

## STUDIES ON DOCUMENTATION AND CONSERVATION OF HERBAL REMEDIES FOR NEURAL DISORDERS FOUND IN MUKUNDARA HILLS TIGER RESERVE OF RAJASTHAN

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### ABSTRACT

*Demand for the pharmaceutical products of Ayurveda is increasing day by day in all over the World, because of the fact that the allopathic drugs have a side effect. Another benefit is low cost and easy availability of herbal therapy. Indian system of medicine has traditionally been used in several neurological disorders. Regular field survey and interviews of local healers were conducted to identify and document the plants which are used for the treatment of mental and neural disorders. The aim of the present study is to understand the knowledge of plants and their taxonomy which used for therapeutic uses. In the present communication Centella asiatica (L.) Urban*

*(Apiaceae), Convolvulus microphyllus L. (Convolvulaceae), and Celastrus paniculatus, Withania somnifera (L.) Dunal (Solanaceae) were used for further use. For each species, vernacular name, part(s) used, medicinal use, method of preparation and applications of the herbal remedies are provided. Survey study concluded that there is an array of plants used locally to treat mental illness and it is recommended that such surveys are important for documenting our indigenous knowledge. It also focuses on practices related to conservation and sustainable utilization of medicinal plants.*

**KEYWORDS:** Pharmaceutical products, Neural disorders, Mental illness, Herbal therapy.

### 1. INTRODUCTION

Herbal remedies are the oldest forms of health care to mankind on the earth. The knowledge of medicinal plants has been used from thousands of years based on different medicinal systems like Ayurveda, Unani and Siddha. In all over the world traditional medicines

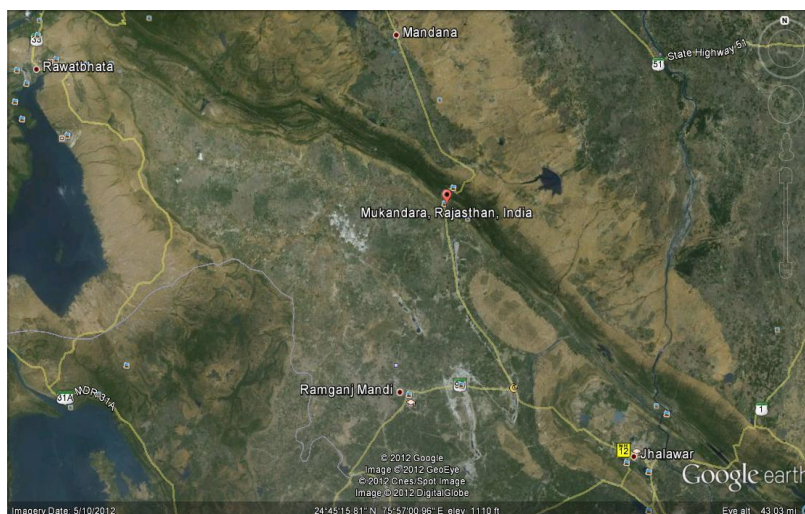
especially folk or ethno medicines are receiving heightened interest. These age old health care systems are found in close interaction with the nature. Informations regarding traditional herbal medicines had always played a vital role in the discovery of chemotherapeutic agents from plants. In India, it is reported that around 2500 plant species are used by traditional healers.<sup>[1]</sup> Documentation of this indigenous knowledge is important for the conservation and utilization of biological resources. In the survey, an attempt was made to explore some of useful information on medicinal plants growing in wild and their medicaments in local household remedies by villagers. It is known that western medicines are basically produced from the plants as they have ingredients for drugs. Secondly, the aim of the investigation is to record lesser known/new medicinal uses of plants from the local people/villagers and to know the laws and ways of nature for making optimum sustainable use of plant resources. The protection of large number of medicinal plants in different parts of the India are well documented.<sup>[2,3,4,5]</sup> Many of the threats to medicinal plant species are similar to those causing endangerment to plant diversity generally. Generally the most serious threats are habitat loss, habitat degradation and over harvesting. But the conservational aspect about the medicinal plants is very rare. Therefore, an attempt has been made to document the knowledge of herbal medicinal plants in the treatment of neural disorders.

