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C A R A S



The Study of Hidden World Patalkot of Chhindwara District in Special Reference to Ecological Diversity

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ABSTRACT

The study revealed that the hidden world known as Patalkot which were concealed yet now is from in Chhindwara district of Madhya Pradesh. A special ecological diversity, flora and fauna untouched with entire world. Climate were free from contamination and pollutants. Habitat, diet, natural product, medicinal property and bioactive elements which have potential things which help for mankind. This article presents ecological diversity and flourished nature.

Key words: Patalkot, Medicinal plant, Ecological diversity

The diversity of the ecosystem is influenced by the physical features of the environment. These factors include temperature, rainfall and ecosystem environment. There is a general tendency for the tropical and subtropical environment to be rich in wildlife rather than cooler climates. Also, the flow of energy in the environment greatly affects the ecosystem. Similarly, the protruding hill or side of a mountain may have more vegetation and lower species diversity compared to the higher vegetation and higher species diversity found in protected valleys [1]. Environmental disturbances at various temporal and spatial dimensions can affect the richness of species and, as a result, ecosystem diversity [2]. Environmental change is also a predictor of the diversity of ecosystem functions and services that are vital to human well-being [3].

Compared to 'natural forests' or mixed-forest forests, cultivated forests tend to have a lower rate of canopy tree species and other species [4] and their potential to provide certain -ecosystem reduced. For example, mixed forests tend to be more efficient in delivering more diverse resources [5] and are more resistant to various disturbances than single plant species [6]. This relationship between forestry, biodiversity and ecosystem services is critical to informing forest policy and management. However, given the abundance of ecosystem resources, it is difficult to integrate the role of forest diversity. In addition, there is a trade-off between different ecosystem resources depending on the tree mix and the type of stand involved. Some tree combinations are better at providing

certain services but other tree mixtures or even single species of trees work best in other services [7].

Ecosystem diversity Tansley [8] described the ecosystem as, "The whole system includes not only the complexity of living things, but also the whole complexity of the elements that make up what we call nature". Any unit that integrates all living things (i.e.: "community") into a specific area of activity so that energy flow leads to a clearly defined trophic structure, biotic diversity, and material cycles (i.e.: interaction between living and non-living elements) within a system. by the ecosystem [9]. An ecosystem refers to all the people, species and population of a place defined by geographical location, interaction between them and what is between them and the ecosystem [10]. Ecosystems are the most common units considered for biodiversity, including amalgam habitats, the type of intermediate and important processes that occur within and between biotic and abiotic elements [11] (Wilcove and Blair, 1995; Christensen et al, 1996; Noss, 1996). The ecosystem can exist on any scale, for example, from the size of a small pond to the water to the size of the entire biosphere [1] of species - and ecosystems is not easy (WRI-IUCN-UNEP, 1992).

Patalkot is a land of diversity

The proposed Patalkot study area is very important because of its natural beauty and scenery. Patalkot Valley covers an area of 79 Km². with an average height of 2750-3250 feet above sea level from 22.24 to 22.29° North and 78.43 to 78.50° east. The village is located 78 km from Chhindwara to the North West and 20 km from Tamia in the North-East Direction. The 'Doodhi' River flows through a beautiful valley. There are 12 total districts and 13 villages with a population of 2012 (1017 males and 995 females) in the district. These villages are located at a distance of 2–3 km each. The main village villages are: Measurement, Chintipur, Gujja Dongri, Sahra Pachgol, Harra-ka-Char, Sukhabhand, Dhurni malni, Jhiram, Parani Gaildubba, Ghatlinga, Gudichattri, Gaildubba, Kareyam, Ghana, etc. Socioeconomics is sometimes used as an umbrella

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term for different uses. 'Social economics' may refer broadly to "economic use in public learning" [12]. Gradually, modern practice looks at the behavioral interactions of individuals and groups through social funding and social "markets" (excluding, for example, marriage sorting) and the formation of social norms [13]. Finally, it studies the relationship between economic and social values [14].

