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Indian Ethnomedicinal Plants

Traditional Practices to Cure Diseases

Akhil Baruah



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NUTRITIONAL AND MEDICINAL VALUES OF FRUITS IN DIABETES

ANJALI VERMA, DALIP KUMAR UPRETI, VEENA PANDE
AND MAHESH PAL

INTRODUCTION

Fruits are an important component of a healthy diet, they are highly nutritious, enrich with many vitamins, minerals, fiber and macro & micronutrients. The earliest definition of a fruit was "any plant used as food," but nowadays the definition of a fruit was based on its anatomy (Slavin and Lloyd 2012). The ovules of the flowers after fertilization are converted into seeds, whereas the ovary wall develops further to form the protective covering of the seeds, which is known as fruit. In botany this particular coating is called pericarp which consists of three different layers epicarp, mesocarp and endocarp (Shah and Seth 2010). Some fruits offer great medical benefits in prevention of a range of chronic diseases such as obesity, diabetes mellitus and cardiovascular ailments. (Weisburger 1991, Block *et. al.* 1992, Maynard *et. al.* 2003). Diabetes mellitus (DM) is a group of metabolic disorders characterized by a chronic hyperlipidemia, hyperaminoacidemia, and hypoinsulinaemia it leads to decrease in insulin, secretion and insulin action. The adverse side effect of diabetic drugs has been noted and its leads to increase in demand for the use of plant based medicines "medicinal plants" to treat diabetes (Lakshmi *et. al.* 2012).

Fruits are the edible part of most of the plants which has less or zero side effects (Soetan and Aiyelaagbe 2009). It contains inherent active ingredients used to cure diseases (Okigbo *et. al.* 2008). Most of the developing countries use fruits as in traditional medicines or in the preparation of medicines under the term 'herbal medicines'.

ROLE OF PHYTOMEDICINE IN DIABETES

Fruits are the very rich sources of secondary metabolites and representing numerous

major groups: terpenoids (about 25000 compounds), alkaloids (about 12000 compounds), phenolic compounds (about 8000 compounds), and sulfur-containing compounds (Poiroux-Gonord *et al.* 2010).

Phenolic are phytonutrients in plant-based food products that often contribute to the color of the foods. They provide antioxidant activity which may play a significant role in cardiovascular health and may help to prevent against diseases such as cancer caused by free-radical damage. They may also provide benefit in the prevention of other chronic conditions such as osteoporosis and diabetes (Pandey and Rizvi 2014). Fruits that grow on trees have been shown to be high in flavonoids. Bananas contain quantities of anthocyanidins including cyanidin and delphinidin. Citrus fruits including grapefruit, lemons, limes and oranges are high in the flavanone group of flavonoids including hesperetin, naringenin and eriodictyol. Members of the Rosaceae family of tree fruits including apples, pears, plums, peaches and apricots are known to be high in catechin and epicatechin and are best if consumed raw with the skin on. Berry fruits such as raspberries, strawberries, blueberries, and blackcurrants have high levels of polyphenolic compounds and are therefore rich sources of dietary antioxidants and are more protective than any other raw sources in many diseases such as cancer, diabetes etc. (Skrovankova *et al.* 2015). Fruits juices are one of the major sources of antioxidant activity, such as pomegranate juice is the rich source of antioxidant protective compounds (Pandey and Rizvi 2009). Citrus fruits rich with vitamin C content and considered to protect against oxidative stress and atherosclerotic process. Many of the fruit juices rich in potassium, known to reduce blood pressure and may be related a lower risk of stroke (Lobo *et al.* 2010) (Fig. 2).

