

Ethnomedicinal Wild Plants and its Uses by Rural Women of Assam in Gynecological Disorders : A Comprehensive Study

¹Bidyut Bikash Deka and ²Namita Deka

¹Assistant Professor, ²Assistant Professor

¹Department of Botany, Barama College, Barama, Baksa, Assam, India

²Department of Botany, Nalbari College, Nalbari, Assam, India

Abstract: The connection between man and his search for drugs in nature dates from the far past of which there is ample evidence from various sources. Many plants are being used to treat different human disorders that adversely affect women reproductive system from ancient times. Assamese women specially of rural area are interested to treat their gynecological disorders like leucorrhoea, menorrhagia, infertility, menstrual pain etc by using herbal medicine. In present study 25 wild plant species belonging to 18 families are recorded which are utilized to cure many gynecological disorders. Among these plants 18 species are herb, 2 species shrub, 2 species trees and 3 species climbers.

Index Term : Assamese, gynecology, wild, disorder

I. Introduction:

Being a part of the Eastern Himalayas, Assam is very much rich in biodiversity. A good number of wild plants are found in Assam due to its high humidity and high rain fall. More than 30% of total plants of the world has been used in preparation of medicine. From ancient times herbal medicine have been used to cure many diseases and maintaining a healthy life. Plants with numerous efficacious observations have historically been used as a starting point in the development of new drugs, and a large percentage of modern pharmaceuticals have been derived from medicinal plants (Hugo J. de Boer, 2014)

Gynecology deals with the health of the female reproductive system including uterus, vagina and ovaries. Mostly the rural women are more vulnerable of the disorders like delivery problem, leucorrhoea, menorrhagia, morning sickness, infertility etc. The more healthy will be the women the more developed will be the society. But rural women are less health concerned, as a result of which they frequently suffer from such diseases which are kept hidden. Traditionally from time immemorial such types of disorders are cured and controlled by using some locally available plants. According to WHO the health care of women is crucial. Now a days research is going on active organic macromolecules present in these wild plants. There are many medicinally important species which are used to produce various types of drug and medicines to treat many ailments in India since the time of the Rig Veda (Tripathi *et al.* 2010). The different chemical constituents of a plant accountable for control diseases include tannins, anthocyanins, iridoids, flavonoids, phenolic acid, terpenoids, steroids etc. Tannins are a heterogenous group of high molecular weight polyphenolic compounds with the capacity to form reversible and irreversible complexes with proteins, polysaccharides, alkaloids, nucleic acids and minerals (Milena Masullo, 2015).

II. Materials and Methods:

Assam is one of the states of India with a heterogenous population and with an area 78,438 sq Km. Assam has total population of 31,205,576 in which females were 15,266,133 as per 2011 census. Around 2.68 crore persons which is 86% of total population live in rural areas. The geographical boundary of the state is 24° 2'N to 27° 6'N latitude and 89° 8'E to 96° E longitude. The state is bounded by Bhutan and Arunachal Pradesh in the North, Meghalaya, Tripura, Mizoram, Manipur and Nagaland in the South, Arunachal Pradesh in the East and West Bengal and Bangladesh in the West. The study was conducted during 2013-2015 in various villages of upper and lower Assam.

In the survey the information regarding the uses of plants in practice has been collected from experienced traditional practitioner or the informants locally known as Vaidyas or Ojachs of different localities of the state. The medicinal uses noted against each species are also consulted with local elders experienced people including both male and female as per suggested by Jain(1987), Brahma (1992) and Cotton(1996). The field survey was

done from 2014 to 2015. The most effective and important side of correct utilization of herbal medicine is its proper identification and its correct traditional process of utilization. The plants are collected and processed for making herbarium following standard methodology (Jain and Rao, 1977). Plants are identified at regional herbaria and by using literature like Flora of Assam (1934-1940), Axamar Gos-Gosoni (2004) and others available at the library of Gauhati University and BSI, Eastern circle, Shillong.

