

Ethnomedicinal Studies Of Some Aquatic Plants Of Sitamarhi District, Bihar

Gopal Jha, Dr. S.D.P. Sinha

Research Scholar, University Department Of Botany, Associate Professor, University Department Of Botany.

Babasaheb Bhimrao Ambedkar Bihar University Muzaffarpur, Bihar, India

Abstract: - Aquatic plants are very remarkable forms of plants life and are essential component of the aquatic ecosystem. A variety of products and significant beneficial services are offered by these groups of organisms. They play important role in the life of human beings as food, fodder, medicine, etc. In spite of that, the knowledge of correct utilization of aquatic plants is lacking among common people and in order to make them aware, steps are to be introduced. In this survey an attempt has been made to categorize aquatic plants and their utilization by the local inhabitants of Sitamarhi district, Bihar. Sitamarhi district in Bihar is an important area situated in the India Nepal border along with a rich number of aquatic vegetation.

Keywords: - Aquatic plants, Sitamarhi, Bihar, India, Nepal.

LITRODUCTION

The earlier record use of medicinal plants for prevention of disease and use of ointment can be traced Rig-Veda perhaps the oldest repository of human knowledge have been written between 4500 & 1600 BC.

Each ethnic community has their own health care system, their ancient knowledge, sometimes referred to as ethno therapeutics. They are utilized their plant part like rhizome, stem, roots, fruits, leaves, in various ways for the treatment of various ailments since ancient time.

In spite of the impressive work done on the aquatic plants India viz. Biswas and Calder (1955), Santapu (1955), Subramanym (1962), Vyas (1965), Jha (1965), are the prominent workers and a several publication were made on the aquatic flora of different districts of India. Aquatic plants are generally considered as menance as they are often result of eutrophication. But this is also a myth as a large number of aquatic plants are useful for human being and their medicinal uses are worth mentioning. Keeping these facts in mind present investigation was formulated to study aquatic plants of Sitamarhi district and to document their medicinal properties prevalent among local people.

- And also these subdivisions are organized in to blocks
- Bairgania
- Bajpatti
- Bathnaha
- Belsand
- Bokhra
- Choraut
- Dumra
- Majarganj
- Nanpur
- Parihar
- And etc.
- Sitamarhi Sadar

Sitamarhi district was formerly subdivision of Muzaffarpur district under Muzaffarpur division of Bihar. In 1972 Sub-division was upgraded as a district. The previous history was very glorious because Sitamarhi was the birth place of Jagat Janani Maa Sita wife of Sri Rama and daughter of Raja Janak. History reveals that place was the capital of the Kingdom of Raja Janak having political boundary adjoining Nepal and Madhubani from North and East. This district is traversed by many rivers – Lakhandai, Purani dhar Lalbakia. Besides these there are merely depressions like chauras. Mauns throughout the district which are inhabited by many aquatic plants besides some ponds, ditches, and marshy depression are vergin.

II.OBJECTIVES

1. Trying to prove useful for human life by getting information about aquatic medicinal plants available in sitamarhi district.

III.PROBLEM DISCUSSION

- Although in India a wide spectrum of Aquatic flora is found but a survey of the literature reveals that the aquatic flora of Bihar, Still remains unexplored and there is no any exhaustive volumes encompassing the description of the aquatic plants species are reported to have attained the status of aquatic weeds in different Situation. Above 140 species the following three are the primary aquatic weed of the world.