Phenolic

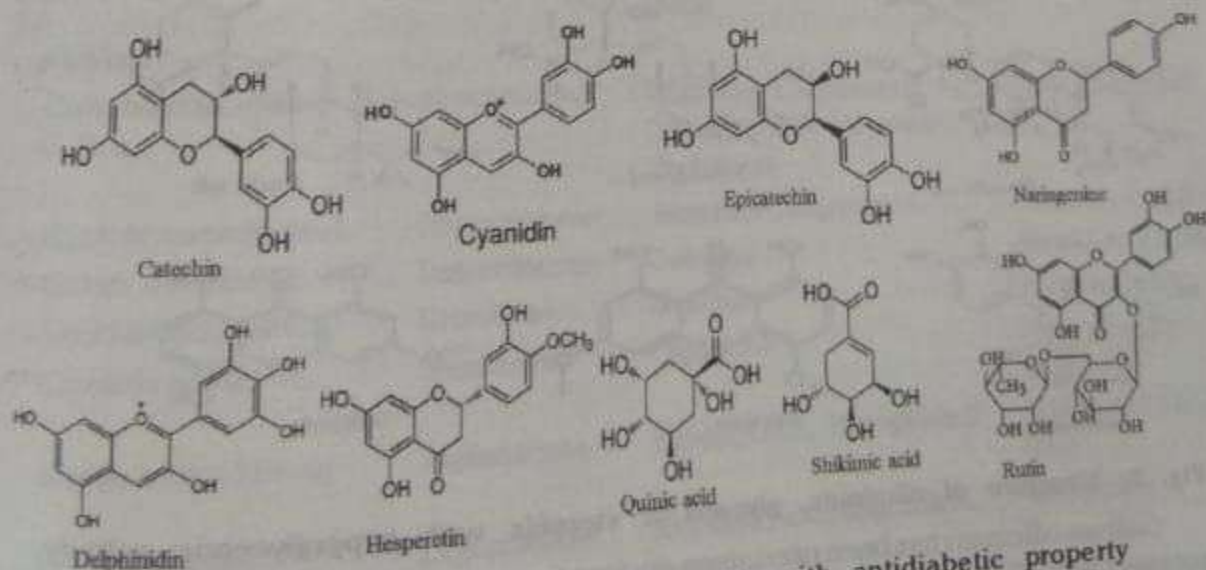


Fig. 2. Structure of phenolic compounds with antidiabetic property

Alkaloids are a group of naturally occurring chemical compounds that mostly contain basic nitrogen atoms and produced by a large variety of organisms including bacteria, fungi, plants, and animals. They can be purified from crude extracts of these organisms by acid-base extraction. Alkaloids have a wide range of pharmacological

