



Research Article

ISSN : 0975-7384  
CODEN(USA) : JCPRC5

## Traditional Healing Practices by Some Polyherbal Formulations of Rajbanshi Community

Priyankar Roy<sup>1</sup>, Subhasis Panda<sup>2</sup> and Palash Mandal<sup>1\*</sup>

<sup>1</sup>Plant Physiology and Pharmacognosy Research Laboratory, Department of Botany, University of North Bengal,  
Rajarammohanpur, Siliguri, India

<sup>2</sup>Department of Botany, Maulana Azad College, Kolkata, India

### ABSTRACT

Rajbanshis are the ancestor of Koches and are living in Northern Region of West Bengal. The distinctive climatic and ecological conditions make North Bengal a unique existence for a large Biodiversity. For thousands of years, Rajbanshis are living in this area and they are mostly dependent on agriculture. But socio-cultural activities of the Rajbanshi community are directly and indirectly related to the plants resources. They are using various plant parts to make medicinal formulations for alleviating their diseases & disorders since time immemorial. By semi-structured questionnaires through scheduled interviews with the local medicine men (commonly known as Mahan, Ojha or Kabiraj), ten polyherbal formulations were recorded with their dosimetry and method of application. The study revealed that a total number of thirty one types of plants species from twenty four families were used for preparing different polyherbal formulations to cure various ailments like arthritis, sore, wound and injury, dysentery, fever, irritation during urination, liver problem, jaundice, nose bleeding along with frequent urination or glycosuria. Further attention is required from the researchers for these medicinal plants particularly for making formulation for the treatment of above mentioned disorders towards the discovery of potential efficacious drugs in future.

**Keywords:** Koch; Indigenous traditional knowledge; Ailment; Ethno-medicine

### INTRODUCTION

Biodiversity of India is recognized as one of the enriched megadiversity countries globally [1]. India is well-known for the knowledge about natural products, specially herbal medicines. Since prehistoric periods, people of Northern Bengal used various herbal medicines and their dosimetry [2]. The unique weather and ecological conditions make North Bengal an exclusive residence for a large variety of flora and fauna [3,4]. This area is inhabited by diverse ethnic populations like Rajbanshis, Nepalese, Bengalese, Muslims, other major tribal groups and migrant settlers like Jains and Bihari Hindus from other Indian state and also the migrants from Bangladesh. However, the ancient aboriginal inhabitants of the area are the Rajbanshis (ancestor of Koches), are mostly dependent on agriculture [5,6], but socio-cultural activities of Rajbanshi community are directly and indirectly correlated to the plants.

In developing countries, there is a growing attempt to integrate traditional medicines based on herbal preparations, in the local health care systems and many researchers are concerned today to discover the effective treatment for diverse and critical illness by using ethno-botanical knowledge [5-8]. The effective phytochemical constituents of a single plant may not enough to achieve the desirable therapeutic effects. But multiple herbs in a particular ratio, will provide an enhanced therapeutic effect and decrease the toxicity [9]. From the very beginning this type of knowledge has been passed on from the forefather to the descendants for conserving the knowledge in the

community. However the trends about the transmission of the traditional knowledge are declining day by day due to the following causes: modernization of new generation rapidly; availability of synthetic medicine along with non-awareness about their side effect; lack of interest to inheritate the knowledge and dilution of ethnic culture. So, it indicates the imperative requirement of their documentation, as well as the preservation of traditional knowledge [10]. Therfore this study mainly focuses on the survey of polyherbal formulations of Rajbanshi community in the Northern part of West Bengal.

## EXPERIMENTAL SECTION

### Study area

North Bengal lies in the Northern half of the State of West Bengal and is surrounded by international boundaries of Bangladesh, Nepal and Bhutan. The area is a combination of wide-ranging landscape - from high mountainous region in the north to the vast Gangetic plains in the farthest south. The study area lies in 26.7072° N & 88.3558° E. The annual rainfall is recorded to be about 3900 mm and temperature varies between 7°C to 37°C. The uniqueness of the area has made it one of the treasures of West Bengal with diversified plant and animal populations. The region not only stands out in case of scenic beauty, along with flora and fauna, but also in social atmosphere. The region is a blend of several exclusive tribal communities which makes it rich in culture as well. Some of the major tribes include Rajbanshi, Rabha, Santal, Munda, Oraon, Polia, Lepcha, Toto etc [11-12]. Mainly Rajbanshi community comprises the major part of population in this area and they are living here since thousands of years.