III. Result and Discussion:

The present study reveals that 25 wild plant species belonging to 18 families and 24 genera have been utilized by the women to cure different gynecological disorders (Table 1). They belong to 3 monocot families and 15 dicot families. In the survey 72 % of reported plant species are herb, 8% tree, 8% shrub and 12 % climber (Fig- I). Different plant parts used in the practice are root(20%), bark(4%), fruit & seed (8%), flower(8%), leaf(20%), tender shoot(20 %), rhizome(4%), petiole(12 %) inflorescence(4%) and whole plant(16%) (Fig-2). The herbal medicines are either cooked or raw and prepared as paste, decoction, juice, powder, fumes. There is a tradition in Assamese community that a special dish containing petioles of *Homalomena aromatica*, *Colocasia gigantea* and black pepper is cooked and given to a new mother on the 7th day of child birth. The dish is popular in Assamese community as it improves breast feeding capacity of a mother and considered as one of the practice for post natal care.

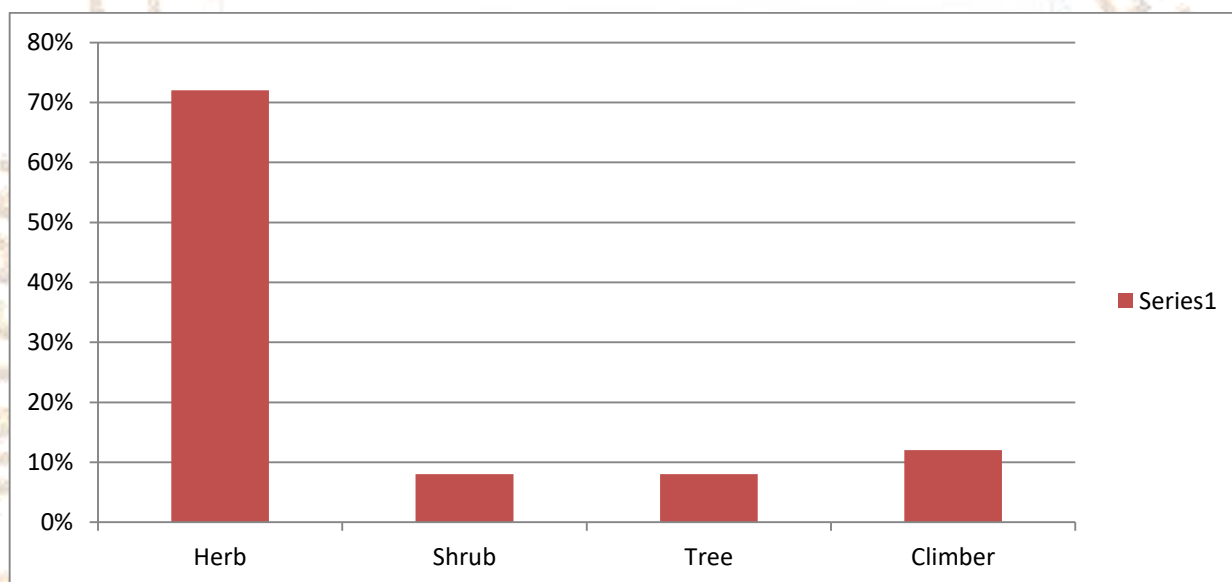


Fig – I : Type of Plant Habit

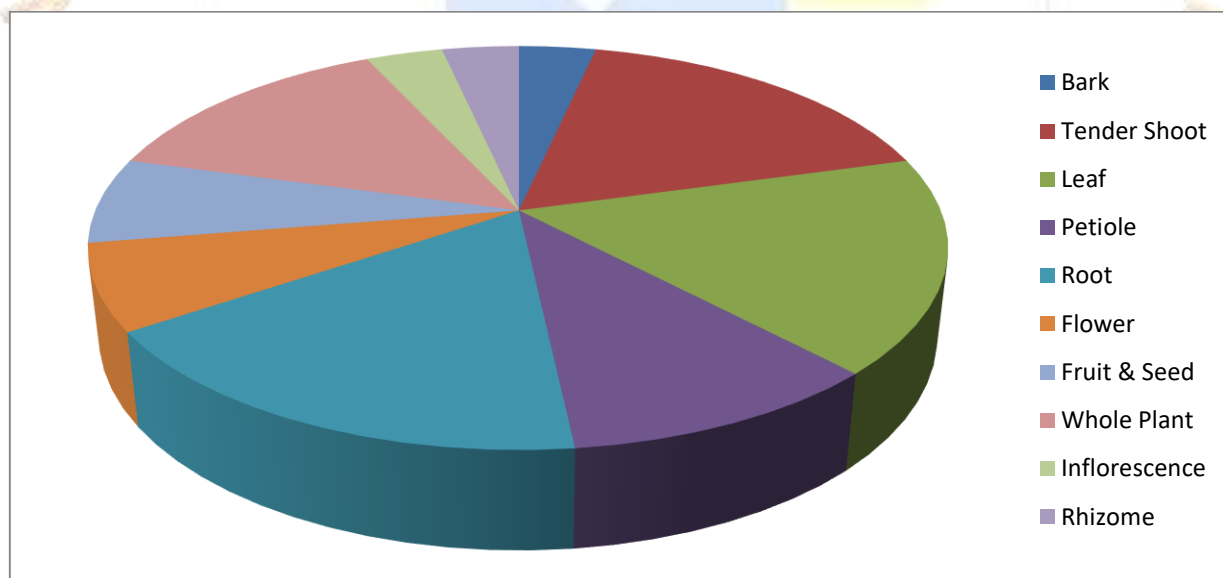


Fig – II : Plant Parts Used

Table 1: Wild plants used to treat gynecological disorder in Assam

Species	family	Local name (Assamese)	Habit	Used plant part	Process of Utilization
<i>Alternanthera sessilis</i> R. Br.	Amaranthaceae	Matikaduri	Herb	Tender shoot	About half cup of Extract given to take orally to treat leucorrhoea
<i>Amaranthus spinosus</i> Linn.	Amaranthaceae	Kata khutura	Herb	root	Half cup of decoction mixed with honey and given to treat menorhagia
<i>Basella rubra</i> Linn.	Basalaceae	Puroi sak	Climber	Tender shoot	Massage of leaves on forehead decrease dizziness during pregnancy