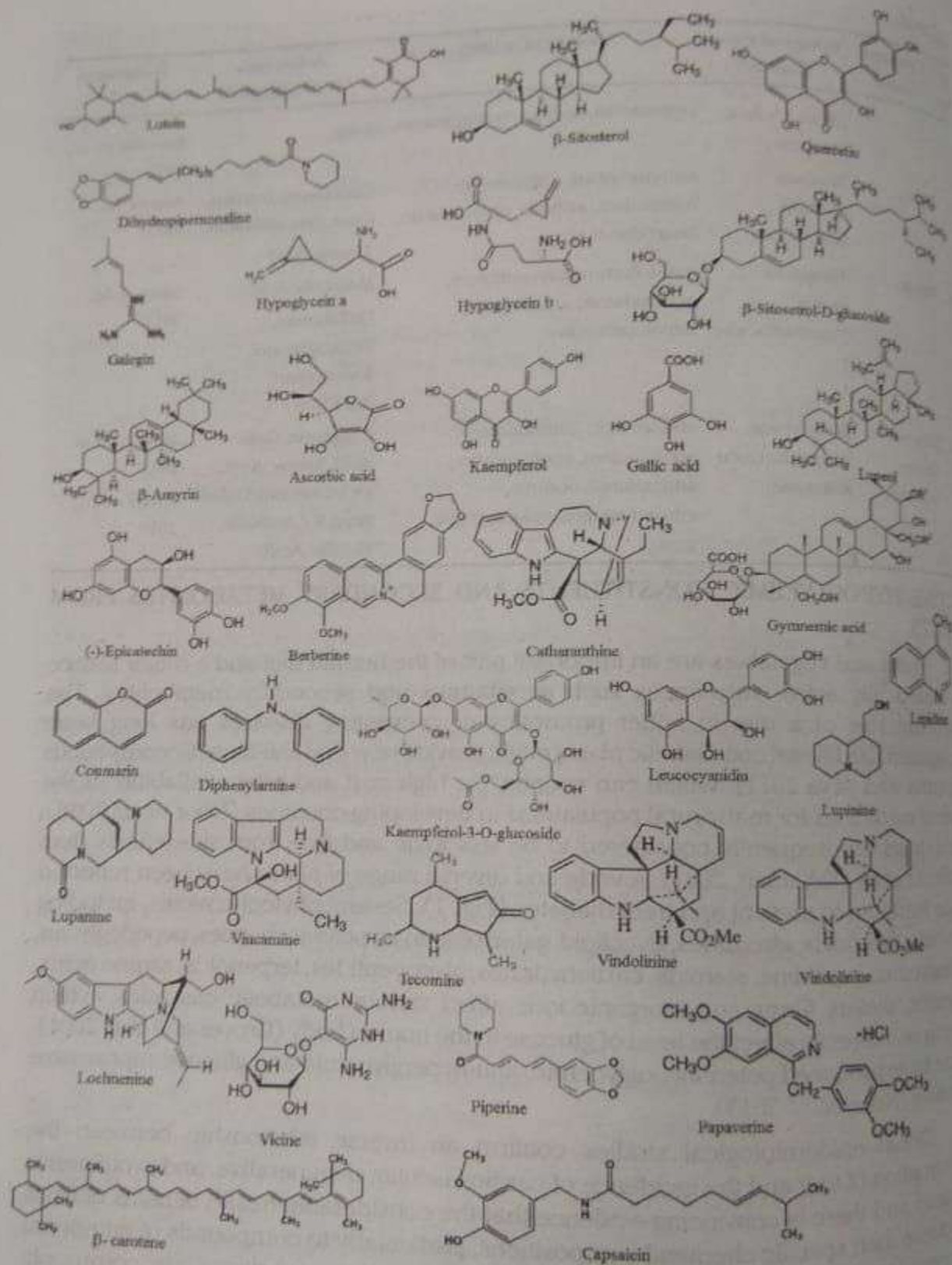


Fig. 1. Structure of compounds with hypoglycemic activity

Sl No	Common name	Botanical name (Family)	Biological activity	Active bio-constituents	References
17.	Nani	(Roxb.) Schott. (Anacardaceae) <i>Morinda citrifolia</i> (Rubiaceae)	pneumonia, scabies, hypoglycemic, anti-microbial, anti-cancer, antioxidant, arthritis, anti-diabetic, heart diseases,	Acids Coumarins, Digoxin, Quinoline, Rubiadin, Uronic Acid M-Digallic Acid, Gallobannin, Phloroglucinol, Kaempferol, Myricetin	Kaushik <i>et al.</i> , 2012 Asai <i>et al.</i> , 2015
18.	Mango	<i>Mangifera indica</i> (Anacardiaceae)	anti-inflammatory, anticancer, antioxidant, antidiabetic, hepatoprotective		Saha <i>et al.</i> , 2013
19.	Bitter-Melon (Karela)	<i>Momordica charantia</i> (Cucurbitaceae)	antidiabetic, antimutagenic, abortifacient, contraceptive, antimalarial, eczema, emmenagogue, galactagogue, gout,	Charantin, Gallic Acid, Tannic Acid, (+)-Catechin, Caffeic Acid, p-Coumaric, Ferullic Acid,	Joseph <i>et al.</i> , 2013 Fawzi <i>et al.</i> , 2010

ACTIVE HYPOGLYCEMIC CONSTITUENTS AND SECONDARY METABOLITES FROM FRUITS

Fruits and vegetables are an important part of the human diet and a major source of biologically active substances such as vitamins and secondary metabolites. The important role of a diet in either promoting or preventing diseases has long been recognized. Traditional anti-diabetic plants might provide new oral anti-diabetic compounds (Sharma and Arya 2011), which can counter the high cost and poor availability of the current medicines for many rural populations in developing countries (Noor *et al.* 2008). Plant drugs are frequently considered to be less toxic and free from side effects than synthetic ones (Valiathan, 2001). A wide and diverse range of plants have been reported in the literature to prevent and treat diabetes (Fig. 1). Several phytochemicals, including alkaloids, flavonoids, glycosides, glycolipid, galactomannan, polysaccharides, peptidoglycan, hypoglycans, guanidine, steroids, carbohydrates, glycopeptides, terpenoids, amino acids, saponins, dietary fibres and inorganic ions affect various metabolic cascades, which directly or indirectly affect the level of glucose in the human body (Grover and Vats 2001). These have produced potent hypoglycemic, anti-hyperglycemic and glucose suppressive activities (Noor *et al.* 2013).

