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# DIVERSITY OF MEDICINAL PLANTS AT THE BANK OF RIVER GANGA IN DISTRICT BALLIA OF UTTAR PRADESH

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## ABSTRACT

The paper reports 46 species of medicinal plants with common and scientific names belonging to 46 species and 41 genera under 26 families from the eight sites *viz.* Belahari, Baria, Chandpur, Manjhua, Manjhi ghat, Mahavir ghat, Nagwa and Srirampur at banks of Ganga river in the district of Ballia for cure of various human diseases.

Figure : 00 References : 16 Table : 01
KEY WORDS : Ballia, Diversity, Medicinal plants, River Ganga,

## Introduction

Human beings have always been largely dependent for their food, shelter, medicine and other needs on plant resources. Since the plant is everything to them in their day to day struggles, presence of biologically active nutrients and secondary metabolites in foods, beverages and pharmaceuticals are of great importance[4,5,6]. Considering the depletion in plant diversity at a fast rate, a need for immediate and massive efforts for collection and conservation of national genetic wealth was felt strongly. About 600 plant species belonging to 108 families are on the verge of extinction in India[9, 10].

Several medical systems have evolved and prominent among these systems are Ayurveda, Siddha and the Unani systems of medicine. In different civilizations the contribution of floral diversity to health care has been well documented[13]. Because of the accelerated local, national and international interest in recent years, the demand for medicinal and aromatic plants has increased manifolds and pharmaceutical industry views plant wealth as a source of income. Due to easy availability, no side-effect and sometimes only source of health care, the demand for medicinal plants is increasing in both developing and developed countries[1]. More than 50,000 species are used for medicinal purposes worldwide[15], of which almost 13% are flowering plants. Over 8000 plant species are used in traditional and modern medicine in India[11], and 90-95% collection of medicinal plants is from the wild, of which more than 70% collection involves destructive and unscientific extraction. Overexploitation of trade species, destructive way of collection, vulnerability due to anthropogenic pressure are some of the major threats to medicinal plants. The World Health Organisation (WHO) estimated that 80% of the populations rely on traditional medicines, mostly plant drugs, for their primary health care needs in developing countries. Now-a-days, the local people have less knowledge about the plant, which are medicinally important. Recently, some very important medicinal properties of various plants have been identified during last four decades[3].

Ballia district was created on the 1 November, 1879 from the districts of Ghazipur and Azamgarh. District comprises an irregular area extending westwards from the confluence of the Ganga and Ghaghara. The Ganga holy river of world separates it from Bihar in the North and East respectively. Suraha Tal, one of the biggest Tal of Uttar Pradesh situated in this district is connected in South from the Ganga and North the Ghaghara. It is connected from Ganga through Kathar nala. The district is connected to other cities and states by road.[8, 13]

In the present investigation, **46** species of medicinal plants belonging to 26 families were recorded at the bank of river Ganga from the district of Ballia, Uttar Pradesh for cure of various human diseases.

## Materials and Methods

A survey and collection of medicinal plants on Ganga river bank at Ballia was carried out under eight sites namely Belahari, Baria, Chandpur, Manjhua, Manjhi ghat, Mahavir ghat, Nagwa and Srirampur. The study area, the bank of river Ganga at Ballia lies between the latitude $25^0$ 33È N to $26^0$ 11È N and longitude $83^0$ 38ÈE to $84^0$ 39ÈE.