### Collection of data

Data collection was one of the prime parts of the study. It incorporates extensive field survey accompanied with detailed discussions in the form of questionnaires to the medicine men of particular areas. Even the local inhabitants were taken into consideration, as some information was received from them as well. The information includes the mode of consumption, shelf life and ethnic values of the particular plant and its part (s) used. After these detailed discussions the respective plants were collected properly both in its flowering and fruiting seasons. The collected specimens were dried consequently and herbarium sheets were made. Several literatures have been reviewed for proper identification of the plants, and digitalized photographs were also taken [9,10].

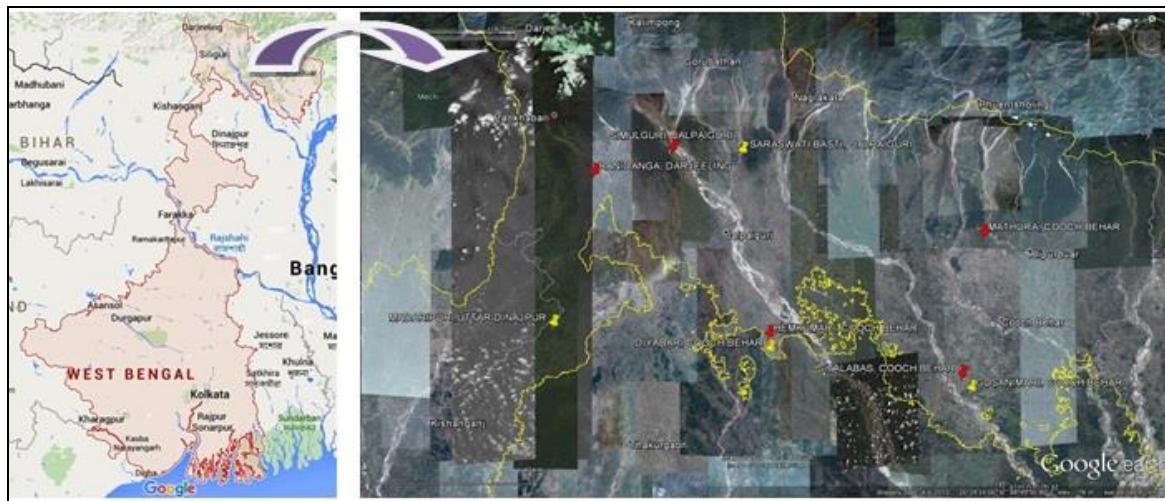


Figure 1: Study area (Red pins are non-responsive and yellow pins are showing responsive area)

## RESULTS AND DISCUSSION

During the field survey, most of the people who gave information comprising of both men and women were above fifty years of age. They had an immense knowledge of treating various diseases and disorder through traditional techniques by using locally available plants. The vast plant species diversity of this place is helping this community to retain their traditional healing practices. Till date they rely on herbal therapeutic system than available modern medicine, as the herbal formulations are more economic than the later. Rajbanshi use their traditional healing

