

Ethnobotanical Survey of Konark Forests of District Puri, Odisha

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Abstract

Based on an ethnobotanical field investigation of medicinal plants carried out in Konark forest range and adjacent areas of Puri Forest Division, Odisha, during December, 2011 - January, 2012, the paper presents 30 plant species widely used in the area for various purposes including treatment of different diseases and conditions either single or in combination with some other ingredients. The information on botanical name, family, local name, locality, voucher specimen number and folk uses are presented. Nevertheless, need for pharmacological studies and clinical trials on the reported folk medicines which can be used for the benefit of ailing humanity following investigations on their medical efficacy and safety has been re-stressed.

Introduction

Plants have been used in traditional medicine for several thousand years (Abu-Rabia, 2005). The knowledge of medicinal plants has been accumulated in the course of many centuries based on different medicinal systems such as Ayurveda, Unani and Siddha. In India it is reported that traditional healers use 2500 plant species among them around 100 species of plants serve as regular sources of medicine (Pei, 2001). Medicinal plants are the basic health care of rural households form the resource base for rapidly growing pharmaceutical industry and cosmetic. In recent years, there has been a tremendous range of interest in the medicinal plants especially those used in Ayurveda, Unani and other traditional systems of medicines. The folk medicinal traditions play a reflecting and prominent role in human and environment interaction (Chopra *et al.*, 1956).

An ethnobotanical survey of Konark Forest range under Puri Forest Division, Odisha provided first-hand information on folk medicinal uses of plants for treatment of various diseases and conditions. The Puri district lies between the latitudes 19°28'N to 26°35'N and longitudes 84°29'E to 86°25'E. It has a geographical area of 3051 km² or 264988 Ha. The area explored included Kanti, Barimuda, Pipili, Harishpur, Padampur, Jatani, Padampur and Konark. The present investigation focuses was performed with the aim of producing an inventory of the plants used by traditional healers in Konark Forest Range and adjacent areas of Puri district of Odisha to treat various ailments.

The whole of the district may be divided into two dissimilar natural divisions. One is the littoral tract: The strip of the country lies between the alluvial and the

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Bay of Bengal. and second is the level alluvial tract: This level of alluvial region is full of villages and rice fields, watered by a network of channels, through which the water of distributaries of the most southerly branch of Mahanadi, find their way to the sea. There is no hill in Puri District except a small cultivate land under plough. Generally biali or autumn rice, sarada or winter rice and dalua or spring rice these three types of rice are cultivated.

Materials and Methods

An ethnobotanical survey of Konark Forest range of Puri forest division of odisha was conducted in December, 2011 to January, 2012 with a view to study the medicinal plants of the area and also record the folk wisdom of tribal known as Kondh, Munda, Khandait, Santal and agriculturist who have since long settled in the villages. The data on medicinal uses of plants were recorded from the well reputed Kaviraj (Medicine men) through their direct interview. Each of the plant material was assigned a field note books and documented as to botanical name with family, local name, locality with voucher specimen number, part used and therapeutic uses. Plant parts that were identified as having use in ethnobotany were collected, compressed, the voucher specimens were collected and identified by referring to standard Flora (Saxena & Brahmam, 1994-1996). All the voucher specimens were maintained in the herbarium at Regional Research Institute of Unani Medicine (RRIUM), Bhadrak, for future reference and study. Ingredients and adjuvant drugs in a particular recipe have been recorded by their local names in field and scientifically identified at the Institute.

Enumeration

The plants used by the inhabitants in the study area are arranged in alphabetic order. Each entry provides the information i.e., botanical name with family local name, locality with voucher specimen number, part used, and ethnopharmacological uses.

Acacia auriculiformis L. (Mimosaceae); Aksia; Jatni-9225; Stem; Stem wood is used in making furniture.

Achyranthes aspera L. (Amaranthaceae); Apamarango; Pipili-9253; Root; Lactation Problems; Root paste is mixed with cow's milk and given to care of lactation.

Andrographis paniculata (Burm.f.) Wall. ex G. Don (Acanthaceae); Bhunimbo; Barimuda-9145; Leaf; Wounds, Skin Diseases; Leaves decoction is used to

washing wounds for healing. Leaves paste mixed with haldi is applied locally to treat pruritis, scabies etc.

Atylosia scarabaeoides (L.) Benth. (Fabaceae); Bankulthia; Jatni-9223; Whole Plant; Plant used as fodder in this area.

Azadirachta indica A. Juss. (Meliaceae); Limbo; Pipili-9163; Leaf; Skin Diseases; Leaves decoction is used by the local inhabitants to treat kanchokundia (Skin diseases). Twigs are used as tooth stick.

Blumea lacera (Burm.f) DC (Asteraceae); Pokosunga; Padampur-9190; Leaf; Toothache; Leaves decoction is used in gargling to treat toothache.

Bridelia retusa (L.) Spreng (Euphorbiaceae); Kassi; Pipili-9162; Fruit, Stem Wood; Ripe fruits are eaten raw by the children. Stem wood used in making furniture.

Cassytha filiformis L. (Lauraceae); Nirmudi; Jatni-9222; Whole Plant; Bone Fracture; Plant paste is heated in castor oil and bandage to treat bone fracture.

Chromolaena odorata (L.) King. & Robins. (Asteraceae); Phuluri; Pipili-9169; Leaf; Cuts; Leaves juice is applied locally on cuts to check bleeding.