The present study is based on the two years of intensive exploration of the area. The excursion was

**TABLE-1: Medicinal Plants At River Ganga Bank**

| Common Name | Family & Scientific Name | Morphological Parts Used | Useful for Treatment of various Human diseases |
|---|---|---|---|
| | **Family- Amarathaceae** | | |
| 1. Kanchari | *Alternanthera* sersilis | Stem and leaf | Snakebite |
| 2.Katailichavlai | *Amaranthus spinosus* | Root and leaf | Honorrhoea, Monorrhaiga, boiled leaves given to children as a laxative |
| 3. Lat jira | *Achyranthes aspera* | Root, stems and leaf | Cough & cold, Child birth |
| 4. Tanduliya | *Amaranthus viridis* | Leaf | In scorpion-sting |
| | **Family- Asteraceae** | | |
| 5. Arishta | *Xanthium stramarium* | Root | Malaria, sedative, strumous & cancer |
| 6. Arkara | *Spilanthus accumula* | Leaf | Toothache |
| 7. Babuna | *Cotula hemispherica* | Leaf and root | Externally in rheumatism, eye wash |
| 8. Bhringaraja | *Eclipta alba* | Root and leaf | Emetic, in scorpion-sting |
| 9. Kesaraja | *Eclipta prostrata* | Root and leaf | Scabies at finger feet |
| 10. Osari | *Ageratum conyzoides* | Root and leaf | Antilith, styptic, externally in ague |
| 11. Sahadevibari | *Sonchus arvensis* | Root | Jaundice |
| | **3. Family- Leguminoceae** | | |
| 12. Ankra | *Vicia sativa* | Leaf | Efficacious in rousing |
| 13. Bakla | *Vicia faba* | Leaf | Efficacious in rousing |
| 14. Dadamari | *Cassia* tora | Root and leaf | Skin disease, ringworm, itch, snake bite |
| 15.Jangli-matar | *Lathyrus aphaca* | Root and leaf | Skin disease |
| 16. Shirish | *Albizzia lebbeck* | Root bark and leaf | Scorpion sting, Snake bite, night blindness |
| | **Family- Malvaceae** | | |
| 17. Kanghi | *Abutilon indicum* | Leaf, seed and root bark | Diarrhoea, vomiting, laxative, diuretic |
| 18. Kungyi | *Sida cordifolia* | Leaf and root | Febge, facial paralysis, sciatica, micturiton, Spermatorrhoea, healing wounds |

| | | | |
|---|---|---|---|
| | **Family- Papaveraceae** | | |
| 19. Shialkanta | *Argemone maxicana* | Root, leaf, latex, flower and seed | Jaundice, dropsy, eye inflammation, scorpion syphilis, conjuctivitis |
| | **Family- Nyctaginacea** | | |
| 20. Sant | *Boerhaavia diffusa* | Root, leaf and seed | Asthma, opthalmia, eye, diarrhea, anaemia, jaundice |
| | **Family- Asclepiadaceae** | | |
| 21. Aak | *Calotrops procera* | Root, leaf and flower | Dysen, Guinea worm, asthma, fevers , purg |
| | **Family- Capparidaceae** | | |
| 22. Kanthari | *Capparis sepiaria* | Root and leaf | Febge, skin diseases |
| 23. Karer | *Capparis deciduas* | Stem and seed | Scorpion sting, cough and cold, toothache, alexeteric, asthma, rheumatism |
| | **Family- Caesalpiniaceae** | | |
| 24. Amaltas | *Cassia fistula* | Root and leaf | Astrin, tonic, febge, purg, skin diseases |
| 25. Chakunda | *Cassia angustifolia* | Root and leaf | Skin diseases, ring worm, itch, snake bite |
| | **Family- Casuarinaceae** | | |
| 26. Janglisaru | *Casuarina equisetifolia* | Root and leaf | Diarrhoea, dysentery, colic |
| | **Family-Chenopodiaceae** | | |
| 27. Bathua | *Chenopodium album* | Leaf | Tonic |
| | **Family-Commelinaceae** | | |
| 28. Kanchara | *Commelina benghalensis* | Leaf, stem and root | Leprosy and vata, lotion, bath (form of decoction) |
| | **Family- Convolvulaceae** | | |
| 29. Hiranpadi | *Convolvulus arvensis* | Root | Purg |
| 30. Jhilla | *Indigofera oblongifolia* | Leaf and flower | Migraine |
| 31. Nakkari | *Ipomea hispida* | Leaf | Rheumatism, headache, epilepsy, leprosy, ulcers and antipyretic |
| | **Family- Tiliaceae** | | |
| 32. Kalasaka | *Corchorus capsularis* | Leaf and root | Demuls, stomach, carmine, dysentery, fever, liver disorders |