The green and beautiful distance of Satpura surrounding the Chindwara region in Madhya Pradesh. Chindwara is famous not only for its orange, cotton and charcoal, but also for its natural beauty and splendor. Chindwara district is divided into four forests. On the whole Chindwara is a complete forest area. Pataalkot is located in the Tamia block area. Gonds and Barias are the main inhabitants of the valley. This horse-shaped valley is surrounded by high hills and has very little access to the villages in the valley. The word Pataalkot is derived from the Sanskrit word "patal" which means very deep. It is believed that Prince 'Meghnath' went to Patel-Lok in the area after worshipping 'Shiva'. People say that the area was ruled by kings in the 18th and 19th centuries and there is a long tunnel that connects the area to 'Pachmarhi' in Hoshangabad province. Pataalkot is home to national culture, which has the potential to use forest plants to make an effective medicine. Even the outsiders do not know how hidden the Pataalkot forest is that it exists. Satpura Ranges around the Chindwara District in Madhya Pradesh are lush green and beautiful. Chindwara is famous not only for its orange, cotton and charcoal, but also for its natural and natural beauty that attracts first-time visitors. Chindwara district is divided into four forest areas. Overall

Chindwara is a complete forest district. It is located in the Tamia block of Pataalkot district. Gonds and Bharis are the main inhabitants of the valley. There are huge hills around this horseshoe shaped valley and there are many ways to reach the villages inside the valley. The name 'Pataalkot' is derived from the Sanskrit word 'Patal', which means very deep. It is believed that Prince 'Meghnath' went to the underworld from this place after worshipping 'Shiva'. People say that the region was ruled by kings in the 18th and 19th Centuries and there is a long tunnel that connects the area to the 'Pachmarhi' in the Hoshangabad district. Pataalkot is home to tribal culture, which specializes in the use of forest plants to make effective medicines. Pataalkot forest is very hidden and those outside do not even know that it ever existed. The modern world is completely unaware of its existence. Now the dangers of deforestation and exploitation of the people there are increasing. The locals (bharyas and gonds) who live there know how to collect and grow food, clothes and plants needed to build their houses. They know the secrets of medicinal plants. This unique skill is passed on to each generation. More than 2,000 natives live in villages spread across the forest [15]. There is great harmony between them, living in a comfortable balance, happily helping each other, growing and gathering their own food. They are exceptionally skilled at making pulp and plant extracts to cure diseases. They have medicinal cures for many diseases like measles, cholera, high blood pressure, diabetes, cough, snake bite and pain. With the invention Patalcoat became famous for its fund of medicinal plants. Gonds and Bharis are mainly found in the Pataalkot population. Bharia is said to have lived here for over 500 years.

Table 1 Wild edible plants of chhindwara district [16]