<i>Centella asiatica</i> Urban	Apiaceae	Bor Manimuni	Herb	Whole plant	Cooked and eaten to treat anemia due to blood loss during menorhagia
<i>Coccinia indica</i> Wight	Cucurbitaceae	Belipoka	Climber	leaf	Leaf extract along with rice flour given to eat to stimulate milk flow of a mother
<i>Colocasia esculenta</i> (L.) Schott	Araceae	Kola kosu	Herb	petiole	Cooked and eaten to treat anemia due to blood loss during menorhagia
<i>Colocasia gigantea</i> (Blume ex Hassk) Hook.f.	Araceae	Dohi Kosu	Herb	petiole	Cooked and eaten for increasing milk production and speedy recovery of wounded uterus after delivery
<i>Cynodon dactylon</i> Linn.	Poaceae	Dubori	Herb	Whole plant	About 2 table spoon of Extract with honey given to take orally to treat leucorrhoea
<i>Hemidesmus indicus</i> (Linn.) Schult	Periplocaceae	Ananta mul	Climber	root	About 5 ml of decoction with milk given to take for one month to treat infertility
<i>Homalomena aromatica</i> (Spreng.) Schott	Araceae	Gondh Kosu	Herb	petioles	Cooked and eaten for speedy recovery of wounded uterus after delivery
<i>Hydrocotyle sibthorpioides</i> Lam.	Apiaceae	Soru Manimuni	Herb	Whole plant	Cooked and eaten to treat anemia due to blood loss during menorhagia
<i>Ipomoea aquatica</i> Forssk.	Convolvulaceae	Kolmou	Herb	Tender shoot	Cooked and eaten to treat anemia due to blood loss during menorhagia
<i>Lasia spinosa</i> Linn.	Araceae	Seng Mora	Herb	leaves	About 10 ml of decoction with milk given to take orally for a week to treat leucorrhoea
<i>Leucas aspera</i> (Willd.) Link	Lamiaceae	Dron	Herb	Tender shoot	Half cup of raw extract mixed with water and given for few days to treat menorhagia
<i>Murraya koenigii</i>	Rutaceae	Nara Singha	Tree	Leaves	Cooked and eaten to treat anemia due to heavy blood

