

Some Medicinal Plants of Indian *Purāṇas* in Today's Ethnomedicinal Perspective

Madhumita Nath* and S K Jain**

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Abstract

Several hundred plants are mentioned in Indian *Purāṇas* for their use as human and animal food, medicine, general healthcare, house-building, other material uses, faith, warfare and conservation. Many of those plants are not only presently used in urban and rural societies, but their several new uses have also been discovered. The present article deals with sixteen indigenous and cultivated plants indicating their uses as given in the *Purāṇas* and also the ethnomedicinal uses as now documented in last few decades. The purpose of this article is to show that over several centuries economic utilization of Purāṇic plants has largely expanded. It is discussed that intensive ethnobotanical research can tap and document elements of unique intuition, keen observation, vast ingenuity, unmatched creativity and infinite patience for trial and error methods of the so called illiterate and uneducated rural and particularly tribal folk.

Key words: Dimasa tribe, Ethnomedicinal, Medicinal, *Purāṇa*, Tribal.

Abbreviations used for plant parts: bb: bulb, bk: bark, fl: flower, fr: fruit, infl: inflorescence, la: latex, lf: leaf, px: part not known, rh: rhizome, rt: root, sd: seed, st: stem, tu: tuber, tw: twig, wp: whole plant.

1. INTRODUCTION

The word *Purāṇa* is almost as widely known as the words *Vedas*, *Gītā*, *Qurān* or *Bible*. There has been considerable controversy about the antiquity, period, number, and authorship of the *Purāṇas*. Not unoften there are long stories woven around small facts or events. This has led to use of the word *Purāṇa* even in sarcasm. People will sometimes say that if you go to 'x' person, he will start the *Purāṇa* of his gallantry in last war.

Sensarma (1989) reviewed opinion of over a dozen noted scholars about the period in which the several *Purāṇas* were written/compiled. These dates vary from about 200 AD to 1500 AD; this article is no place for any discussion or opinion on this.

Present authors have taken material on medicinal plants from extracts of the few *Purāṇas* as discussed by Sensarma (1989).

Plants are referred in the *Purāṇas* by the Sanskrit or Indian names. P. Sensarma, a reputed scientist and a popular teacher of botany of Kolkata worked for several years to find their botanical equivalents. It was a hard job in absence of any pictures or proper descriptions; he depended on sketchy account and reference to context.

About thirty years ago Sensarma (1982) had attempted to give a very brief mention of ethnobotany of some *Purāṇas*. The present work is different in objective, perception, coverage and content.

* Microbial & Agricultural Ecology and Biodiversity Conservation Laboratory, Department of Ecology & Environment Science, Assam University, Silchar- 788011(India) Mailing Address: Dr. M. Nath, d/o Late Sri Amlendu Nath, Srinath Road, LALA-VI, (Hailakandi), Assam-788163, E-mail: madhu.rhss@gmail.com

**Corresponding author: C/o Mr Arun Kumar, 802 Tower 1, Malibu Towne, Sohna Road, Gurgaon 122018, Email: skjainbotanist@rediffmail.com

Plants are mentioned in *Purāṇas* under several categories like (a) Importance of plants, (b) Forests, (c) Plants in garment makings, (d) Plants materials as cosmetics, (e) Plants in medicinal uses, (f) Plants in religious rituals, (g) Fibre-yielding plants, (h) Gardens and royal palace.

Medicinal plants are taken for this article because maximum information from tribal and rural folk is on such plants. This fact was considered very relevant for meaningful evolution of the theme of this article.

About two decades ago the second author Jain (1991) extracted ethnobotanical information from over 300 research papers and books; this resulted in documentation at one place ethnomedicinal data on over 2500 plants. Several books and papers published in last two decades (Saklani & Jain, 1994), (Jain, 1996), (Varghese, 1996), (Pal & Jain, 1998), (Jain, 1999), (Nath *et al.* 2011, 2013) and (Kumar, 2014) available issues of the main journals on ethnobotany namely *Ethnobotany*, *Journal of Economic and Taxonomic Botany* and *Indian Journal of Traditional Knowledge* were consulted. Ethnomedicinal uses for different plants dealt in this article are taken from these sources.

As the objective of this paper is to show that over several centuries, economic utilization of Purāṇic plants has largely expanded, same medicinal uses repeatedly documented have sometimes been excluded.

Papers on ethnobotany are often published in home magazines and journals of very limited circulation, to which authors would have no access. Hence, the recent ethnomedicinal uses discussed in the article are in no way exhaustive, but only indicative.

In the following pages medicinal uses of sixteen plants as given in *Vāmana Purāṇa*, *Vāyu Purāṇa*, *Kūrma Purāṇa*, *Matsya Purāṇa*, and *Brahma Vaivarta Purāṇa* have been taken.

Thereafter a representative glimpse of the numerous ethnomedicinal uses of each plant is given. The plant part used (abbreviated) and the ethnic group or region are indicated.

The above information is mainly from the second half of twentieth century and early years of current century.

For a very recent and comprehensive ethnobotanical field work done among unexplored Dimasa Tribes of North East India, information is taken from the work of Nath (2014).

