name	<i>Cassia auriculata</i> L. 1-2 mt. tall erect, bushy legume shrubs. Leaves 2.5-8 cm. long. Leaflets 0.8-2.1 X 0.5-1.2 cm., glabrous, obovate and yellow flowering plant.
	Local name	Aval
	Family	Caesalpiniaceae
	Part used	Stem and Leaves
	Ethnomedicinal uses	Today, chewing sticks are still used in many developing countries because of religion and/or tradition, and because of their availability, low cost and simplicity. A plant's stem is used to cure gout, gonorrhoea, fever and rheumatic pain. Leaf properties include constipation and are helpful in digestion.
4.	Botanical name	<i>Acacia nilotica</i> (L.). It is tall trees with dark blackish brown bark. Leaves 2-4.5 cm. across pinnate 4-8 pairs, leaflets 10-25 pairs. Heads yellow in axillary panicles. Pods 8-12 X 1-1.5 cm. linear-oblong, green.
	Local name	Baval, Babul
	Family	Mimosaceae
	Part used	Stem
	Ethnomedicinal uses	The plant sticks contain natural ingredients used to toothbrushes and other homecare aids, they can significantly help improve plaque, gingivitis, gingival bleeding and beneficial for oral as well body health. Plant has anti-fungal, inhibitory and anti-microbial properties.

5.	Botanical name	<i>Salvadora persica</i> Linn. An evergreen tree, 2.5-4 mt. tall, with crooked trunk and dull gray to grayish-brown bark. Leaves 1.5-7 X 0.8-3.5 cm., glabrous and fleshy.
	Local name	Piludi, Mishwak
	Family	Salvadoraceae
	Part used	Stem and Leaves
	Ethnomedicinal uses	The beneficial effects of miswak in respect of oral hygiene and dental health. Fresh leaves are eaten as salad and are used in traditional medicine for cough, asthma, scurvy, rheumatism and piles.
6.	Botanical name	<i>Phyllanthus reticulatus</i> Dennst. It is a large glabrous or pubescent shrub with smooth or lenticulate branches growing from 8-10 ft in height.
	Local name	Kamboi
	Family	Euphorbiaceae
	Part used	Stem and Leaves
	Ethnomedicinal uses	Chew sticks also cure xerostomia, cold sores, canker sores, dry mouth, and bad breath. cracks on the lips and on the surface of the tongue are cured by chewing few fresh leaves frequently. The leaves are used as diabetic and cooling medicine. It is reported to be used as diuretic, alternative, attenuant, astringent and as anti-diarrhoeal.



## RESULTS AND DISCUSSION

Tannins are the manufactured or natural compounds used to various pharmaceutical products for mankind derived from many plant parts, including the leaf, stem, bark, rhizome, flower, buds and berries, among others. Among the important tannins are the easy to extracts from the stem, leaf, wood or bark of plants. A comprehensive presentation about tannin yielding plants or plant parts from where they are obtained. Use full for forestry students and others who want to know about plant products. The present work is undertaken to collect information regarding the medicinal values of some tannin yielding plants species of the region. Ethnomedicinal information given in the

present paper will be directly useful to the mankind in curing several diseases.

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