Combretum roxburghii Spreng. (Combretaceae); Atundi; Pipili-9160; Leaf; Skin Diseases; Leaves juice is applied locally to treat cracked heal and also used as antifungal (Balikhai-Kundia).

Croton bonplandianus Baill. (Euphorbiaceae); Banmiricho; Kanti-9114; Plant Sap; Cuts & Wounds; Plant sap is used to treat cuts and wounds.

Datura metel L. (Solanaceae); Kala Dudura; Kanti-9104; Leaf; Leaf paste warm in jada oil (*Ricinus communis* L.) and applied on affected part of the body for remove inflammation.

Elephantopus scaber L. (Asteraceae); Mayurchulia; Barimuda-9152; Whole Plant; Plant used as fodder in this area.

Eucalyptus citriodora Hook. (Myrtaceae); Patas; Pipili-9245; Leaf; Blood Dysentery; Leaves juice/paste is used in blood dysentery (Nalijhada).

Eugenia bracteata (Willd.) Roxb. ex DC (Myrtaceae); Unchana; Jatni-9221; Fruit; Edible; Ripe fruits are eaten raw.

Euphorbia antiquorum L. (Euphorbiaceae); Siju; Jatni-9200; Latex; Wounds; Latex is applied locally on wounds for healing.

Ficus benghalensis L. (Moraceae); Baro Gachho; Konark-9238; Latex; Heal Cracks; Latex is applied locally on cracks of heal.

Ficus hispida L.f. (Moraceae); Dumaro; Kanti-9106; Fruit, Latex; Boils; Fruits/ latex with salt is applied to treat boils.

Hemidesmus indicus (L.) R. Br. (Periplocaceae); Swanloi; Padampur-9182; Flower; Flowers are used on the occasion of Deepawali.

Hygrophila auriculata (Schum.) Heine (Acanthaceae); Koelekha; Kanti-9108; Spines; Swelling; Spines paste is applied locally on swollen part for the treatment.

Ipomoea sp. (Convolvulaceae); Gadainoi; Jatni-9224; Stem; Stem used as bonding material for the chhappar etc.

Jatropha gossypifolia L. (Euphorbiaceae); Nali Gaba; Kanti-9113; Leaf; Joint Pain; Leaves are used in joint pain.

Lippia javanica (Burm.f.) Spr. (Verbenaceae); Naguari; Kanti-9112; Leaf; Leaves are used for preservation of grains i.e. rice moong etc.

Mimosa pudica L. (Mimosaceae); Lajkuli; Barimuda-9143; Root; Cold & Fever; Root paste is given in required quantity with honey to treat common cold and fever.

Moringa oleifera Lam. (Moringaceae); Sajana; Barimuda-9122; Leaf, Fruit; Leaves and fruits are cooked and eaten as vegetable.

Ocimum sanctum L. (Lamiaceae); Tulasi; Pipili-9166; Leaf; Cold, Cough & Fever; Seven leaves are given with honey before rising the Sun to treat cold, cough and fever.

Pongamia pinnata (L.) Pierre (Fabaceae); Karanjo; Kanti-9103; Seed; Seeds oil is applied locally to treat body pain.

Toddalia asiatica (L.) Lam. (Rutaceae); Tundupora; Konark-9220; Leaf, Fruit; Edible; Leaves are cooked and eaten as vegetable. Ripe fruits are eaten raw by the local people.

Xanthium indicum Koenig. (Asteraceae); Agara; Kanti-9111; Fruit; Fruits are tagged with cows and goats nipple to stop feeding.

Ziziphus oenopia (L.) Mill. (Rhamnaceae); Kantakoli; Pipili-9242; Fruit; Fruits are eaten raw by the children.

Results and Discussion

In the present investigation 30 medicinal plants have been recorded to be used for various purposes including the treatment of different diseases like lactation Problems, boils, cuts & wounds, skin diseases, tooth ache, bone fracture, blood dysentery, swelling, joint pain, body pain, cough & cold. The miscellaneous uses of the plants are timber wood, leafy vegetable, edible fruits, worships etc. 30 plants species belonging to 19 families are reported. The utility lies through their roots, bark, latex, leaves, fruits and seeds. These are taken internally or applied externally in the form of infusion, decoction, paste or powder. Most of the plants used in medicines are either mixed with other ingredients or single. Some important medicinal plants needs immediate conservation and their cultivation should be encouraged through which their extinction can be prevented and local village people may also get low-cost cure their disease.

The data on folk medicinal uses have been compared with recent available literature. (Ali *et al.*, 2009, 2010, Aminuddin *et al.*, 2007, 2009, 2010; Anonymous, 2001, 2006, Panda & Misra, 2011; Behera, 2006; Bhadra *et al.*, 2010; Rath, 2005; Dhal *et al.*, 2010; Girach *et al.*, 2006, 2011; Mukesh *et al.*, 2010, 2011a, 2011b; Prusti & Behera, 2007; Rout & Panda, 2010) and found that most of the folk medicinal plants are duly reported in the context of folk claims in the literature. However, their mode of application, ingredient and part used are different. Therefore, the present study represents contemporary folk uses of medicinal plants of the area investigated. It would be worthwhile to subject all these folk drugs to scientific testing in an attempt to discover new drugs of natural origin for many of the diseases, thus far, incurable in modern medicine.

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