Khan and Balick (2001) reviewed pharmacognostic, phytochemical, pharmacological and clinical work of last about six decades on over one hundred common medicinal plants of India. Their conclusions are given in relevant cases.

In the following pages the selected sixteen species are described as per popular Indian name (Sanskrit/ Hindi name), common English name and along with their botanical (Latin) name. Thereafter the medicinal uses of the plant in the various *Purāṇas* are given. The name of the *Purāṇa*, the name of the plant as given in that *Purāṇa* and uses are given. Thereafter the ethnomedicinal uses documented from above mentioned published literature are given.

The prescription noted by Nath (2014) is then given for species studied in this work. The scientific evidence of efficacy given by Khan & Balick (2001) is given for some species.

A comparison of the medicinal uses mentioned in the *Purāṇas* has been made with the documented ethnomedicinal uses among different ethnic groups and in various states/regions of India in last six decades, brings out the following first. Almost all uses given in the *Purāṇas* have continued to be employed for human and animal healthcare over centuries. In addition several new uses have been discovered. Results of such comparison are given in bold phase.

2. ACCOUNT OF PLANTS

2.1 *Bel, Shree-phal (Bael Tree), Aegle marmelos Corr.*

Brahma Vaivarta Purāṇa (Vilva) ss-62*: Its ripe fruit with powdered *dhānyaka*, *tāla*, *adraka*, *canaka*, soup of *mudga* and the sweets made of *tila* and sugar, help in eliminating *pitta* (acidity).

Recent Ethnomedicinal Uses (Jain 1991): Abdomen pain (px Santhals); abscess (If Gujrat); astringent (fr Garhwal); backache (If Assam); breast pain (px Santhals); cholera (px Santhals); constipation (fr Rajasthan, px Santhals, fr Jammu); cramp (px Santhals); diabetes (If Salsett, Mumbai); diarrhoea (bk Orrisa; fr Salsett, Mumbai, M.P., Rajasthan, U.P.; px Santhals); digestive disease (fr+rt Santhals, If Bihar, bk Orrisa, fr Bengal, Banda, U.P., Assam, tharu U.P., Andaman and Nicobar, px Santhals); dog-bite (rt Orrisa); dysentery (bk Orrisa; fr Salsett, Mumbai, M.P., Banda U.P., Gujrat, Rajasthan, px Santhals); eye disease (If Rajasthan, Assam, U.P.); fever (bath in If water Gujrat, If Assam, rt M.P., Siwalik, px Santhals); heart disease (rt M.P.); jaundice (If Santhals); nausea (px Santhals); post-natal (px Santhals); puerperal fever (px Santhals); snakebite (px Santhals); tonic (fr Garhwal); vomiting (If Assam); wounds and cuts (If U.P.) wounds (If U.P.).

Vet - Jain 1999: Anthrax (fr Warangal, Andhra Pradesh); boil, blister, ulcer (If Warangal, Andhra Pradesh); joint pain (fr Tamilnadu); diarrhoea. (fr); eye diseases (If Warangal, Andhra Pradesh); fever, impaction (fr Warangal, Andhra Pradesh); wound (If Tharu U.P.); rinderpest (Maharashtra); sore (bk Assam); tympani (fr Warangal, Andhra Pradesh)

Dimasa tribal uses**: Fruit juice is given frequently to drink as a remedy for dysentery. In blood dysentery, immature fruit is burnt in fire and is mixed with molasses and is given orally in

empty stomach for few days. Half cup of juice of tender leaf is added with ½ cup of milk and is given orally in the morning hours in empty stomach in jaundice.

Khan & Balick (2001) state that good results were obtained in scientifically conducted clinical trials on the drug prepared from this plant in mixture with some other herbs. Pulp of fruit with *Bacopa monnieri* was found useful in irritable bowel syndrome.

Observations: The use of pulp of fruit for ‘Pitta’ (acidity) mentioned in the *Brahma Vaivarta Purāṇa* is given in almost all ethnomedicinal reports as also in the recent work of (Nath, 2014). It is also validated as useful in ‘Irritable bowel syndrome’ by experimental and clinical research (Khan & Balick, 2001).

In recent ethnomedicines it is additionally reported as used to treat: abscess, backache, breast pain, cholera, constipation, cramp, diabetes, diarrhoea, dog-bite, eye disease, fever, heart disease, jaundice, nausea, postnatal complications, puerperal fever, snakebite, vomiting, wounds and cuts and as astringent, tonic and some veterinary diseases.

2.2 *Kathal (Jack Fruit), Artocarpus heterophyllus L.*

Vāyu Purāṇa (Panasa) ss-23: By regularly consuming the fruit juice of this plant one can live up to 10,000 years.

Recent Ethnomedicinal Uses: Anthelmintic (If Boro tribe, Assam); carbuncle (px Santhals); postnatal (px Santhals); digestive diseases (rt Assam); small pox, sores, sterility, stomach complaint, toothache (px Santhals).

Vet- Jain 1999: Swelling in throat (If Eastern India).

Dimasa tribal uses: Two teaspoonfull of root juice is given orally against diarrhoea till recovery.