Botanical name	Local name	Family	Plant / Part Used	Mode of use
<i>Aegle marmelos</i> (L) Corr.	Bel	Rutaceae	Fruit	Ripe fruit eaten used in Sharbet
<i>Amaranthus viridis</i> Linn	Choulai	Amaranthaceae	Leaves	Vegetable
<i>Amorphophallus campanulatus</i> Blume	Suran	Araceae	Tuber	Vegetable
<i>Annona squamosa</i> L. Linn	Seethaphal	Annonaceae	Fruit	Ripe fruit eaten
<i>Bauhinia variegata</i> Linn	Sonapatti	Fabaceae	Leaves	Vegetable
<i>Boerhaavia diffusa</i> Linn	Pathhar chatta	Nyctaginaceae	Leaves	Vegetable
<i>Buchanania latifolia</i> Roxb.	Chironji	Anacardiaceae	Fruits / Seeds	Raw fruits eaten
<i>Carrisa carandas</i> Linn	Karonda	Apocynaceae	Fruits	Vegetable pickles
<i>Cassia tora</i> Linn	Teeti	Fabaceae	Leaves	Vegetable
<i>Chenopodium album</i> Linn	Bathua	Chenopodiaceae	Leaves	Vegetable
<i>Cleome gyandra</i> L.	Hulhul	Cleomaceae	Fruits	Vegetable
<i>Cordia dichotoma</i> Forst.f.	Retu	Boraginaceae	Fruits/	Inflorescence / Vegetable pickles
<i>Dioscorea bulbifera</i> Roxb.	Aggetha	Dioscoreaceae	Bulbil / tube	Ripe fruits eaten
<i>Diospyros melanoxylon</i> Roxb.	Tendu	Ebenaceae	Fruits	Ripe fruits eaten
<i>Eablica officinalis</i> Gaertn	Aonla	Euphorbiaceae	Fruits	Pickles
<i>Feronia elephants</i> Corr.	Kabeet	Rutaceae	Fruits	Chutney
<i>Ficus racemosa</i> L.	Oomar	Moraceae	Fruits	Raw fruits eaten
<i>Madhuca indica</i> Gmel	Mahua	Sapotaceae	Flowers	Ripe flowers eaten
<i>Mehtha arvensis</i> Linn	Pudina	Lamiaceae	Leaves	Chutney
<i>Momordica dioice</i> (Roxb.) ex. Willd.	Kakaora	Cucubitaceae	Fruits	Vegetable
<i>Moringa oleifera</i> Lamk	Munga	Moringaceae	Fruits	Vegetable
<i>Phoenix sylvestris</i> Roxb.	Chhind	Palmae	Fruits	Ripe fruits eaten
<i>Pithecolobium dulce</i> (Roxb.) Benth	Vilaytiimli	Mimosaceae	Fruits	Fruits eaten
<i>Pueraria tuberosa</i> DC	Baichandi	Fabaceae	Tuber	Cooked and eaten
<i>Solanua nigrus</i> L.	Makoy	Solanaceae	Fruits	Ripe fruits eaten
<i>Semecarpus anacardium</i> Linn.	Bhilwa	Anacardiaceae	Ripe golden part of fruit	Ripe fruits eaten
<i>Syzygiua cumini</i> (L) Skeels	Jamum	Myrtaceae	Fruits	Ripe fruits eaten
<i>Zizyphus jujuba</i> Linn	Ber	Rhanaceae	Fruits	Ripe fruits eaten
<i>Z. nummularia</i> W & A	Jharberi	Rhanaceae	Fruits	Cooked and eaten

Study site

The dense green slopes in the Tamia area of Chhindwara are occupied by over 2,000 clans spread over 12 towns, with each city located at a distance of 3 to 4 km! As far as the area is concerned, Pataalkot is spread over more than 20,000 squares of land. Pataalkot has long been inhabited by Bharia and Gond dynasties. Up to this point, these clans were cut off from the social world due to non-availability of territory; Pataalkot is bestowed with dense foliage and is home to various species of herbs, plants, fauna and flying creatures. The highest point of the canyon is as high as 1,200–1,500 feet, and a better view causes the view to resemble a horseshoe. The main source of water for the residents of the valley is the Dudhi river. The interesting thing is that after noon the whole area is covered

with mist so much that daylight does not reach the depth of this valley. Superficially, Pataalkot may resemble a cleverly constructed mountain with a civilization thriving in its belly. Some consider it to be a deep gorge, on the other hand, locals accept that Pataalkot is the only access to Paatal Lok or Paatal Lok, and they deliberately keep an unshakeable watch as the watchmen of the black market [17].

The Pataalkot forest was so hidden that people outside did not even know that it existed. It is a very special place, which is rich in plants and animals. The natives who live there know how to collect and grow the plants needed for food, clothing, and building their homes. They also have a special skill that has been passed on to every generation [18].