Spreng.					loss during menorhagia
<i>Musa balbisiana</i> Colla	Musaceae	Vim Kol	Herb	Inflorescence	Cooked and eaten to treat anemia due to blood loss during menorhagia
<i>Nelumbo nucifera</i> Gaertn	Nelumbonaceae	Podum phul	Herb	Flower, Fruit, seed	Dried powder with milk given to take to treat infertility
<i>Nymphaea nouchali</i> Burm.f.	Nymphaeaceae	Vet phul	Herb	Rhizome, Fruit, seed	Dried powder with hot water given to take orally to treat irregular periods
<i>Phyllanthus niruri</i> Linn.	Euphorbiaceae	Bhui Amlokhi	Herb	Root	Extract mixed with honey and given a week to treat abdominal pain during periods
<i>Ricinus communis</i> Linn.	Euphorbiaceae	Ara gos	Shrub	Leaf	Massage of hot leaves decrease stomach pain after delivery
<i>Saraca indica</i> Linn	Fabaceae	Asoka	Tree	Bark, flower	Half cup of decoction mixed with honey and given in empty stomach for a week to treat menorhagia
<i>Stellaria media</i> Linn.	Scrophulariaceae	Moroliya	Herb	Tender shoot	Cooked and eaten to increase fertility
<i>Vernonia cinerea</i> (L.) Less	Asteraceae	Son phul	Herb	Leaf, root	About 5 ml decoction with honey given to eat to treat prolonged menstrual cycle
<i>Wedelia chinensis</i> (Osbeck) Merr.	Asteraceae	Vringaraj	Herb	Whole plant	About 10 ml of decoction with water given to take orally for a month to treat leucorrhoea
<i>Withania somnifera</i> (L.)Dunal	Solanaceae	Ashwagandha	shrub	Root	Root powder mixed with ghee taken orally both to treat menorhagia & leucorrhoea

IV. Conclusion:

The traditional knowledge transferred from one generation to another by oral means is very important to be documented, so that future generation can practice them scientifically. The different aspects like used plant parts, doses, application should be correctly practiced for effective result. Vigorous studies in this field will open a new door on ethno pharmacology and enrich the economy of the state.

Acknowledgement: Authors are thankful to different communities of Assam for giving valuable information necessary for the present investigation.

V. References:

- [1] Bor, N.L. (1940): Flora of Assam Vol-V (Gramineae). Calcutta.
- [2] Brahma, B.K.(1992): A study on the ethnobotany of the Bodos of Kokrajhar district, Assam, Ph.D Thesis, Gauhati University.
- [3] Cotton, C.M. (1996): Ethnobotany- Principles and Application. John Wiley and Son, New York.
- [4] Dutta,A.C. (2004) Axamar Gos-Gosoni, Vol I, Assam Science Society,Assam, Print.
- [5] Dutta,A.C. (2004) Axamar Gos-Gosoni, Vol II, Assam Science Society,Assam, Print.
- [6] Hugo J. de Boer,(2014): Medicinal plants for women's healthcare in South east Asia: A meta-analysis of their traditional use, chemical constituents, and pharmacology. *J. of Ethnopharmacology* **151(2):747-767**
- [7] Jain, S.K. (1987): A manual of Ethnobotany. Scientific publishers, Jodhpur. *Eco.Bot.***33 (1): 52-56**. New York Bot. Gard.
- [8] Jain, S.K. & Rao, R.R.(1977): A handbook of Field and Herbarium methods. Today & Tomorrow's Printers & Publishers, New Delhi.
- [9] Kanjilal,U.N., Kanjilal, P.C., Das, A., Purkayastha, C. and De, R.N.(1934): Flora of Assam. vols. I-IV, Govt. of Assam Press, Shillong,
- [10] Milena Masullo, Paola Montoro (2015): Medicinal plants in the treatment of women's disorder: Analytical strategies to assure quality, safety and efficacy. *J. of Pharmaceutical and Biomedical Analysis* **133**: 189- 211
- [11] Tripathi, R, Dwivedi, S.N and Dwivedi, S (2010): Ethnomedicinal plants used to treat gynecological disorders by tribal people of Madhya Pradesh, India. *International J. of Pharmacy & Life Sciences*, **1(3):160-169**