*vide, Sensarma, P (1989)

**vide Nath, M et al (2011, 2013-14)

Paste of young leaves is applied externally in tumour till recovery. Fresh seeds are taken orally for easy digestion. Bark of *Mangifera indica*, bark of *Psidium guajava* and bark of *Artocarpus heterophyllus* are boiled in water and 3-4 teaspoonfull of the extract is taken orally in the morning and evening hours in dysentery till recovery.

Observations: This plant is mentioned only in *Vāyu Purāṇa* but in a very vague manner that by its regular use a person can live for ten thousand years.

In recent ethnomedicines it is precisely recommended for expelling worms, carbuncle, digestive complications, small pox, sterility and toothache. Nath (2014) provide recipes for diarrhoea, tumour and dysentery.

2.3 Barhal (Monkey Jack), *Artocarpus lakoocha*

Vāyu Purāṇa (Lacuka) ss-24 : Man can survive by consuming only the fruit juice of this tree.

Recent Ethnomedicinal Uses: Digestive disorder (sd Purullia, Bengal)

Observations: According to *Vāyu Purāṇa* man could survive only on fruit juice of this plant; no specific disease is mentioned.

In recent ethnomedicinal reports also there is report only of its use in digestive disorders.

2.4 Tād (Palmyra Palm), *Borassus flabellifer* L.

Brahma Vaivarta Purāṇa (Tāla) ss-62: Its ripe fruit with powdered *dhānyaka*, *vilva*, *adraka*, *canaka*, soup of *mudga* and the sweets made of *tila* and sugar, help in eliminating *pitta*-acidity.

Recent Ethnomedicinal Uses : Abortifacient (wood pulp Bhil M.P.) burns, convulsions, earache, headache, heat stroke (px Santhals); epilepsy (petioles Santhals); gonorrhoea (sap Hazaribagh Bihar); hysteria (petiole Santhals); menorrhagia, nausea (px santhals); rheumatism

(infl, Dhasan Gujrat); scabies, sores, syphilis, ulcers (px santhals).

Vet- Jain 1999: Post-natal (infl Darbhanga, Bihar); fever (lf Lodha tribe, Bengal).

Observations: *Brahma Vaitra Purāṇa* mentions its use in mixture with few other herbs for *Pitta* (acidity) caused diseases. It is common spice in every home.

Ethnomedicinal data report its use as abortifacient, for burns, convulsions, earache, headache, heat stroke, epilepsy, gonorrhoea, hysteria, menstrual disorders, rheumatism, scabies, sores, syphilis and ulcers.

2.5 Jeerā-Kālā (Caraway), *Carum carvi* L.

Brahma Vaivarta Purāṇa (Jiraka) ss-62: Ripe and dry *haritakī*, unripe *rambha*, *marīca*, *pippalī*, dry *adraka* help in removing phlegm (*śleṣma*).

Recent Ethnomedicinal Uses: Cold, cough, fever (sd Amchis tribe of Ladakh); digestive diseases (sd Amchis tribe of Ladakh,); gonorrhoea (px Lahul); rheumatism (sd Lahul).

Vet- Jain 1999: Gastric; digestive; wound (Kerala).

Observations: *Brahma vaivarta Purāṇa* recommends it in mixture with other herbs in cough *phlegm* (*śleṣma*).

Recent ethnomedicines use it for cold, fever, digestive disease, gonorrhoea and rheumatism. In ethnoveterinary medicine its use is reported in treatment of digestive disorders and wounds.

2.6 Dhaniyā (Coriander), *Coriandrum sativum* L.

Brahma Vaivatra Purāṇa (dhānyaka) ss-62: Its powder mixed with cold water and sugar, ripe fruits of *tāla* and *vilva*, *adraka*, *canaka*, soup of *mudga* and the sweets made of *tila* and sugar, help in eliminating *pitta* -acidity.

Recent Ethnomedicinal Uses: Bleed piles, colic, flatulence (If Sagar, M.P.); chicken pox, stomachache, tonic (sd Naudi folk Kerala).

Vet- Jain 1999: Digestive (sd); lactation (Darbhanga, Bihar); mastitis (If Darbhanga, Bihar); fever.

Dimasa tribal uses: Two teaspoon full of seeds are soaked overnight in a glass of water and in the next morning the water is given to take orally to get relief from fever. Sauce of leaves is taken orally which is good in bowel complaint and also to increase appetite. To get immediate remedy of flatulence, 2 teaspoon full of juice of leaves is prescribed to take orally. One-two teaspoon full of juice of shoot is given orally three times in a day in anaemia and continued till recovery.

Observations: *Brahma Vaivarta Purāṇa* mentions its use in mixture with few other herbs for *pitta* (acidity) caused diseases. It is common spice in every home.

Recent ethnomedicinal data report its use in bleeding piles, colic, chicken pox and as tonic. In ethnoveterinary medicine it is reported to improve lactation in cattle. Nath (2014) provide detail ethnomedicinal recipe.

2.7 Doobh (Bermuda Grass), *Cynodon dactylon* Pers.

Matsya Purāṇa (durva) ss-48: Root mixed with *kaseru* and roots of *ikṣu*, *viṣa* boiled in milk and mixed with butter (*ghee*) to be taken once a month for good health.