Global epidemiological studies confirm an inverse relationship between the consumption of fruit and the incidence of cardiovascular, degenerative, and proliferative diseases and there is convincing evidence that the considerable health benefits of fruits are due to their specific chemical compositions, particularly to compounds of nutritional relevance (Najda *et al.* 2014). These specific chemical compositions are commonly known as secondary metabolites of the plants. According to the nomenclature adopted by the British Nutrition Foundation, plant secondary metabolites can be divided into four

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Exploring the Himalayas: Land and the People



Dr. Neeraj Ruwali

Exploring the Himalayas : Land and the People

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SOCIO-ECONOMIC EFFECTS OF TOURISM ON UTTARAKHAND: A CASE STUDY OF NAINITAL

Vijay Kumar
Asha Balmiki

Uttarakhand is the amalgamation of kumaon region and Garhwal region. Uttarakhand carved from the Uttarpradesh on 9th November 2000 as 27th state of India. On the time of formation it was named Uttarachal. Seventh year later it adopted the name Uttarakhand.¹ State is a part of western Himalya's ranges starting from the shivalik foothills to greater Himalya's with Tibbetas its north eastern border and Nepal in the east. On its north-west lies Himanchal Pradesh, while the most of its western and south boundary surrounded by Uttarpradesh.²

Key words - Migration, pollution, Socio-economic, Tourism, Demography of the state-

Uttarakhand is also rich in Human resources as Natural resources. According to the Population censuses 2011 the total population of state is 100,86 lakh. Out of the total population Approx. 50.9% are male and 49.1% are female. Rural population of the state are 70,37 lakh, out of this 50.1% are and 49.9% are female population. Approx. 70% of total population is living in rural area. Sex ratio is marginal of the man but it is below it means female are less in number. Child sex ratio is very below, it means in future female would be less than the male. Literacy ratio 78.80%, whereas 87.40% are male and 70% are female literacy ratio is not good. Population is living in 1 sq.km. 189 people, it is satisfactory.³

Table-1
Demographic profile of Uttarakhand (Census 2011)

S.N	Description	Total	Male	Female
1.	Population S	100,86 lakh	51,38 lakh	49,48 lakh
2.	Rural population	70,37 lakh	35,19 lakh	35,18 lakh
3.	Urban population	30,50 lakh	16,19 lakh	14,31 lakh
4.	Sex ratio	963*	-----	-----

5.	Child sex ratio	890*	-----	-----
6.	Literacy rate	78.80%	87.40%	70.00%
7.	Density	189per sq km.	-----	-----

*Per 1000 male

Source- Uttarakhand at a glance 2014-2015 and statistical diary 2014-2015

The state is rich in Flora and Fauna, natural and tourist ambiance. State has vast tourism potential adventure, leisure and eco-tourism.

Opportunities for tourism are immense in this state by its nature, wildlife, and adventure and pilgrimage tourism. The major Destination are Dehradun, Haridwar, Rishikesh, Mussorie, Kedarnath, Badrinath, Yamunotri, Gangotri, Almora, Ranikhat, Nainital, Jim Corbett park, Bageshwar, Kausani, Pithoragarh and Champawat.

The status of tourism as an economic activity is recognized throughout the World. Tourism Industry has potential of generating substantial income and employment.⁴ Tourism has been developed as an industry in the world. In the Uttarakhand economy tourism has been playing very important role. The industry of tourism in Uttarakhand has flourished with the pilgrimage and various activities like trekking, rafting, skiing and so on. Uttarakhand is ideal place for all type tourists, pilgrimage, trekkers and adventurers.