- Fresh water bodies of the about 8 lakhs lac of availed in India

IV.METHODS OF PROBLEM SOLVING

- Sitamarhi, lying between $26^{\circ}10'1-27^{\circ}-1' N$ and $84^{\circ} 34' -86^{\circ}-44' N$ latitude and longitude respectively. Its survey shows 2199 sq. Km area of the district.
- In present study large number of water bodies of study area was taken into consideration.
- The water bodies were visited every month and aquatic plants were collected and their herbaria were prepared.
- The methodologies followed for the collection of plants and preparation of the herbarium specimens were those suggested by Santapu (1955), Fosberg & Sachet (1965), and Jain and Rao (1977).
- Some of the salient features are being given below:-
- Sitamarhi district is divided into 17 blocks –Viz. 1.Dumra 2.Runisaidpur 3.Parihar 4.Bathnaha 5.Sonbarsa 6.Bajpatti 7.Sursand 8.Riga 9.Nanpur 10.Pupri 11.Bairgania 12.Bokhara 13.Suppi 14.Belsand 15.Majorganj 16.Parsauni 17.Charaut.
- Block wise field survey in different parts of the Sitamarhi district were undertaken for four years (2014-2018) to study aquatic plants.
- Field observations like habit, habitat, available local names, as well as flowering and fruiting periods of the investigated extra have been noted.
- Information regarding the various uses of aquatic plants was noted down by consulting various people in this area and also from the local people, local herbal drug seller and ojhars were consulted for preliminary identification of plants.
- Specimens of species occurring in different water bodies were observed and collected from time to time for preparation of herbaria.
- The plants have been identified from fresh materials with the help of different Floras (Prain, 1903; Biswas and Calder, 1937; Subramanyam, 1962; Maheswari, 1963; Mondal, *et al.*, 1998).
- Botanical identification was made with helps of Heins Flora, published by Botanical Survey of India.
- Botanical names, common names, properties, part used and their curative uses were recorded.

V.CONCLUSION

- In this study, abundant aquatic medicinal plants have been received in all blocks of Sitamarhi district.
- Studies have found that young people do not know anything about aquatic medicinal plants.
- A very large numbers of adults have been found to use aquatic medicinal plants.
- Due to water accumulation in sitamarhi district, most of the medicinal plants are found.
- Result of present investigation is Altogether 24 aquatic plants of medicine importance have been recorded from water bodies of Sitamarhi district.
- These plants belong to 20 families.
- Local people use various aquatic plants as food, fodder, and for treatment of common diseases like, cold, fever, scorpion ting, liver trouble, skin infection, abdominal problems etc.
- A good number of plants are used as nutraceuticals as well.
- It is however a matter of concern that land use pattern in Sitamarhi is changing fast and water bodies are soft target of this change.
- Needless to mention this is the causing unrepairable harm to aquatic plant diversity both species wise and population wise.
- It is therefore urgently suggested by the authors to take contingency of the situation and save highly useful aquatic plants.
- It is also important to note that most of the traditional uses of aquatic plants are novel and they need both popularization and preservation.

So the final conclusion is that as I made contributions that were beneficial for the human life.

Table 1:- List of ponds of Sitamarhi studied

Morsand talab	Cheraut talab
Madanpur talab	Bakhari talab
Janipur talab	Riga talab
Kamal Dah talab	Gangati talab
Parsauni talab	Ranjitpur talab
Nandwara talab	Belganj talab