Recent Ethnomedicinal Uses: antifertility (wp); carbuncle, cramps (px Santhals); cooling (rt Garhwal); dropsy (If Sagar M.P.); dysentery, hysteria (rt Garhwal); eye disease (rt Grahwal); headache (px Santhals); menstrual complaints (wp Assam, Meghalaya); piles, bleeding (If Sagar, M.P., rt Grahwal); snake bite, sores (px Santhals); stops bleeding (px Jalpaiguri, Bengal); tonic (st M.P.); ulcer in stomach (wp Miri tribe, Assam); urinary complaint, vomit (If Sagar, M.P.); wounds (px Jalpaiguri, Bengal, Santhals).

Vet- Jain 1999: Digestive (sh Nepalis Assam); galactagogue (Badagas folk, Nilgiri); diarrhoea (wp Orissa).

Dimasa tribal uses: Paste of the plant is applied externally in cuts and injury to stop bleeding and as antiseptic. Two teaspoon full of juice of the twig is mixed with a little amount of sugar and is prescribed to take orally twice in a day in blood dysentery. In dermatitis, juice of the plant is mixed with the seed oil of *Sesamum orientale* and is applied in the affected area. Paste of root is applied externally in the affected area of piles. Bark of the stem of *Hibiscus rosa-sinensis*, whole plant of *Cynodon dactylon*, leaves of *Ocimum sanctum*, rhizome of *Zingiber officinale* and leaves of *Phlogacanthus thyrsoiflorus* are mixed together and is extracted. Two teaspoonfull of the said juice is given orally thrice daily in cough, menorrhagia and also to control hair fall.

Observations: In *Matsya Purāṇa* the *doobh* grass mixed with other herbs taken once a month is reported useful for good health; no specific diseases is mentioned.

Ethnomedicinal data record utility of this common grass in several specific ailments and injuries. Such as carbuncle, cramps, dropsy, dysentery, hysteria, eye disease, headache, menstrual complications, piles, snake bite, sores, ulcer in stomach, urine complications, vomiting, wounds and as antifertility agent, cooling, haemostat and tonic. Nath (2014) give good recipe for blood dysentery and few other ailments.

2.8 Aonla (EmblcMyrobalan), *Emblica officinalis* Gaertn.=*Phyllanthus emblica* L.

Vāmaṇa Purāṇa (āmalakī) ss-13: Its fruit juice and juice of '*ikṣu*' satisfy hunger.

Recent Ethnomedicinal Uses: Antiemetic (fr Sagar, M.P.); asthma (sd Utrakhand); bronchitis (fr Bengal); burns (bk Dangs Gujrat); cold (If Irulars Tamilnadu); constipation (fr Purulia W. B., U.P.); diabetes (fr Assam, Aruranchal Pradesh,

Grahwal); diuretic (fr grahwal); eye complaint (fr Angami Nagas Nagaland, Khasi & Jaintia Meghalaya, U.P.); fever (fr M.P.); headache (fr Purulia Bengal); indigestion (fr M.P.); laxative (fr Grahwal); liver complaint (fr Purulia Bengal); madness (sd Purulia Bengal); purgative (fr Kumaon); revive taste (fr Hazariba gh Bihar); scorpion bite (If Kol Tribe Banda U.P.); stomach complaint (fr Rajaouri Jammu); thirst (fr Mayur bhanj Orisa); tonic (fr M.P.); vaginal complaint (fr); wounds (If Kol tribe Banda U.P.).

Vet- Jain 1999: Rheumatism, Anthrax (fr Royalseema A.P.); wound (bk Eastern India); dysentery (sd The Lodhas Bengal); rinder pest (rt The Lodhas Bengal); gastric ulcer (px); bronchial problem (px); appetiser (px); indigestion (px), stomach disorders (If Hazaribag, Bihar).

Dimasa tribal uses: Fruits (5-6) are soaked overnight in a glass of water and the water is given to drink in the next morning in acidity. One teaspoon full of fruit powder of *Phyllanthus emblica*, one teaspoon full of powder of fruit of *Terminalia chebula*, and 1 teaspoonfull of powder of fruit of *Terminalia bellirica* are soaked overnight in a glass of water and in the next morning the water is given to drink in empty stomach in bowel complaint. Fruit is edible in cough and dyspepsia. Fruits are cut into pieces and are boiled in coconut oil and the oil is applied in the scalp to control dandruff and hair-fall. Fruit of *Averrhoa carambola*, fruit of *Phyllanthus emblica* and bark of *Mangifera indica* are mixed together and the juice is extracted and 3-4 teaspoon full of the extract is given orally twice in a day for 7 days in jaundice.

Observations: In *Vāmana Purāṇa* its use with sugarcane juice is mentioned for satisfying hunger.

Ethnomedicinal data report its use in asthma, bronchitis, burns, cold, constipation, diabetes, eye complications, fever, headache, indigestion, laxation, liver complications, madness, loss of taste, scorpion bite, thirst, vaginal complications, wounds and as antiemetic, diuretic

and tonic. In ethnoveterinary medicine also, the *doobh* grass is commonly used. Nath (2014) provide detail recipe for some ethnomedicines among the Dimasa tribe of Assam.