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|---|---|---|---|
| | **Family- Euphorbiaceae** | | |
| 33. Choti dudhi | *Euphorbia thymifolia* | Leaf and root | Astrin, ringworm, amenor |
| 34. Dudhi | *Euphorbia hirta* | Whole plant | Ringworm, conjunctivitis, dysentery |
| 35. Jar-amla | *Phyllanthus niruri* | Leaf and root | Jaundice, swelling, ulcers |
| | **Family- Poaceae** | | |
| 36. Dhub grass | *Cynodon dactylon* | Root | Dropsy, secondary syphilis, stopping bleeding, anasarca, menorrhagia |
| 37. Makra | *Dactyloctenium aegyptium* | Root | Menorrhagia |
| | **Family- Cyperaceae** | | |
| 38. Motha | *Cyperus rotandus* | Tubers | Emmen, anthelm, diaphor, astrin, disorder of stomach |
| | **Family- Solanaceae** | | |
| 39. Dhatura | *Datura stramonium* | Leaf | Antiseptic, anodyne, guinea worm, narcotic |
| | **Family- Moraceae** | | |
| 40. Bor | *Ficus benghalensis* | Leaf, shoot, bark and fruit | Fever, facial, swelling, ointment |
| | **Family- Boraginaceae** | | |
| 41. Hathisur | *Heliotropium indicum* | Leaf | Ulcers, wounds, stings of insects, diur. |
| | **Family- Polygonaceae** | | |
| 42. Bihagni | *Polygonum glabrum* | Leaf | Colic pain |
| | **Family- Portulaceae** | | |
| 43. Kursa | *Portulaca oleraceae* | Leaf and root | Liver diseases |
| | **Family- Ranunculaceae** | | |
| 44. Shim | *Ranunculas scleratus* | Leaf | Applied to the skin to raise blisters |
| | **Family- Zygophylaceae** | | |
| 45.Chotagokhuru | *Tribulus terrestris* | Leaf and fruit | Kidney disease |
| | **Family- Scrophulariaceae** | | |
| 46. Speed weel | *Veronica anagallis* | Leaf and root | Antiscor, scurvy, impurity of blood, healing burns, ulcers |
| | **Family-Rhamnaceae** | | |
| 47. Kohonber | *Ziziphus numularia* | Leaf, bark and fruit | Abortion, dental decay, sorethroat |

undertaken in different areas at regular intervals. During the field work, observations and medicinal uses of plants were recorded. The information about medicinal uses of plants were obtained from the tribal people, local inhabitants, "Hakims" and field workers. Immediately after collection, the specimens were identified with help of floras[2, 5,6,7,8,16]. Eight sites were selected along the river bank in and around Ballia.

## Result and Discussion

The survey of Ganga river bank showed the presence of total 47 medicinal plants. Belahari 42, Baria 41, Chandpur 33, Manjhua 24, Manjhi ghat 28, Mahavir ghat 39, Nagwa 43 and Srirampur 36 species under 26 families were observed (Table-1). The enumeration embodies alphabetically arranged list of plant species priding correct botanical names of species followed by local name and part uses. Plant part uses in different problems like skin problems including wounds, eczema, stomach problems, gastro-intestinal, diarrhea, dysentery, ulcers, blood dysentery, jaundice, malaria, asthma, dropsy, anaemia, leprosy, diuretic, sciatica, facial paralysis, cancer, spermatorrhoea, externally in rheumatism, snake bite, ringworm, antiseptic, antipyretic, fever, cough & cold, headache, toothache, liver disorders and use as a tonic in different forms such as juice, extract, paste *etc.* Valuable medicinal uses of plants were recorded from this area which is not mentioned in Ayurvedic literatures. In the present survey *Cannabis sativa* and *Parthinium hysterophorus* were observed as dominant species.

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