Uttarakhand has potential to attract the all type of tourists. Uttarakhand tourism can be divided in four group;

- o Pilgrimage tourism
- o Nature tourism
- o Leisure tourism
- o Adventure tourism

Pilgrimage Tourism

The Uttarakhand is the major Hindu pilgrimage center for pilgrims. Prime attraction of pilgrims in Uttarakhand is Char Dharmyatra & Kumbh Mela in Haridwar, Badrinath, Kedarnath, Gangotri and Yamunotri is the major pilgrimage centers of Uttarakhand, while other places are also located here for the interest of pilgrims like; Haridwar, Rishikesh, Hemkund Sahib, Reetha Sahib, Nanakmatta, Tapkeshwar and Budha Temple, Patalbhuvneshwar, Jageshwar, Baijnath, Purna Giri Temple, Kaichi, Gorkhahal, Naina Devi Temple and Garjiya Devi Temple etc.

Nature Tourism

Uttarakhand has also so many popular Destinations for wild life. Major attraction of the nature tourism in Uttarakhand is Jim Corbett National Park. Askot Sanctuary, Binsar sanctuary and Govind Ballab wild life Sanctuary is also another place of tourist interest in the state. The high

altitude GovindBallabh pantprani Udhyan (Nainital Zoo) is the most popular Destination after the Corbett national park.

Leisure Tourism

During The Summer, Hill Station Of Uttarakhand Are Attraction Of The Tourists. The Key Tourist Destination In The State Are ; Abbott Mount . Auli, Almora, Bhimtal, Bhowali, Chakrata, Chamba , Champawat, Chamoli, Kausani, Landsdown, Lohaghat, Mukteswar, Mansyari, Mussorie, Nainital, Naukuchiyatal, Ramgarh, Ranikhet And Sattal.

Adventure Tourism

For the interest of adventure tourists there are so many destinations available. The most popular activities for adventure tourists are; rafting, paragliding, trekking, skiing and so on. The key destination for this purpose are; Auli, Barakot, Bugyals, Dodital, Milam Glacier, Naukuchiyatal, Nainital, Rishikesh and Sunderdhunga Glacier etc.

Connectivity for Tourists in Uttarakhand

Airport : The high altitude Naini Saini hawaipatti in Pithoragarh is under construction. State has two Domestic Airport one at Jolly grant Dehradun and another at Pantnagar. The Uttarakhand Government has proposed the construction of at least one helipad in every district of state.⁵

Railways: The Uttarakhand has 345 km of Rail routes in 2009-2010. The both region of the state are connected with railways. The railway station of state are Dehradun, Haridwar, Roorkee, Kashipur, Ramnagar, Udham Singh Nagar, Haldwani and Kathgodam.⁶

Roadways: The total road network in the state is 33914.7 km. National highway running in the state 2042 km, while the length of state highways is 1575.5 km. Major district roads length is 567.8 km. and roads for villages 12375 km. in 2009-2010, respectively.⁷

Economic Effects of Tourism

Tourism industry is become largest expanding industry across the world. Tourism is the act of paying money to go from one place to another place to fulfill their desire. Tourism is the second largest foreign currency earning industry by way of invisible export.

The first effect of tourism is in the transfer of money one region to another region.⁸ Tourism industry is specially benefits for the unemployment youth. Apart from generating income being labor intensive industry. It generates employment specially self-employment and sustainable development, tourists creates jobs more than any other sector for every rupees invested.⁹

Uttarakhand is the best destination for all type tourists. Domestic as well as foreign tourists are attracted from Uttarakhand. The peak season for inflow of tourists in the state is April to June. According to the survey¹⁰ the average expenditure per visitor per day is around 762 rupees at the

overall level. The approximate figure for the domestic overnight visitor is 758 rupees, while that for foreigner overnight visitor is 798 rupees. It is significant effect of Uttarakhand economy.

Table-2
Tourist arrival in the state

State/country	2008		2009		2010	
	Domestic	foreign	domestic	foreign	domestic	Foreign
Uttarakhand	20546323	99910	21934567	106470	3020630	127258
All India	562982298	14112590	650038673	13717522	740214297	17852777
growth						
Uk	-	-	6.8	6.6	37.7	19.5
india	-	-	15.5	-2.8	10.7	24.2
Share of Uttarakhand	3.6	0.7	3.4	0.8	4.1	0.7

Source-Indian tourism statistics 2009-2010.