2.9 Bargad (Banyan), *Ficus bengalensis* Linn.

Vāyu Purāṇa (nyagrodha) ss-24: Man can live up to 10,000 years by drinking the fruit juice of this tree.

Recent Ethnomedicinal Uses: Aphrodisiac (fr Chidwara M.P.); atrophy (px santhals); blisters, boils (la Varanasi U.P.); cholera (px Santhals); cough (If rajasthan); cuts (If Garhwal); diabetes (bk Garhwal); diarrhoea (px Santhals); dysentery (px Santhals); eye complaint (px Santhals, la Gorakhpur U.P.); fever (Px Santhals); gum trouble (la Kerala); insanity (px Santhals); leucorrhoea (aerial rt); menorrhagia (aerial rt dang Gujrat); promotes hair growth (rt Arunanchal Pradesh); scabies (px Santhals); sex diseases (la Chhindwara M.P.); skin diseases (la Banda U.P.); snake bite (bk Rajasthan stipules Purulia West); sores in mouth (px Santhls); spermatorrhoea (la Garhwal U.P.); tonic (la Grahwal U.P.: sh M.P.); toothache (la Kerala M.P., Garhwal); urine complications (bk Gujrat).

Observations: According to *Vāyu Purāṇa* one can live for over ten thousand years by drinking juice of its fruit; no specific diseases are mentioned.

Ethnomedicinal data record its use in atrophy, blisters, boils, cholera, cuts, diabetes, diarrhoea, dysentery, eye complications, fever, gum trouble, insanity, leucorrhoea, menorrhagia, scabies, sexual disease, skin disease, snake bite, stipules, sores in mouth, spermatorrhoea and urine complication; as aphrodisiac, tonic and for promoting hair growth.

2.10 Kelā (Banana), *Musa paradisiaca* L.

Brahma Vaivarta Purāṇa (rambha) ss-62: Its unripe fruit with ripe and dry *haritakī marīca*, *pippalī*, dry *ardraka* and *jīraka* help in removing phlegm (*śleṣma*).

Recent Ethnomedicinal Uses: Anasarca (px Santhals); antifertility (fl, rt Bihar, pseudost Mirzapur U.P., rt); asthma and whooping cough (fl rajauri, Jammu, lf Ambala-Haryana); boils (lf Chindwara M.P.); diarrhoea (rt Angamies Nagaland, px Santhals); dysentery (rt Angamies Nagaland, pseudost Haryana); haematuria, dropsy, mucus in urine, pain, small-pox, vomit (px Santhals).

Dimasa tribal uses: Curry of unripe fruit is given to eat with rice in diarrhoea and dysentery. Juice of roots of the plant is used in cuts and injury to stop bleeding and also as antiseptic. Sauce of flowers is given with rice in anaemia. Three-four teaspoon full of juice of petals is mixed with 2-3 drops of honey and is given orally in the morning hours in diabetes till recovery. Leaf juice is applied locally in insect sting. Leaf paste of *Ocimum sanctum* is mixed with the paste of tender leaves of *Musa paradisiaca* and applied externally in the affected area in dermatitis. Three-four teaspoonfull of paste of tender leaves is dissolved in a cup of water and the water is given orally in liver trouble to promote liver functioning.

Observations: In *Brahma Vaivarta Purāṇa*, in mixture with other herbs it is mentioned useful for cough i.e. phlegm (*śleṣma*).

Ethnomedicinal data records its use also in anasarca, boils, diarrhoea, dysentery, haematuria, dropsy, mucus in urine, small-pox, vomiting; and as antifertility agent. Nath (2014) give recipe for anaemia, diarrhoea, dysentery, to stop bleeding from cuts, diabetes, insect stings, dermatitis, liver complaints.

2.11 Kālimirc (Black Peeper), *Piper nigrum* L.

Brahma Vaivatra Purāṇa (marica) ss-62: Ripe and dry *haritakī*, unripe *Rambhamarica*, *pippalī*, dry *ardraka* and *jīraka* help in removing phlegm (*śleṣma*).

Recent Ethnomedicinal Uses: Antifertility (fr Assam); carminative (fr Darjeeling, W.B.); child

birth (st+lf Nayadies Kerala); cold, cough (Nayadies, Kerala, Darjeeling, W.B.); fever (fr Nayadies, Kerala); sore throat (fr Nayadies, Kerala); stimul, stomachic (fr Nayadies, Kerala).

Vet- Jain 1999: Cough, cold, fever (fr Darbhanga Bihar); digestive diseases (Bihar, Kerala); mastitis (sd Kerala); swell throat (sd Eastern India); diarrhoea (fr, fl Dindigul Tamilnadu); intestinal problem (sd Andhra Pradesh); urinary problem; cholera (lf).