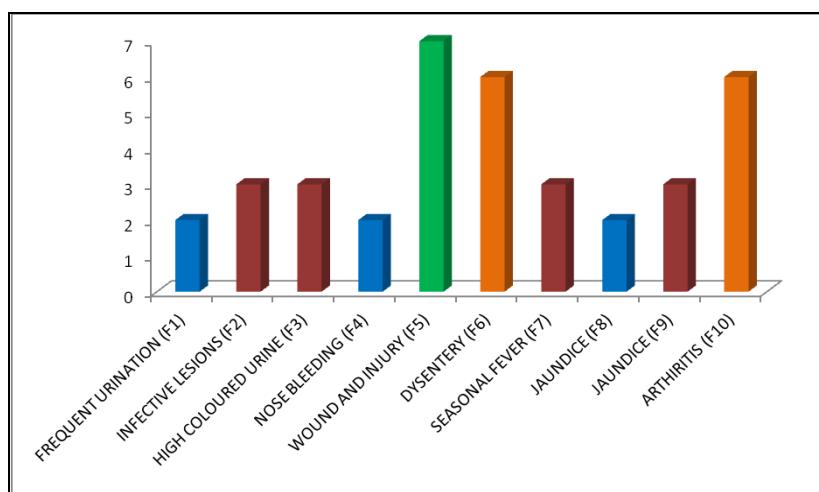
therapy for the treatment of almost all kind of diseases from simple wound and injury to rheumatic arthritis. It was observed that several researchers have worked on the survey and documentation of mono-herbal therapeutic knowledge [3,5]. But limited study has been performed for polyherbal formulations on the Rajbanshi community of this northern part of West Bengal.

The present study revealed that a total number of 31 types of plants species from 29 genera and 24 families are used for 10 poly herbal formulations to cure various ailments like rheumatic arthritis, infective lesions with pus formation, wound and injury, dysentery, seasonal fever, concentrated urine and burning sensation at genitalia, liver problem, jaundice, nose bleeding along with frequent urination. Details of polyherbal plant formulation for curing specific diseases have been enumerated in Table 1.

It can be easily understood that for curing a particular disease, one formulation containing more than one plant components are required, as for example in this study, for healing wounds and injuries seven plants are necessary, followed by dysentery and arthritis that required six plants. A graphical representation (Figure.2) has been constituted with these ten polyherbal formulations in order to observe how many plants are taking part for the treatment of different diseases individually. It can also be noted that some commonly available household materials like common salt, calcium carbonate, plum candy, mustard oil and domestic spider web are also used for the oral or topical application along with the polyherbal formulations.

Among 24 families, the dominant one is Zingiberaceae, followed by Malvaceae and Piperaceae, where to treat various ailments three and two members of these families are used respectively. For better understanding, a comparative pie diagram (Figure 3) has been given for showing the number variation or prevalence of different families in treating diseases. It was found that some plants are used for curing more than one diseases along with the others herbs.

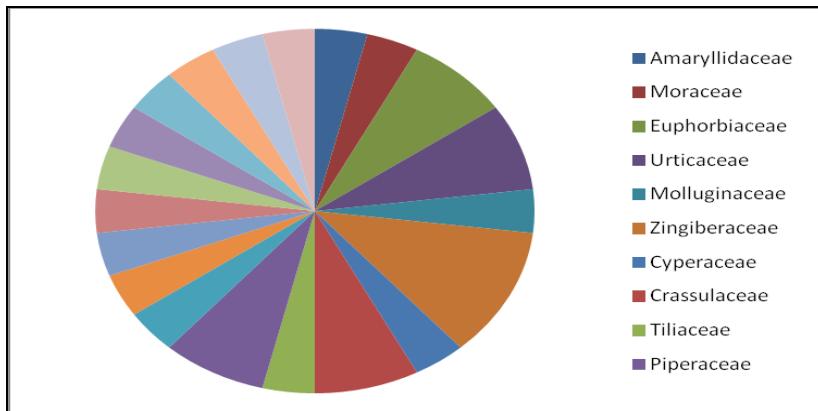
Rajbanshis of North Bengal, a dominant ethnic community, have rich ethno-botanical Indigenous Traditional knowledge (ITK) which are reflected in their cultural life. Various wild as well as cultivated plants are the principal source of this traditional healing therapy used since time immemorial [13]. Some of these plants being used as food, while the others are for health-promoting effects. But recently due to rapid urbanization, diversity and abundancy of these ethnomedicinal plants are diminishing gradually throughout the region [14]. This is disturbing the inheritance of traditional therapeutic knowledge and the applicability of these formulations are becoming restricted. Furthermore, new generation are less interested to practise and preserve their ITK [3].



