

Ethnomedicinal uses of *Cyperus rotundus* L. (Cyperaceae) in Assam

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Abstract

Cyperus rotundus L. (Cyperaceae), a common notorious and Hydra headed weed, which has been used by different ethnic groups for curing some diseases since long. Ethnobotanical studies conducted in Assam gathered information on its ethnomedicinal uses from different ethnic communities living in various remote localities of the state. Total 14 prescriptions are described here with method of preparation, doses and administration. However, these prescriptions deserve further study.

Key words: *Cyperus rotundus*; Ethnomedicine; Assam

INTRODUCTION

The amplitude of traditional knowledge of an area depends on the level/richness of biodiversity of the region. Assam is one of the states of northeastern India in the Himalayan biodiversity Hotspot, which is very rich in biodiversity as well as traditional knowledge. Geographically Assam lies between 20° 51' N - 27° 58' N latitude and 89° 49' E - 97° 26' E longitude and has a total area of 78,523 sq km spreading over 27 districts with a population of 2.66 million as per 2001 census Assam is the home land of large number of diverse ethnic groups having diversified empirical knowledge.

About 80 % of the population of Assam resides in rural areas. People of these rural localities by and large are still dependent on abundant natural resources for their sustenance including health care needs. They have deep belief on the local traditional system of medicine for remedies and rely exclusively on local traditional curers, popularly known as *Vaidyas*, *Bej*, *Kabiraj* or *Ojah* who attained a high degree of perfection in treatment of various ailments using herbal medicines. Though several workers have been involved in search of ethnobotanical and ethnomedicinal information of plants in the state during the last two three decades (Bhattacharjee *et al* 1980; Boissya & Majumdar 1980; Borthakur 1976, 1981, 1992, 1996; Borthakur *et al* 1996, 1998; 2004; Das & Saikia 2002; Gogoi & Borthakur 2001; Hajra & Baishya 1991; Nath 2001; Sarma *et al* 2002), there appears to be no such account so far on single plant. In the present communication an attempt has been made to explore the ethnomedicinal uses, value and potentiality of this notorious weed species.

MATERIALS AND METHODS

During the ethnobotanical survey in the state, remote villages of different districts of Assam were visited and ethnomedicinal information was collected from local traditional medicine men and women who prescribe their own herbal preparations in different ailments. The information was further verified by cross-checking with other traditional medicine men and women of different areas of the state.

ETHNOMEDICINAL USES

Cyperus rotundus L. (Cyperaceae) one of the most notorious weeds of common occurrence in and around our surroundings; most commonly in courtyard and gardens as well as in crop lands; a perennial herb with tuberous rootstock and stoloniferous rhizomes, stolons thickening into black woody, ovoid tubers. Generally tubers of this species are used medicinally. Tuber is bitter, pungent,

acid and astringent in test. In Assam this species is commonly known as 'Keya ban' and used in traditional medicines since long. The observations, made during ethnobotanical survey are presented as prescriptions for various ailments.