Dimasa tribal uses: Half teaspoon full of juice of leaves of *Ocimum canum*, ½ teaspoon full of juice of rhizome of *Zingiber officinale* and powder of 2 grains of *Piper nigrum* are mixed together and ½ teaspoon full of honey is added with it and the mixture is given orally in cough and asthmatic trouble. Juice of 2 twig of *Chromolaena odorata*, juice of 8-10 leaves of *Ocimum americanum*, powder of one grain of *Piper nigrum* are mixed together and sieved well and 1 drop of the mixture is applied in the infected eye if dust gets inside eye and thrice daily for 7 days to treat cataract. Powder of 2-3 grains of *Piper nigrum* is mixed with the paste of 8-10 leaves of *Ocimum sanctum* and is applied externally in the affected teeth and gum in toothache and swelling of gum. To treat dog-bite paste of 50 gm of bark of *Calotropis gigantea*, 50 gm of rhizome of *Zingiber officinale*, 5-6 flower buds of *Syzygium aromaticum*, powder of 8-10 grains of *Piper nigrum* and one bulb of *Allium cepa* are mixed well and pills are prepared and one pill is given orally after every three hours for three times a day for 5 days. During the course of treatment fish and meat are not allowed in diet for three months. Paste of 50 gm of twig of *Ziziphus mauritiana* is mixed with the powder of 10 grains of *Piper nigrum* and pills are prepared. One pill is given to take orally four times a day in jaundice. Half teaspoon full of paste of rhizome of *Zingiber officinale* is mixed with powder of 2 grains of *Piper nigrum* and is given orally once daily to the lactating mother to increase mother's breast milk.

Observations: In *Brahma Vaivarta purāṇa*, in mixture with other herbs it is mentioned useful for cough i.e. phlegm (*śleṣma*). It is a common spice in every home.

Ethnomedicinal data records its use also in child birth, cold, fever, sore throat and as stimulant, antifertility agent, carminative and stomachic. Nath (2014) provide detailed recipes for asthma, dust in eye, toothache, jaundice, and for lactation.

2.12 *Ikh, Ganna* (Sugar Cane), *Saccharum officinarum* L.

Vamana Purāṇa (ikṣu) ss-13: Its juice with fruit juice of *āmalaki* satisfy hunger.

Brahma Vaivarta Purāṇa (ikṣu) ss-62: It juice with *adraka*, powdered *dhānyaka*, ripe fruit of *tāla*, *vilva*, *canaka*, sweets made of *tila* and sugar, soup of *mudga* help in eliminating *pitta* -acidity.

Matsya Purāṇa (ikṣu) ss-48: Mixed with roots of *kāseru*, *viṣa*, and *durva* boiled in milk and mixed with butter (ghee) to be taken once a month for good health.

Recent Ethnomedicinal Uses: Gall bladder (cane juice Nagaland); constipation (juice Bhoxa Grahwal).

Vet- Jain 1999: Lactation (Darbhanga Bihar); wound (infl Lodhas Bengal).

Dimasa tribal uses: Juice of stem is taken orally against dysentery and jaundice.

Observations: Sugarcane, the source of sugar in mixture with other herbs in mentioned in *Vāmana*, *Brahma Vaivarta* and *Matsya Purāṇa* as useful in satisfying hunger, cough and general good health respectively.

Ethnomedicinal data record its use in constipation and gall bladder. Most ethnobotanists would not have considered it necessary to include sugar as a medicinal constituent for inclusion in the recipe. Nath (2014) include it in their recipe for dysentery and jaundice.

2.13 *Til* (Sesame), *Sesamum indicum* L. = *Sesamum orientale* L.

Vāmana Purāṇa (tila) ss-13: One can survive by consuming *tila* and *pinyaka* (husk of *tila*) seeds and vegetables.

Brahma Vaivarta Purāṇa (tila) ss-62: Sweet made with sugar, powdered *dhānyaka*, *adraka* ripe fruit of *tāla*, *vilva*, *canaka*, *ikṣu*, soup of *mudga* help in eliminating “*pitta*” -acidity.

Recent Ethnomedicinal Uses: Abortifacient (sd); boils (sd Ranchi, Hazaribagh Bihar); dysentery (px santhals); lactation (sd Assam); leprosy, spleen complaint (px santhals); ulcers (sd Chadrapur Maharastra; Dehradun)

Vet- Jain 1999: Wound (oil Madhya Pradesh); expel placenta (sd Kurnool Andhra Pradesh); lactation (lf, sd Sahariya tribe, Morena M.P.).

Dimasa tribal uses: Oil of seeds is applied in scalp in high blood pressure. Paste of seed is applied locally in burnt places and also in sun burn to remove dark spots of sunburn. Poultice is provided with the paste of the seeds in chronic dermatitis.

Observations: According to *Vāmana* and *Brahma Vaivarta Purāṇa* seeds of *tila* in mixture with other herbs provide enough nourishment for survival and is useful in cough.

Ethnomedicinal data records its use in boils, dysentery, lactation, leprosy, spleen complications in ulcers and as abotifacient. Nath (2014) provide detail recipe for blood pressure, burn and dermatitis.

2.14 *Jāmun, Jāmbolan* (Black plum), *Syzygium cumini* (L) Skeels

Vāyu Purāṇa (jambu) ss-24: One who regularly consumes the fruit juice, does not suffer from old age, disease, anger, and can even resist death.