Table 2 Diversity of flora in Pataalkot

Diversity of flora	Flora							
	Trees	Shrubs	Herbs	Climbers	Orchids	Grasses	Parasites	Medicinal plants
Family	96	37	85	30	1	2	3	87
Numbers	66	128	564	134	21	144	06	289

A cross sectional study was conducted in Pataalkot area of Tamia block of Chhindwara district of Madhya Pradesh. 113 mothers were interviewed about their knowledge, attitudes and practices about weaning. It was observed that although 81% of mothers were aware of weaning on time, only 2% of mothers actually practiced it. High percentage 81% of mothers started weaning at the age of 9 months and above. 43% of mothers were aware of special weaning foods, although only 2% prepared special weaning foods for babies. The rest 98% of mothers either gave boiled maize pages, buckwheat porridge, rice, boiled agitha. 21% reported having knowledge and a positive view of increased iron requirement at six months of age, but only 3% of respondents actually practiced it [19].

People in India have been using herbs since time immemorial. Knowledge of those medicines is being lost due to the decline of traditional cultures and the migration of young men to urban areas for employment. This knowledge is valuable and irreplaceable. It may have taken centuries to achieve this, but it is easily lost due to being transmitted only orally. Thus, there is an urgent need to conserve this knowledge. The introduction of new drugs is being encouraged by ethnopharmacological studies. With a wide variety of plant and tribal populations in Madhya Pradesh, there is ample scope for studies relating to various aspects of folkloric medicine [20-21].

Humans have dramatically changed the amount, pattern and composition of global vegetation [22]. Loss of forest and fragmentation of the remainder pose a direct threat to biodiversity and endanger the sustainability of ecological goods and services from forestlands [23]. The primary concern is the direct loss of forest cover, and all disturbed forests are subject to some sort of "shore effect". Forest fragmentation is of additional concern, in so far as the "edge effect" is reduced or accelerated by residual spatial patterns [24]. Land-cover maps obtained from satellite imagery provide excellent potential for assessing forest fragmentation and its effects on greenhouse gas emissions, biodiversity, economics and water quality. Several studies have used satellite imagery to map land cover in remote geographic areas such as boreal forests and tropical rain forests [25]. Only in the last decade, global maps derived from satellite imagery have made it possible to continuously assess land cover around the world [26]. However, land-cover maps only indicate the location and types of forest, and further processing is required to measure and map forest fragmentation [27].

Most studies focus on forest volume, as opposed to its pattern, and the forest edge is often viewed as a fixed-width

buffer around a delineated patch of forest [28]. Our aim was to map and compare global patterns of forest fragmentation using a model that differentiates the different types of fragmentation. It adds a global perspective to field studies of forest loss and fragmentation, and thus helps to evaluate their importance. Knowledge of fragmentation allows some inference about its potential effects, even without detailed knowledge of all ecological processes that may be affected [29]. A global study helps to identify and prioritize areas and organisms for direct measurement of impacts. The risk of future impacts may be related to experience in similar forests elsewhere.

The degree of canopy stratification and species diversity increase along the latitudinal thermal gradient from high latitudes to the tropics [30]. Canopy multi-layered structure, that is, architectural stratification, is an important factor in maintaining high species diversity [31]. However, studies reporting the effect of architectural stratification on flower structure and species diversity in subtropical evergreen broad-leaf forests are lacking. Therefore, the aim of this study was to ascertain the status of architectural stratification, and to measure flower structure and species diversity based on stratification in subtropical evergreen broad-leaf forests along a latitudinal thermal gradient in Pataalkot.

Animals living in forests have highly developed hearing, and many are adapted for vertical movement through the environment. Since food other than ground plants are scarce, many land-dwelling animals only use forests for shelter. In temperate forests, birds distribute the seeds of plants and assist insects in pollination along with the wind. In tropical forests, fruit bats and birds influence pollination. The forest is nature's most efficient ecosystem, with high rates of photosynthesis affecting both plant and animal systems in a series of complex organic interactions.

