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## Some aquatic and wetland medicinal plants in Aravalli district of Gujarat

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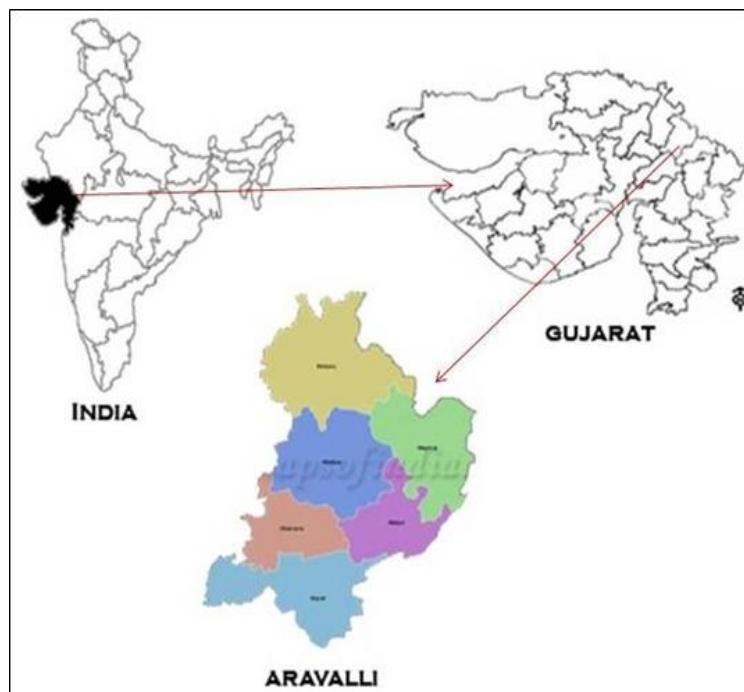
### Abstract

Aravalli district is situated in north-west part of Gujarat state with luxuriant floral and cultural diversity. Qualitative floristic surveys were carried out during 2015-2016 in Aravalli district, Gujarat, India. The local people of Aravalli district have been using almost 18 species of aquatic and wetland medicinal plants to cure different diseases from long years ago. The plants are documented with the Vernacular names, Scientific names and uses of the different medicinal plants. The work aims at the preservation and preparation of this knowledge of the aquatic medicinal plants for further fruitful investigation on modern scientific ways.

**Keywords:** Aquatic and wetland, medicinal plants, Aravalli, Gujarat

### Introduction

Aravalli district is situated in north-west part of Gujarat state with luxuriant floral and cultural diversity. The area is undulating terrain of Aravalli hillocks. The forest is mainly of Dry Mixed Deciduous type with rich floristic diversity. The selected villages are situated on the north-eastern part of the dense forests area. The area is undulating terrain of Aravalli hillocks. The forest is mainly of Dry Mixed Deciduous type with rich floristic diversity. The map of Aravalli district with taluka is given in Figure. 1. The predominant scheduled tribes in the area are Ninama, Damor, Baranda, Bhagora, Angari etc. In the most of the tribal villages, there are usually one/two local practitioners of the traditional medicine, locally known as a 'Bhagat'. These practitioners have acquired the knowledge (mostly oral/non codified) for treating patients, mostly from the elders of the family. Indigenous medicinal uses in India were recorded [7], the uses of ethnomedicinal plants [4] and in North Gujarat [1, 11, 12].



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## Materials and Methodology

The ethnomedicinal field survey was conducted during 2015-16. The first hand information and views given by tribal were recorded as data. Indigenous traditional practitioners and some knowledgeable tribal informants, who have knowledge about therapeutic values of wild plant species in the treatment of common ailment were interviewed in the forest and in their homes. The information on various medicinal plants were gathered from the tribal community, residing forest area of Aravalli district. The collected plant specimens were identified using flora [4, 14]. The data considered worth mentioning only when at least 2 to 3 local healers gave similar answers for the same plant.

## Result and Discussion

The tribal people of Aravalli forest area used some aquatic and wetland species for the treatment of different human

ailments. Out of 18 plants species presented in the paper belonging to 13 families of Angiosperms used in the treatment such as Belly enlargement, Cough and Cold, Dysentery, Bone fracture, Madness, Cracks, Diarrhea, Skin diseases, Wounds etc. Three plants were from Asteraceae family, two plants were from Commelinaceae, Convolvulaceae and Scrophulariaceae, while remaining nine families had one plant each. The tribal people of Aravalli district have a vast wealth of plants, which are sources of medicinal compounds. Therefore, more concerted efforts are needed for the documentation of all the tribal medicines and their health practices useful in the treatment of different disorders. The above reported ethnomedicinal plants also require a proper chemical, pharmacological experiments and clinical trials for the validation of the traditional claims. The details of plants with scientific name, family, local name, parts used and medicinal uses are given in Table. 1.