Table 2
ENUMERATION OF AQUATIC PLANTS OF MEDICINAL USES FOUND IN SITAMARHI

SI NO.	BOTANICAL NAME	LOCAL NAME	FAMILY	PROPERTIES	PARTS USED	ALIMENT / USES
1	<i>Astercantha longifolia</i> L	Gokhuljanum	Acanthaceae	Astringent, Diuretic, Stomachic.	Leaves, Root	The leaf, root & seed are used as diuretic & employed in jaundice, dropsy, rheumatism & diseases of urogenital tracts. Tribal people made decoction of leaves, cool them over night & administered one cup empty bowel in the morning for 7 to 10 days. Cure urogenital disorder. Paste of roots is applied in rheumatism.
2	<i>Alternanthera sessilis</i> L	Garundi garoo, mullabanthi	Amranthaceae	Ophthalmic, detergent	Stem, leaves	Leaf extract is useful in various types of eye trouble. Decoction of stem & leaf is taken half cup daily for 4 to 7 day to check blood vomiting. Poultice of leaf is applied on boils.
3	<i>Aponnegeton natans</i> L	Ghechu	Aponaetonaceae	Antidote, Antiphlogistic, Depurative, Diuretic, Febrifuge.	Leaves, Seed	The starchy seed is roasted & taken as food supplement in different areas of Sitamarhi. The flowering spike & young shoot is used as vegetables.
4	<i>Cerretophyllum demersum</i> L	Jhanjhi	Ceratophyllaceae	Cardiotonic	Leaves	Paste of leaf is externally applied in case of scorpion. Decoction of leaf is used for 10 to 15 days to regulate biles secretion.
5	<i>Eichhornia crassipes</i> (mart) solms	Jalkhumbi	Pontideriaceae	Astringent	Leaves, Petiole	The plants are used as mature young leaves and petioles cooked virtually tasteless said to be used as acarotene rich table vegetable, antioxidant.

6	<i>Hydrolea zeylanica L vahi</i>	Kassachara	Hydrophyliaceae	Diuretic, Febrifuge	Leaves	The leaves have antiseptic properties & its decoction is useful in healing ulcer young shoot are eaten as vegetable.
7	<i>Hydrilla verticilita (L.F) Royle</i>	Jhangi, Kureli	Hydrophyliaceae	Detergent miscellary	Leaves	Decoction of leaf is used in the treatment of abscesses boil and wounds. Leaves are dried powdered and applied on cuts and wounds. To help accelerate healing.
8	<i>Jussieva repens Lns</i>	Allomonda	Oenotheraceae	Depurative, diuretic, febrifuge	Root, Leaves, Fruit, Seeds	Powdered of dried plants is applied on ulcer and skin diseases.
9	<i>Lemna minor Lnn</i>	Patseola, pancha	Lamnaceae	Antiscorbutic, Astringent, Depurative, Febrifuge, Diuretic, Ophthalmic, Sedative	Leaves	Leaves are boiled in water and used in treatment of cold. Application of paste of leaf is useful in skin diseses.
10	<i>Marsilea quardifolia L</i>	Panitengesi sunusunia	Marsileaceae	Antidote, antiphlogistic, depuative, diuretic, febrifuge	Leaves, seed	Juice of leaf is administered one teaspoon for 4 times day in diarrhea. Paste of leaf is also applied on snakebite & abscesses.
11	<i>Nelumbo nucifera Gaertn</i>	Kamal	Nymphaeaceae	Astringent, cardiotoxic, febrifuge, hypotensive, tonic, vasodilator	Flowers, leaves, root, seed, stem	One table spoon of decoction of flower mixed with a glass of water in regularly used as cardio tonic & liver tonic. Past of seed is applied in cure in skin disease. Powdered rhizome is used externally to cure piles.
12	<i>Nymphoides indicum L</i>	Kumudni, panchuli	Menyanthaceae	Diuretic	Leaves	One table spoon of pest of leaves in mixed in one glass of water & is used once a day in fever & jaundice.
13	<i>Nymphaea nauchali Burm</i>	Nilotpalam, uplia kamal	Nymphaeaceae	Tonic	Leaves	Leaves are socked in water overnight & one glass of this preparation is taken in the morning for 4 to 6 days in dysentery & other intestinal disorder. The decoction of leaf is also used in irrehular

						mensuration.
14	<i>Ludwigia adscendena</i> L	Labangi, hikota	Onagraceae	Astringent	Whole plants	Whole plants is boiled in water, the water after cooling is administer one cup twice a day for 4 or 6 days in fever cold & cough. Decoction of plant also used in dysentery.
15	<i>Polygonum glabrum wild</i>	Gulabi, sauriarak, bsirjaush	Polygonaceae	Anthelmintic, astringent, cardiotoxic	Leaves, seed	Half cup decoction of whole plant is used twice daily in fever infusion of leaf relief patient form colic pain.

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