Chhindwara division of Madhya Pradesh is a vast emporium of plant resources and is known to harbor rich thick forest and inhabited by Bhariya and Gond tribal communities. They are mostly dependent on forests for their daily needs. A number of ethnobotanist's had documented use of forest resources, medicinal plants in cure of various ailments in Madhya Pradesh. The ethno-medicinal studies documented and reported in different tribal pockets of Madhya Pradesh such as plants in traditional medicine as prevalent among indigenous community of Bundelkhand region in Sagar district, [32] plants used by Kol tribes in Rewa district, 4 plants used by Baiga and Gond tribes in Mandla district in MP, [33] medicinal plants

used by Bheel tribes in Guna district [21] medicinal plants used by Bheel tribes in Jhabua district) [21] (Jain AK, 1963) plants in medicinal use by Gond tribes in Khargone districts, [34] plants used in cure of various ailments by Bhilala tribes in Alirajpur district, [35] medicinal plants with indigenous uses by Sahariya tribe in Guna district, [36] some traditional medicinal plants used by Sahariya and Baiga primitive tribes in Madhya Pradesh, [37] threatened medicinal plants prevalent among Sahariya tribes in Chambal eco-region, [38] conservation plan

of tribal's for medicinal use in Central India, some unreported plants used by aboriginals in Betul district, [39] some indigenous uses of medicinal plants by Bhil tribes in Jhabua district, [40] management of key medicinal plants by local indigenous communities Gond and Korku tribes in Bori, Pachmarhi sanctuary and in Pachmarhi biospheres [41-42] ethnobotanical documentation of plants in promising pockets of primitive tribes in MP, plants in prevalent in herbal remedies amongst Bhil tribes of Bijargarh in West Nimar [43].

Table 3 Phenotypic distribution of two serological and six erythrocyte enzyme systems in Bharia tribe [44]

System	n	Phenotype	Observed	Expected	χ^2	Statistical significance
AIA2BO	92	O	25	26.87	3.14	*Non-significant (0.50 > P > .30)
		A1	27	23.94		
		A2	1	1.08		
		B	33	30.48		
		A1B	5	9.16		
		A2B	1	0.495		
RH(D)	92	RH(D)+	92	–	–	–
		RH(D)–	0	–		
ADA	66	ADA 1	52	52.74	0.9253	†Non-significant (0.70 > P > 0.50)
		ADA 1,2	14	12.52		
		ADA 2	0	0.74		
AK1	90	AK1 1	78	77.47	0.6945	†Non-significant (0.80 > P > 0.70)
		AK1 1,2	11	12.06		
		AK1 2	1	0.47		
ESD	26	ESD 1	8	6.5	1.39	†Non-significant (0.70 > P > .50)
		ESD 1,2	10	13		
		ESD 2	8	6.5		
PGM1	90	PGM1 1	42	40.005	0.904	†Non-significant (0.70 > P > .50)
		PGM1 1,2	36	39.996		
		PGM1 2	12	9.999		
ACPI	24	ACPI A	4	2.6661	1.5066	†Non-significant (0.50 > P > .30)
		ACPI A, B	8	10.6661		
		ACPI B	12	10.6677		
GPI	91	GPI 1	90	–	–	–
		GPI 1,3	1	–		

People living in isolation in natural and unpolluted surroundings maintaining their traditional values, customs, beliefs and myths in general as tribes are considered the indigenous people of the land and living far away from modern civilization. Scheduled Tribes, Scheduled Areas and Tribal Areas in India. Ministry of Social Justice and Empowerment (Tribal Division): From <http://www.tribal.nic.in>. India has the second largest concentration of tribal population in the world, accounting for about 8.2 percent of the total population of India, according to the 2001 Census of India. India has 635 tribes located in 5 major tribal areas across the country, out of which only 75 are primitive tribes [45] Bharia in Patakot had a total population of 2801, and as of 2001 India census, the total number of households was 579. Census of India. 2001. Available from: <http://www.censusindia.net>. These primitive tribal communities have been identified by the Indian government on the basis of their pre-agricultural level of technology, extremely low levels of literacy, and small, stable or declining populations [46].