**Table 1:** Ethnomedicinal uses of aquatic and wetland plants in Aravalli district

No.	Scientific name / Family / Local name	Part's used	Ethnomedicinal Uses
1	<i>Acmella calva</i> (DC.) R.K.Jansen Asteraceae / Akkalgaro	Leaf	Tender leaves are used in cough and cold [8, 12].
2	<i>Acmella paniculata</i> (Wall. ex DC.) R.K.Jansen, Asteraceae / Akkalgaro	Leaf	Tender leaves are used in cough and cold [9].
3	<i>Alternanthera sessilis</i> (L.) DC. Amaranthaceae	Leaf and Shoot	Tender shoot and leaf boiled or roasted and given in dysentery, used as stomachic and as a digestive [6].
4	<i>Bacopa monnieri</i> (L.) Pennell Scrophulariaceae / Jahnaveri	Whole plant	Boiled panchang are crushed and made into paste then cooled; the paste is applied thrice a day for three days to cure belly enlargement [3, 6].
5	<i>Centella asiatica</i> (L.) Urb. Apiaceae / Brahmi	Whole plant	One teaspoon juice of herb is given internally twice a day for a month to cure madness [13].
6	<i>Colocasia esculenta</i> (L.) Schott Araceae / Alavi	Leaf and Rhizome	Tender leaves and rhizome are cooked as vegetables [5].
7	<i>Commelina benghalensis</i> L. Commelinaceae / Shishmuliyu	Leaf and Shoot	Tender leaves and shoots are eaten cooked as vegetable. Paste is made from stem and leaves and used in bone fracture [7].
8	<i>Commelina diffusa</i> Burm. f. Commelinaceae / Shishmuliyu	Leaf and Shoot	Tender leaves and shoots are eaten cooked as vegetable. Paste is made from stem and leaves and used in bone fracture [13].
9	<i>Cynodon dactylon</i> (L.) Pers. Poaceae / Darbh	Whole plant	Essential for rituals, juice is used in the treatment of piles and on cuts and wounds [5].
10	<i>Eclipta prostrata</i> (L.) L. Mant. Asteraceae / Bhangaro	Shoot	Shoot juice with few drops of mustard oil is given in diarrhea [10].
11	<i>Hydrilla verticillata</i> (L. f.) Royle Hydrocharitaceae	Whole plant	Tender leaves and rhizome are cooked as vegetables [13].
12	<i>Ipomea aquatica</i> Forsk. Convolvulaceae / Nanibhaji	Leaf and Shoot	Tender leafy shoots are eaten fried or cooked. About 30 to 50 ml of leaf extract is orally taken to control bleeding during child birth [7].
13	<i>Ipomoea fistulosa</i> Mart. ex Choisy Convolvulaceae / Naffat	Leaf and Shoot	Tender leafy shoots are eaten fried or cooked. About 30 to 50 ml of leaf extract is orally taken to control bleeding during child birth [6].
14	<i>Lindernia crustacea</i> (L.) F. Muell. Scrophulariaceae	Whole plant	Whole plant is used to cure Skin diseases [10].
15	<i>Nelumbo nucifera</i> Gaertn. Nelumbonaceae / Kamal	Seeds and Flowers	Seeds are used as raw, flowers and leaves are used in religious aspect and in rituals [4].
16	<i>Ricinus communis</i> L. Euphorbiaceae / Aeranda	Leaf	Boiled leaves in lukewarm condition are spread over painful abdomen and then bandaged twice a day for two days to get relief from abdominal pain [13].
17	<i>Trapa natans</i> L. Trapaceae / Shingoda	Fruit and Seed	Seeds are eaten raw. Raw fruits are used raw in the treatment of diarrhea [8].
18	<i>Typha domingensis</i> Pers. Typhaceae / Gha bajariyu	Inflorescence	The fresh powdered inflorescence of this plant is spread over the fresh cut for stop bleeding and fast healing of the cut [8].

## Conclusion

The tribal people of Aravalli district have a vast wealth of plants, which are sources of medicinal compounds. Therefore, more concerted efforts are needed for the documentation of all the tribal medicines and their health practices useful in the treatment of different disorders. The above reported ethnomedicinal plants also require a proper chemical, pharmacological experiments and clinical trials for the validation of the traditional claims. It was suggested to document such vital and valuable knowledge for the future

generation as this knowledge found to be decline day-to-day. On the other hand loss of important floral diversity also leads to declining of it. Hence conservation of floral diversity will be important tool to sustain and carry such important knowledge to the future generation.

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