1. Fresh juice of tuber mixed with plant juice of *Cynodon dactylon* (L.) Persoon and juice of tender leaves of *Psidium guajava* L. in equal amount and given in blood dysentery (two to three teaspoonfuls thrice daily till cure).
2. Decoction of tuber is given as vermicide to children (two teaspoonfuls daily for three days).
3. Juice of tuber is given in strangury as diuretic (four teaspoonfuls mixed with one teaspoonful of honey daily in the morning for a fortnight).
4. Juice of tuber mixed with extract of boiled tender fruit of *Psidium guajava* L. in equal amount is given in diarrhoea (five teaspoonfuls thrice daily till cure).
5. Decoction of tuber mixed with root decoction of *Ecbolium viride* (Forsk.) Alston in equal amount is given in stomach pain and in abdominal gripes (one teaspoonful twice daily for three days).
6. About 50 ml of tuber juice and equal amount of root juice of *Asparagus racemosus* Willdenow mixed with a cup (about 125 ml) of milk is given in general debility as tonic (twice daily for a fortnight or more).
7. Tuber juice is used as blood purifier in skin diseases.
8. Tuber pounded with spike of *Piper longum* L., fruit of *Terminalia chebula* Retzius and rock salt in equal amount, made into small pills of about 5 gm and given in indigestion and in dyspepsia (Two to three pills twice daily).
9. Decoction of tuber with root of each of *Achyranthes aspera* L., *Flemingia strobilifera* (L.) Aiton, root of *Solanum torvum* Swartz, seed of *Tribulus terrestris* L. leaf of *Paederia foetida* L., stem of *Tinospora cordifolia* (Willdenow) Hook.f. & Thompson, leaf of *Barleria cristata* L. and dry ginger in equal parts is prescribed in puerperal diseases like causing burning sensation of the body, fever, loose motion, etc. (two teaspoonfuls twice daily).
10. Decoction of tuber with root of each *Rubia manjith* Roxburgh, *Plumbago zeylanica* L., *Tinospora cordifolia* (Willdenow) Hook.f. & Thompson, *Morinda angustifolia* Roxburgh, *Glycyrrhiza glabra* L., *Cayratia pedata* (Lamarck) Gagnepain and *Ipomea mauritiana* Jacquin, rhizome of *Curcuma longa* L., rhizome of *Acorus calamus* L., whole plant of *Portulaca oleracea* L. and wood of each of *Pterocarpus santalinus* L.f. and *Santalum album* L. is given in apoplexy (five teaspoonfuls daily for a week).
11. Root decoction with bark of each *Gmelina arborea* Roxburgh, *Stereospermum colais* (Buch.-Ham. ex Dillwyn) D.L. Mabberley, *Clerodendrum indicum* (L.) O. Kuntze. and *Oroxylum indicum* (L.) Ventenat, root of each of *Hedyotis corymbosa* (L.) Lamarck, *Achyranthes aspera* L., *Tribulus terrestris* L. and *Solanum virginianum* L., stem bark of *Aegle marmelos* (L.) Correa, stem of *Tinospora cordifolia* (Willdenow) Hook.f. & Thompson and dry ginger in equal parts is given in all kinds of fever, splenomegaly, hepatitis, dropsy and loss of appetite (two teaspoonfuls twice daily).
12. Decoction of tuber with root of *Tinospora cordifolia* (Willdenow) Hook.f. & Thompson, bark of *Justicia adhatoda* L., root of *Solanum virginianum* L. and leaf of *Aegle marmelos*

(L.) Correa in equal parts is given in dropsy, fever and vomiting (five teaspoonfuls thrice daily till cure).

13. Tuber pounded with root of *Basella alba* L. var. *rubra* (L.) Stewart and *Sida cordifolia* L. in equal parts, made into pills of about 5 gm each and administered in spermatorrhoea and in leucorrhoea (three pills thrice daily for three weeks).

Poultice of tuber made with seeds of *Citrus limon* (L.) Burman f. is applied on inflammation of joints.

DISCUSSION AND CONCLUSION

Though *Cyperus rotundus* L. is a most notorious and Hydra headed weed the present study revealed its manifold usefulness in traditional medicines. The ethnic groups of Assam have a rich tradition of use of this taxon for various ethnomedicinal purposes. In the present study 14 prescriptions using this plant species against 16 different ailments have been recorded from the state. Scanning through the literature reveals that some important Indian medicinal plants documents have recorded various uses of this plant against a number of ailments (Ambasta 1986; Chopra *et al* 1956; Jain 1991). In the present investigation some new and less known medicinal uses [mention those uses!!!] of this plant have been enumerated, which have been well accepted by rural people as these seem to be very effective. It is now time to undertake pharmacological studies to establish the therapeutic properties of this herb, so as to standardize and formulate alternate medicines based on ethnotherapeutics either with single plant or in combination with other plants.

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