**Figure 2: Graphical Representation of number of plants in formulation used to heal various ailments**

**Table 1: Showing 10 poly herbal formulation for various diseases and its mode of application and dosage**

Formula ID	Name of the disorders	Local Name of Plants	Scientific Name	Mode of application and dosage
F1	Frequent Urination	Similar Gach	Bombax ceiba L. (Malvaceae)	Gum from tree of Bombax ceiba is mixed with gum from inflorescence of Musa paradisiaca along with ghee and consumed twice (2 spoons) every morning and evening.
		Malvok kola	Musa paradisiaca L. (Musaceae)	
F2	Infective lesions with pus formation	Lajjapati	Mimosa pudica L. (Mimosoideae)	Leaves of the three plants are mixed with domestic spider web and made into ash by burning. The sore is first treated with Neem leaf decoction prepared with hot clean water. The ash is then applied to the affected parts.
		Kala kesri	Eclipta prostrata L. (Asteraceae)	
		Neem	Azadirachta indica A. Juss. (Meliaceae)	
F3	High coloured urine and burning sensation at genitalia	Ulot komol	Abroma augusta (L.) L.f (Malvaceae)	Barks of Abroma augusta and Bombax ceiba are mixed with fruits of Musa paradisiaca along with plum candy. The ingredients are soaked in cold water over night. One glass of this juice is then consumed in empty stomach.
		Similar	Bombax ceiba L. (Malvaceae)	
		Atiya kola	Musa paradisiaca L. (Musaceae)	
F4	Nose bleeding	Piyajer ros	Allium cepa L. (Amaryllidaceae)	Bulb of Allium cepa was crushed and homogenized with mustard oil and applied as drops into the nose.
		Bot er Kushi	Ficus bengalensis L. (Moraceae)	
F5	Wound and injury	Lalhenda	Jatropha gossypifolia L. (Euphorbiaceae)	Twigs of Jatropha gossypifolia was mixed with the rhizome of Eclipta prostrata and leaves of rest of the plants and crushed into paste. The paste was then applied on affected parts or swelled areas twice daily.
		Nirbis	Pouzolzia indica (L.) Spach (Urticaceae)	
		Vuitita	Glinus oppositifolius (L.) A.DC. (Molluginaceae)	
		Kalakeshari	Eclipta prostrata (L.) L. (Asteraceae)	
		Halud	Curcuma longa L. (Zingiberaceae)	
		Kenda gash	Cyperus rotundus L. Cyperaceae	
		Soday mosto	Bryophyllum pinnatum (Lam.) Oken (Crassulaceae)	
F6	Dysentery	Bakshapata	Triumfetta rhomboidea Jacq. (Tiliaceae)	100g roots of Triumfetta rhomboidea and 50g roots of Piper longum were mixed with 100g rhizomes of Curcuma caesia and Zingiber officinale along with 50g leaves of Cetella asiatica and 5g fruits of Piper nigrum. All ingredients are crushed and made into one glass of aqueous solution. The solution was consumed in empty stomach and if there would be any belly pain warm solution was taken.
		Kalahalud	Curcuma caesia Roxb. (Zingiberaceae)	
		Ada	Zingiber officinale Rosc. (Zingiberaceae)	
		Pipol	Piper longum L. (Piperaceae)	
		Golmorich	Piper nigrum L. (Piperaceae)	
		Thankuni	Centella asiatica (L.) Urb. (Apiaceae)	
F7	Seasonal Fever	Vauti pata	Clerodendrum viscosum Vent. (Verbenaceae)	Leaves of Clerodendrum viscosum, dry fruit of Piper nigrum and rhizome of Zingiber officinale are mixed together with little common salt and made into aqueous solution. One or two tea cup (s) of this solution is consumed in empty stomach for 3–5 days.
		Gol Morich	Piper nigrum L. (Piperaceae)	
		Ada	Zingiber officinale Rosc. (Zingiberaceae)	
F8	Jaundice	Tulsi pata	Ocimum sanctum L. (Lamiaceae)	Leaves of Ocimum sanctum and seeds of Raphanus sativus are crushed together and aqua's solution is taken orally for 7 days.
		Mular bij	Raphanus sativus L. (Brassicaceae)	
F9	Jaundice	Isormul	Aristolochia indica L. (Aristolochiaceae)	Leaves of three plants are crushed with calcium carbonate and juice is extracted. The juice is taken orally for 7 days
		khodaymasto	Bryophyllum pinnatum (Lam.) Oken (Crassulaceae)	
		Dubbagash	Cynodon dactylon (L.) Pers. (Poaceae)	
F10	Arthritis	Kala Dhutura	Datura metel L. (Solanaceae)	Leaves of all plants are mixed and extracted to get the juice. Common salt is added to the juice and the mixture is warmed. It is then applied to the treated areas and given as hot compress three times per day.
		Nirbis	Pouzolzia indica (L.) Spach (Urticaceae)	
		Nishindha	Vitex negundo L. (Verbenaceae)	
		Morachakra	Sansevieria roxburghiana Schult.f. (Liliaceae)	
		Patuya Shishu	Euphorbia trigona Mill. (Euphorbiaceae)	
		Naro Singha	Murraya koenigii (L.) (Sprengel Rutaceae)	