Recent Ethnomedicinal Uses: Anaemia (px Santhals); astringent (bk Garhwal); blisters in

mouth (lf Bhoxa tribe, Grahwal); cancer, colic (px santhals); diabetes (sd Gujrat, Tejpur Assam, Bihar); diarrhoea (px Santhals); digestive complaint (fr Bhoxa tribe Garhwal, bk Bihar); dysentery (lf Kurukshetra Harayana, Bhils tribe Rajasthan, px Santhals, bk Bihar); piles (bk Bhoxa tribe U.P., lf Bihar); pimples (sd Madhya Pradesh); stomachache (fr Bhoxa tribe Garhwal, Bastar M.P., lf Rajasthan); tonic (fr Chadrapur, Maharastra); ulcer (lf Bihar).

Vet- Jain 1999: Diarrhoea (sd Assam); dysentery (bk Assam); wound (sd, fr Rayalseema Andhra Pradesh); swell, sore (sd, fr Rayalseema Andhra Pradesh); cholera (rt).

Dimasa tribal uses: One teaspoon full of powder of seed is soaked overnight in a glass of water and in the next morning the water is given orally to drink in empty stomach in diabetes. Two-three teaspoon full of juice of bark is given orally twice in a day in diarrhoea. In blood dysentery, one-two teaspoon full of juice of twig is given orally thrice in a day till recovery. Ripe fruit juice with salt is prescribed to take orally to improve appetite.

Observations: *Vāyu Purāṇa* suggest use of its fruit juice to avoid anger and even death (!).

Ethnomedicinal data reported its use in anaemia, blisters in mouth, cancer, colic, diabetes, diarrhoea, digestive complaint, dysentery, pimples, ulcer, and as astringent, stomachache and tonic. Nath (2014) provide recipe for diabetes, diarrhoea, dysentery, and as appetizer.

2.15 *Harad* (Chebulic, Myrobalan), *Terminalia chebula* Retz

***Brahma Vaivarta Purāṇa* (haritakī) ss-62:** Its ripe and dry fruits with unripe (*rambha*)*marīca*, *pippalī*, dry *adraka* and *jiraka* help in removing phlegm (*śleṣma*).

Recent Ethnomedicinal Uses: Bronchitis (px santhals); cold (fr Sikkim); colic (fr Mirzapur U.P.); constipation (px Santhals); cough (px

Santhals, fr Sikkim, Andhra Pradesh, lf Bihar); diabetes (fr Tirap Aruranchal Pradesh, Bihar); diarrhoea, dysuria (px Santhals); dysentery (fr Purulia Bengal); eczema (bk Grahwal); eye diseases (fr Tarai U.P., px Santhals); Haemataturia (px santhals); indigestion (fr Irulas tribal Tamilnadu); measles (px santhals); malaria (fr Bihar); menstrual complaint (fr Mirzapur U.P.); pneumonia (fr Madhya Pradesh); purgative (fr Chandrapur Maharastra, Dehradun Siwalic); sore (px santhals); sore throat (fr Andhra Pradesh); spleen complaint (px santhals); stomach complaint (fr Khandala Maharastra).

Vet- Jain 1999: Diarrhoea (fl, fr Dindugul Tamilnadu); anthrax (fr Andhra Pradesh); dysentery (fr Lodhas W. B.); gastropathies, gastric ulcer in swine; liver; stomach ache in cows.

Dimasa tribal uses: Dry fruit is burnt and 1 teaspoon full of the burnt dust is mixed with little amount of molasses and is given orally twice in a day in diarrhoea and is continued till recovery. Fruit is also taken orally to get relief from cough.

Observations: *Brahma Vaivarta Purāṇa* mentioned its fruit in mixture in other herbs in cough (phlegm).

Ethnomedicinal data reported its use also in cold, colic, constipation, diabetes, diarrhoea, dysuria, dysentery, eczema, eye disease, haematuria, malaria, menstrual complications, pneumonia, spleen complications. Nath (2014) provide recipe for diarrhoea. Khan and Balick (2001) have reported on scientific basis use of fruits in acne, pimples congestive heart failure.

2.16 *Adrak* (Ginger), *Zingiber officinale* Roscoe

***Brahma Vaivarta Purāṇa* (adraka) ss-62:** Ginger with powdered *dhānyaka*, ripe fruit of *tāla*, *canaka* soup of *mudga* and the sweets made of *tila* and sugar, help in eliminating *pitta* - acidity.

Recent Ethnomedicinal Uses: Abortifacient (rh); amenorrhoea, asthma, bronchitis, cholera,

constipation, diarrhoea (px Santhals); cough (rh Jaintia, Khasi tribe, Meghalay, px Santhals); indigestion (px Santhals); insect stings (rh Khasi, Jaintia tribe Meghalaya); labor pain (rh Nagaland); phthisis, postnatal, puerperal fever (Px Santhals); revive taste (rh Hazaribagh, Bihar); rheumatism, scabies, scorpion sting (px Santhals); snake bite (rh Khasi Jaintia tribe Meghalaya, px Santhals); throatache, T.B. (rh Nagaland).