For several neurological disorders, modern medicine offers symptomatic treatment that is often expensive and associated with side effects. Indian system of medicine has traditionally been used in several neurological conditions. The accessibility, cost effectiveness and lower incidence of side effects of plant products offer considerable advantages. A survey study was conducted during 2010-2013, concluded that there are some medicinal plants which useful in the treatment of neural disorders. The present paper is an effort undertaken for documentation of this traditional knowledge for future application and scientific investigation of plants in the treatment of neural disorders.

## 2. METHODOLOGY

Mukundara Hills Nation Park (Map-1) belongs to the tropical region having a normal annual precipitation of 885.6 mm and with an average 30°C temperature. The soil is of very fertile due to perennial River Chambal. Present study was conducted in throughout the forest during a three year session of 2010-2013 in all three seasons of the year viz. summer, monsoon and winter. During the field survey, ethnomedicinal plants were collected from in and around the forest areas of Mukundara Hills National Park. These plants were preserved as herbarium

specimens. Local inhabitants were interviewed about medicinal uses of plants.



**Map-1:Satellite Map of Mukundara Hills National Park**

### 3. Observation

After careful screening and interviews with the villagers 4 species were selected which are intensively used in the treatment of neural disorders. These plants are enumerated below with relevant necessary information.

#### 1. *Celastrus paniculatus* Wild.

Local Name: Malkangani, Jyotismati

Family: Celastraceae

Uses- For the extraction of oil seeds are placed in a pot of boiling water or goat's milk for over a period of several hours. After some time essential oils rise to the surface, then seeds are strained out, remaining mixture is allowed to settle, finally oil is siphoned out into another container. Oil is stomachic, tonic, good for cough and asthma; used in leprosy, cures headache and leucoderma. Oil has an efficient therapeutic effect on the central nervous system. Seeds used externally on foul, indolent ulcers and scabies; useful both as an external and internal remedy in rheumatism, gout, paralysis and leprosy.<sup>[6]</sup> In modern medicinal system Medicated oil extracted from the seeds of the plant is used for topical application as a rubifacient and stimulant. Consumption of half a teaspoon of the oil daily or its application on the head acts as a brain stimulant to improve memory.<sup>[7]</sup> *Status and Distribution in the study area-* It is the threatened medicinal plant of the study area and due to its medicinal properties it is going to be extinct in nearby future. It is distributed in localized places of Kolipura range of Mukundara Hills National Park.

**2. *Centella asiatica* (L.) Urban**

Local Name: Brahmi

Family: Apiaceae

Uses: It was described to possess effects on Central Nervous System such as stimulatory-nervine tonic, rejuvenator, sedative, tranquilizer and intelligence promoting agent.<sup>[8]</sup>

*Status and Distribution in the study area-* It is widely distributed in the study area but decreasing due to overexploitation for medicinal purposes. Found near road side areas of Rawatbhata road.

**3. *Convolvulus arvensis* L.**

Local Name: Sankhpushpi

Family: Convolvulaceae

Uses: The decoction of leaves is used for improvement of mental power and intelligence.

*Status and Distribution in the study area-* Common on the rocky habitats of Gaipernath Mahadeo.

**4. *Withania somnifera* (L.) Dunal**

Local Name: Ashwagandha

Family: Solanaceae

Uses: Ashwagandha is effective for insomnia but does not act as a sedative. Its rejuvenative and nerving properties produce energy which in turn help the body to settle and sleep. Thus it helps the body to address a stress related condition rather than masking it with sedatives. A herb that rejuvenates the nervous system, erases insomnia and eases stress.<sup>[9]</sup> Except this root decoction is mixed with milk and given orally to cure sterility in men. Decoction of powdered root is given to ladies in leucorrhoea and frequent miscarriage. Root paste mixed with cow urine is used in skin diseases. *Status and Distribution in the study area-* It is widely distributed plant in all over the study area.

**4. RESULT AND DISCUSSION**

The present study provides information about the plant species which are mostly used in the treatment of neural disorders since a long time. Proper scientific evaluation of these plants might lead to the discovery of some fruitful information regarding their therapeutical properties. Herbal and ethno medicinal uses of plants has been reported from a long time but most of these plants do not certified their efficacy. The reported plants were used for various

ailments but they need to be pharmacologically screened, chemically analysed and to be tested for a various bioactive compounds. The survey indicates that the flora of Mukundara Hills National Park is rich in medicinal plants and it covers a wide spectrum of human ailments. The area is very important area of plant health in Rajasthan.

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