Health problems in the context of the tribal communities of India require special attention. Available research studies suggest that tribal populations have specific health problems, which are primarily controlled by their habitat, difficult terrain, and ecologically variable niches [47]. These tribes have minimal access to medical and dental care [48]. Since periodontal disease is one of the primary causes of tooth loss

and is also associated with health problems such as cardiovascular diseases, cerebrovascular accidents, diabetes mellitus and pregnancy-related complications, it is estimated that the population The prevalence and identification of high-risk groups are of great importance [49]. Worldwide, studies on the health status and treatment needs of Aboriginal populations have been reported. African tribes and nutritional diseases. Available from: <http://www.modern-diet-and-nutrition-diseases.com/african-tribes.html>. Little is known about the difficulty of reaching communities in India and one such community is a primitive tribal group of Bharia people in Patakot. They live in solitude and are so hidden that people from the outside world didn't even know it ever existed; Hence, the name comes from the Sanskrit word "Patal" which means very deep [50]. The higher prevalence of periodontal diseases and poor sanitary conditions among the Bharia people can be attributed to their difficult terrain, very low literacy level, socioeconomic status, isolation, superstition, cultural practices, low use of basic can be held responsible for. Health care facilities, and above all lack of health care facilities. Thus, the Bharias in Patakot are among a particularly vulnerable group, with low rates of care and high rates of unmet dental needs. Despite tremendous progress in dental science, health care delivery services among these primitive tribal people are still poor and need to be strengthened to achieve the goal of health for all. in country.

Table 4 Numbers of medicinal plants used in various ailments

Diseases	No. of species used
Abdominal disorder itching	20
Abortifaciant	11
Anaemia	12
Anthelmintic	17
Antipyretic	11
Antiseptic	11
Asthma	14
Astringent	13
Bleeding problem	16
Boils	13
Bowels	6
Bronchitis	17
Burn	13
Cancer	13
Child delivery	02
Cholera	12
Circulation	01
Cold	14
Constipation	11
Cough	17
Cuts	15
Debility	10
Diabetes	27
Diarrhoea	13
Diuretic	25
Dropsy	14
Dysentery	15
Dyspepsia	8
Earache	13
Eczema	12
Edema	6
Emetic	6
Eye problems	37
Fever	13
Fracture	16
Gonorrhoea	19
Haemorrhages	14
Hair problem	13
Headache	19
Indigestion	18
Inflammation	11
Insect bite	11
J aundice	17
Kidney disorder	15
Leprosy	29
Leucoderma	21
Liver problem	28
Malaria	16
Menstruation	18
Muscular	6
Nerve	10
Obesity	8
Ophthalmia	4

Pain	95
Paralysis	11
Piles	41
Pneumonia	4
Pregnancy problem	10
Rheumatism	8
Ringworm	46
Scabies	19
Scorpion bite	14
Skin Diseases	08
Small pox	67
Snake bite	4
Sores	41
Stomache	31
Swelling	61
Toothache	39
Tuberculosis	25
Ulcer	16
Urinary problem	61
Uterine infection	45
Vomiting	10
Weakness	19
Worms	7
Wounds	29
	74

CONCLUSION

The Patalkot forest was so hidden that people outside did not even know that it existed. It is a very special place, which is rich in plants and animals. The natives who live there know how to collect and grow the plants needed for food, clothing, and building their homes. They also have a special skill that is passed on. In many cases, socio-economists focus on the social impact of some type of economic change. Such changes may include a closed factory, market manipulation, the signing of international trade treaties, new natural regulation, etc. Such social impacts can be wide in size, ranging anywhere from local effects on a small community to changes in society as a whole. Examples of causes of socio-economic impacts include new technologies such as cars or mobile phones, changes in laws, changes in the physical environment (such as increased congestion within cities), and ecological changes. These can affect consumption patterns, the distribution of income and wealth, the way people behave (both in terms of purchase decisions and the way they choose to spend their time) and overall quality of life. A typical complementary use is social economics as "a discipline studying the interrelationship between economic science on the one hand and social philosophy, ethics and human dignity on the other" for social reconstruction and reform, or for multidisciplinary methods from such fields. described as an emphasis. Sociology, History and Political Science. In criticizing mainstream economics for its perceived flawed philosophical premises (e.g., the pursuit of selfishness) and neglect of dysfunctional economic relations, such advocates classify social economics as heretical.

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