Medicinally Potential Herbs of Family Asteraceae: A case study in Baksa District, Assam.

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***Abstract*:** Baksa is one of the four districts of BTC, Assam. The plant diversity of the district is wroth mentioned as it is an undisturbed area. The present study has focused on the medicinally potential herbs belonging to the family Asteraceae. 22 species belonging to 20 genera have been reported to be used in traditional medical practices. Different plant parts like inflorescence, root, tender shoot, leaves and fruit and seed are utilized to cure many diseases. The identification of the bioactive drugs from such natural sources will add a new direction in medical science in near future.
***Key Words*: Asteraceae, Baksa, BTC, traditional**

I. INTRODUCTION

Baksa is inhabited mainly by Assamese and Bodo speaking ethnic group who have a vast knowledge on traditional healing practices. Originally Baksa was annexed with Nalbari district. But after the formation of BTC in 2004, Baksa became a newly formed district with an area of 2475 square Km. It lies between $26^0 30^/ {}^51^{//}$ N to $26^045^/52^{//}$ N latitude and $91^015^/20^{//}$ E to $91^045^/13^{//}$ E longitude. The world-famous Manas National Park is located in the western part of the district. The area enjoys a warm and rainy weather which support luxuriant growth of herbaceous vegetation.
Asteraceae is considered as the largest and advanced family of dicot plants and with over 32000 species all over the world. The Asteraceae were first described in 1740 with an original name Compositae. Most of the species are herbs with medicinal properties. The family is characterized by the presence of head inflorescence, involucre, ray as well as disc florets, pappus etc. Since time of immemorial medicinal plants are nature's hidden wealth and to a large extent unexplored treasure that have been used virtually in all human cultures around the world (Lakshman *et al* 2014). *Acmella* is known for its antiviral, antimalarial, antinociception, anti-inflammatory effects. Plant derived compounds have played an important role in treating and preventing human diseases. These are important sources for new drugs and also good lead compounds suitable for further modification drug development to discover new naturally occurring enzyme inhibitors (Ata *et al*. 2007).

II. METHODOLOGY

The plant specimens have been collected at their flowering and fruiting stages at regular intervals covering all the seasons of the year. Herbarium Sheets were prepared following Jain & Rao (1977). Plants are identified by comparing Voucher specimens with the collection of herbarium sheets of GUBH and ASSAM. Regional and National flora like *The Flora of British India* (Hooker, 1872-1897), *Flora of Assam* (Kanjilal *et al*. 1934-1940), *Assam's Flora* (Chowdhary, 2005) were collected for identification. The identified species are correctly named through the consultation of literature (Bennet,1987) and web site (http://www.theplantlist.org/).The local uses of plant resources of the areas have been analyzed as per the process suggested by Jain (1987), Martin (1995) and Cotton (1996).The nomenclature was verified through www.theplantlist.org.

III. RESULTS AND DISCUSSION

As shown in the Table 1, 22 species of Asteraceae family have been reported from Baksa district and used to treat different illness. Different plant parts like inflorescence, root, tender shoot, leaves and fruits and seeds are utilized for this purpose. They are mostly used to treat dermatological problems. The uses of *Tridax procumbens* L. as anticoagulant is world famous. Even its medicinal value was mentioned in the epic ***Ramayana***. But the other plants of Asteraceae family have not got so much attention as a result of which a vacuum is created in pharmacognosy, related to utilization of these Aster members. Regarding various plant parts, whole plants of 3 species, roots of 4 species, shoot of 6 species, inflorescence of 2 species, fruit or seed

of 2 species, leaves of 6 species are recorded to be used in the study area (Figure 1). Plants are mostly applied externally than orally. The use pattern is almost same among Assamese and Bodo people.

Table 1: Medicinally important species of Asteraceae found in Baksa district

Sl. no	Species/ Voucher no	Vernacular name	Parts used	Flowering and fruiting period	Uses
1	*Acmella calva(*Candolle)R.K. Jansen N.Deka 045	Piroja (Assamese)	Root	Feb-April	Root paste applied to treat tooth ache
2	*Acmella paniculata*(Wallich ex Candolle)R.K. Jansen N.Deka 007	Piroja, Huhuni sak(Assamese) Ushumoi (Bodo)	Root	Feb-April	Root paste applied to treat tooth ache
3	*Ageratum conyzoides Linn.* N.Deka 019	Gondhoa Bon (Assamese); Bur Madari(Bodo)	Leaf	March-June	Leaf extract used for faster wound recovery
4	*Blumea lacera* (N.L. Burman)Candolle N.Deka 029	Kukursuta (Assamese); Jarimaigong (Bodo)	Leaf	April-May	To treat sore throats
5	*Centipeda minima* (Linn.)A. Braun N.Deka 032	Joni bon (Assamese)	Whole plant	Feb-April	Used to treat nasal allergy
6	*Cotula hemisphaerica* (Roxburgh) Wallich ex Bentham N.Deka 061	Saru Hassati (Assamese);Hasiu undai (Bodo)	inflorescence	Feb-April	Inflorescence squeezed and applied to treat piles
7	*Cyanthillium cinereum* (Linn.) H.Robinson N.Deka 005	Saha Debi (Assamese)	root	Feb-April	Used in inflammations
8	*Eclipta prostrata* (L.) L. N.Deka 081	Kehraj (Assamese); Dawjeng Jwala (Bodo)	leaf	Feb-April	Leaves paste applied in nail to reduce bacterial infection
9	*Enydra fluctuans* Loureiro N.Deka 041	Helachi (Assamese); Allachi Maigong (Bodo)	Shoot	July-November	Tender shoots cooked and consumed to treat diabetes
10	*Erechtites valerianifolius* (Link ex Sprengel) Lessing ex Candolle N.Deka 053	Bon Kopah (Assamese)	Fruit/seed	March-May	to treat nasal allergy
11	*Ethulia conyzoides* Linn. N.Deka 044	Nil phul (Assamese)	Whole plant	March-May	Paste applied to treat piles
12	*Gnaphalium indicum* Linn. N.Deka 017	Kopah Gutiya (Assamese); Hagrani(Bodo)	shoot	Feb-April	Treat sensation of legs
13	*Gnaphalium polycaulon* Persoon N.Deka 038	Kopahi Bon(Assamese)	shoot	January-March	Treat sensation of legs
14	*Grangea maderaspatana* (Linn.) Poiret N.Deka 075	Hasuti(Assamese); Hasiu biphang(Bodo)	Inflorescence/ leaf	February-May	Used to treat joint pain in hand and leg