**Figure 3: Pie chart showing variation in the members of different families**

## CONCLUSIONS

The indigenous traditional knowledge concerned with healing practices against various diseases and disorders by using different plants is our heritage and it must be conserved. In order to protect such ITK, appropriate scientific documentation is urgently required. Nowadays people are inclining more into allopathic and other synthetic drugs which may cause prolonged side effects due to over exploitation. In this situation a proper documentation of this ITK will help and ensure further improvement in standardization of new leads towards drug discovery. Many people are even opting for ayurveda in present days. Formulation of proper resources and knowledge can bring about a revolutionary change in modern medicine worldwide, which will, in turn, help mankind.

## ACKNOWLEDGEMENT

We are highly obliged to University Grants Commission, New Delhi for providing financial assistance to one of us (P. Roy) for the purpose of studying the Traditional healing practices of Rajbanshi community throughout North Bengal. We are also grateful to the Rajbanshi Community, especially the Mahan / Kabiraj of Rajbanshi community and other resource persons from the Rajbanshi community for extending their help during field trip. We are also thankful to Dr. Manoranjan Choudhury, NBU herbarium In-charge for granting permission to consult NBU herbarium specimens.

## REFERENCES

- [1]. T Datta; A K Patra; S G Dastider. *Asian Pac J Trop Biomed*, **2014**, 4(1), S478-S482.
- [2]. D Kalita; B Deb. *Nat Prod Radiance*, **2006**, 5(4), 319-322.
- [3]. S Roy. *J Med Plants*, **2015**, 3(5), 46-49.
- [4]. DC Sircar. “Pragjyotisha-Kamarupa” In H K Barpujari *The Comprehensive History of Assam* I, Guwahati: Publication Board, Assam, **1990**, 59-78.
- [5]. S Roy. *J Chem Pharm Res*, **2016**, 8(4), 762-766.
- [6]. CP Kala. *Ethnobot Res App*, **2005**, 3, 267-278.
- [7]. BK Dutta; PK Dutta. *Indian J Tradit Know*, **2005**, 4(1), 7-14.
- [8]. Jain DL; Baheti AM; Jain SR; Khandelwal KR. *Indian J Tradit Know*, **2010**, 9(1), 152- 157.
- [9]. AD Sokkalingam; P Subramani; ST Gan. *Pharmacogn Rev*, **2014**, 8(16), 73–80.
- [10]. K Jeyaprakash; M Ayyanar; KN Geetha; T Sekar. *Asian Pac J Trop Biomed*, **2011**, S20-S25.
- [11]. K Deka; N Nath. *Am J Ethnomed*, **2015**, 2(5), 265-276.
- [12]. S Mitra; SK Mukherjee. *Indian J Tradit Know*, **2010**, 9(4), 705-712.
- [13]. S Kundu; A Bag. *Ethno Med*, **2012**, 6(2), 117-120.
- [14]. U Dutta; GC Sarma. *Int. J Sci Adv Technol*, **2011**, 1(8), 59-65.