Vet- Jain 1999: Blood purifier (rh Bihar); expectorant (rh Bihar); cough (rh Darbhanga, Bihar); cold, fever (rh darbhanga Bihar); strength (Darbhanga, Bihar); indigestion (rh Bihar, Darbhanga, Kerala); bone fracture, diarrhoea (fl, Dindugul Tamilnadu); gastric (rh Didigul Tamilnadu); anthrax (tu Andhra Pradesh); appetiser; dyspepsia (px); rabies(px).

Dimasa tribal uses: Half teaspoonfull of leaf juice of *Ocimum americanum*, ½ teaspoon full of juice of rhizome of *Zingiber officinale* and powder of 2 grains of *Piper nigrum* are mixed together and ½ teaspoonfull of honey is added with it and the mixture is given orally in cough and asthmatic problem. To treat dog-bite paste of 50 gm of bark of *Calotropis gigantea*, 50 gm of rhizome of *Zingiber officinale*, 5-6 flower buds of *Syzygium aromaticum*, powder of 8-10 grains of *Piper nigrum* and one bulb of *Allium cepa* are mixed well and pills are prepared and one pill is given orally after every three hours for three times a day for 5 days. During the course of treatment fish and meat are not allowed in diet for three months. Half teaspoon full of paste of rhizome of *Zingiber officinale* is mixed with powder of 2 grains of *Piper nigrum* and is given orally once daily to the lactating mother to increase mother's breast milk. Bark of the stem of *Hibiscus rosa-sinensis*, whole plant of *Cynodon dactylon*, leaves of *Ocimum sanctum*, rhizome of *Zingiber officinale* and leaves of *Phlogacanthus thyrsoiflorus* are mixed together and juice is extracted and 2 teaspoon full of the juice is given orally thrice daily in amenorrhoea and also to control hair fall. Paste of bark of

Terminalia arjuna, paste of bark of *Hibiscus rosa-sinensis*, and paste of rhizome of *Zingiber officinale* are mixed together and 2-3 teaspoon full of the mixture is given orally with water thrice in a day for 7 days to get rid of weakness and arthritis. Rhizome is taken orally in flatulence and dyspepsia.

Observations: *Brahma Vaitra Purāna* mentioned its use with other herbs in cough (phlegm). It is common ginger a spice in every home.

Ethnomedicinal data record its use also in amenorrhoea, asthma, cholera, constipation, diarrhoea, indigestion, insect stings, labor pain, phthisis, postnatal complaints, fever, loss of taste rheumatism, scabies, scorpion sting, snake bite, throatache and abortifacient and several veterinary diseases. Nath (2014) provide detail recipes for arthritis, amenorrhoea, asthma and lactation.

3. DISCUSSION AND CONCLUSION

This comparative analysis of use of some medicinal plants of the *Purānas* with ethnomedicinal data of the last six decades as also the most recent and comprehensive work on ethnomedicinal recipes among a tribe of Assam has brought out very notable facts and some ideas for future work. Almost all medicinal uses mentioned in the *Purānas* are employed not only among tribal and rural folk, but many are prevalent in today's organised medical systems based on herbs (such as Ayurveda, Unani, Siddha) and also in unorganised medical practices like household remedies and in recipes of untrained but educated by experience like in the tribal and rural medicine man, locally addressed as Kavirāj, Vaidu, Gaita.

It has been suggested that a medical system is one which has (1) text books on its subjects, topics, and procedures, (2) state approved teaching institutions, (3) degrees or diplomas for various levels of qualification (BAMS, BUMS, MBBS, MD, Ph.D, etc) and (4) Doctors are registered with some state approved Agency (Jain, 2011).

The most significant fact is proving the dictum 'Necessity is the mother of invention, in the absence of organised health-care facilities, the folk have discovered material and ways of treating not only their own ailments and injuries, but also of some of their domesticated animals. One can assign this to elements of unique intuition, keen observation, vast ingenuity, unmatched creativity and infinite patience for trial and error methods of the so called illiterate and uneducated rural and particularly tribal folk. The large number of ailments for which the ethnomedicinal recipes are reported is remarkable.

It is relevant to recall that the origin of all medical systems and practices based largely on herbs was in folklore. Shepherds and graziers who watched their sheep, goats, cattle and other animals avoiding certain plants, eating some particular herbs or shrubs mentioned this to others; some of this folklore passed through rigorous process of careful observation and trial and error method, and in recent decades through experimental or clinical evaluation. Though many are now included in organised systems yet far more remained in oral folklore or unorganised practices.

One observation is necessary on some Purāṇic statements like: if one eats this plant he can live up to 10,000 years or can even avoid death. Exaggeration even to the extent of incomprehensible is not uncommon in legends of several religions or faiths. To impress their followers, preachers or authors they would try to assure very long life, extreme prosperity and heavenly pleasures as a consequence of doing a noble deed, or using good objects, and frighten them with tortures by demons and incurable diseases on doing sinful acts or using prohibited objects. Hence, the intention of such superlative sentences should be taken and not the words.

The observations bring out need for comparative study on medicinal plants mentioned in other *Purāṇas* and other early writings, as also scientific research into selected plants. The

criterion for short- listing ethnomedicinal plants with good prospect of positive results from experimental and clinical work was suggested by (Jain 2004).

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