15	*Ixeris polycephala* Cassini ex Candolle N.Deka 011	Sariyoh phul (Assamese)	Whole plant	January-March	Used to treat inflammations
16	*Mikania scandens* (Linn.) Willdenow N.Deka 002	Asama Lata (Assamese)	Shoot	August-December	Stem tied to leg to treat pain
17	*Sonchus arvensis* Linn. N.Deka 056	Usumai pagla(Bodo)	root	March-April	Roots used to treat jaundice
18	*Sphagneticola calendulacea* (Linn.) Pruski N.Deka 009	Sarubeli (Bodo)	Leaf	Feb-April	Leaves used in blackening grey hair and to treat dandruff
19	*Tagetes patula* Linn N.Deka 049	Narji phul, Gendhe phul(Assamese)	Leaf	Nov-December	Leaf paste used to treat cuts
20	*Tridax procumbens* Linn. N.Deka 034	Bikhalyakarani (Assamese)	Tender shoot	Whole year	Tender shoots' paste used as anticoagulant. and in treatment of boils, blisters and cuts.
21	*Xanthium strumarium* Linn. N.Deka 006	Agra (Assamese)	seed	March-May	Fumigation of seed used to treat viral disease
22	*Youngia Japonica* (Linn.) Candolle N.Deka 065	Bogi Mula(Assamese)	Tender shoot	Feb-April	Consumed as leafy vegetable to treat anaemia

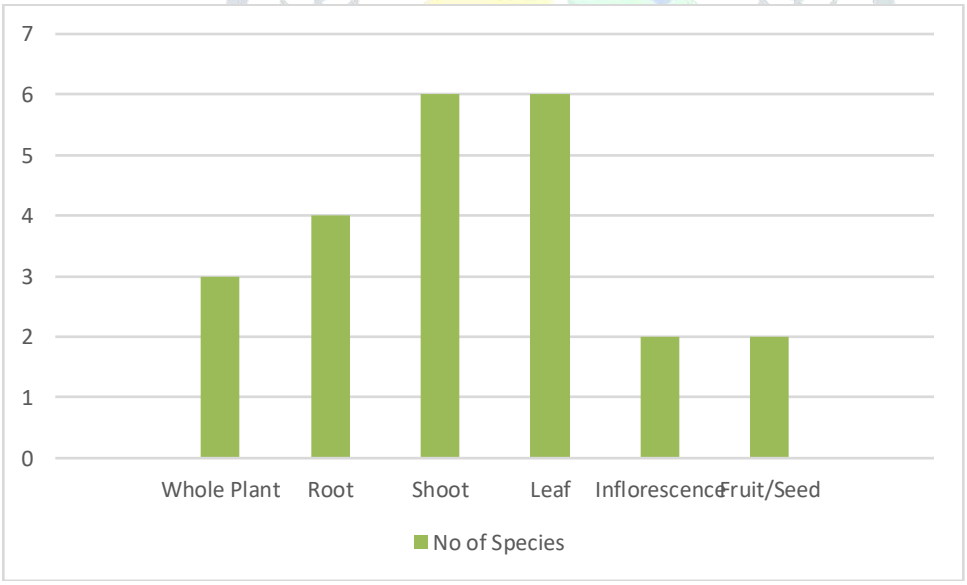

Fig-1 : Plant Parts utilised as medicine.

IV. CONCLUSION

The study of medicinal potential of Asteraceae in Baksa district reports that there are many plants of the family which are either undiscovered or their medicinal activities are not investigated. The discovery of medically potential phytochemicals in the taxon will impart a new direction in the field of Pharmacognosy.

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Gnaphalium Polycaulon

Erechtites valerianifolius

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Grangea maderaspatana

Acmella paniculata

Acmella calva

Enydra fluctuans

Centipeda minima

Eclipta prostrata

Mikania scandens

Sphagneticola calendulacea