Significant increase of arrival of tourists is source of earning income. The most earners from the tourism are people based on pilgrimage, hotels, Restaurants, tour and travel operators, taxis, boats, local markets, hawkers and service provider people. Uttarakhand tourism has been providing employment to many people directly or indirectly.

Social Effects of Tourism

Tourism is the key factor of sustainable socio-economic development of Uttarakhand. The major social effect of tourism is generating the employment, it's helpful for unemployment person and their family. Tourism industry is also helpful for prevent migration, conserve local art and cultural.

Development of tourism raises various issues like; pollution of environment, hike in the price of land because of the greater demand of the construction, due to hike of the price of land local people are unable to purchase land for their home. Much demand of goods is hiking the price of daily needs goods are also another issue for local.

A Case Study of Nainital

Nainital is situated at an altitude of 1938 m. around naini lake the lake resort of Nainital is divided by lake in two parts Tallital and Mallital. Southern side of lake is called Tallital, while the northern side is known Mallital. Nainital is renowned for its lake and residential schools established by British.¹¹

Nainital is a popular hill station in the India. During the summer time it is most familiar place among the tourists. Tourism plays an important role in a region economy as they bring a net inflow of money. The economy of Nainital entirely dependent on tourism. Tourism is very helpful in generating the employment in Nainital, it is prevent of migration, while

helpful in conserve the local art and cultural. Famous film makers are also attracted to the Nainital for suiting the film.

It is true that the tourism is very helpful in socio-economic development of Nainital, but the cost of development are paying environment, it is the negative impact of tourism industry.

In this case study researchers have taken problems from the tourism in Nainital. Tourism is very beneficial for development of the region and society. The most negative impact of tourism is pollution of environment.

Objectives

To study the problems of tourists in Nainital.

To study the problems local People with tourists.

Methodology

The present case study is confined to the problems of tourists as well as local people. The study has been conducted in the month of June, 2016. For the purpose of study 40 people are selected through quota sample method, comprising of tourists and local people. Primary data were collected through interviews of Sample.

Findings

- ❖ Nainital economy is depending on tourism. Tourism is playing vital role for employments generation in Nainital.
- ❖ It found that tourists as well as local are suffering from traffic problems.
- ❖ Local people have only problem with tourism which is traffic problem.
- ❖ On the high altitude tourism destination like; Zoo, Snow view, Tiffin top, Himalaya darshan so on places, sellers are charging high rate.
- ❖ Hotels ,taxi, horse and boatman also charging very high rate than the fixed rate.
- ❖ School student especially All saints, St. joshep, St.marry and LPS are suffering from the traffic problems.
- ❖ Car Parking and lake bridge contractors are taking extra money than the fixed rate.
- ❖ Behavior of traffic policeman is not good to the tourists as well as local.
- ❖ Car parking is not sufficient in the month of May and June.
- ❖ Medical facility is inadequate in the town.

Suggestions

- ❖ Traffic problem is a big problem in the city. The major reason of traffic is maximum hotels as well as local peoples have no car parking. Hotels owner would have taken the initiate to develop the car parking in hotels. Maximum local people have no car parking so they are parking in the road - side that is a one of the major reason of traffic jam. If municipality gives the priority to the local in car parking form the issue car parking pass on the pattern of lake bridge pass this problem can be sort-out.

- ❖ On the high altitude tourists destination unauthorized sellers are selling the goods and they are charging higher prices. Concern authority should issue the license to the seller and randomly check.
- ❖ To check the monopoly of hotels, taxi, horse and boatman concern authority should have check time to time in the peak season.
- ❖ Convent school have sufficient place for parking but they do not open there gate for school children vehicle. If they open there gate only for related vehicle this problem can be solve. For the safety of school children on the affected ways like bus station to Rajbhawan road should strictly follow One- way system on the time of arrival and departure of children.
- ❖ On the Car parking and lake bridge gate C.C.Tv cameras should install for watch. Lake bridge sleep should be issued for whole days not for one time.
- ❖ Installation of C.C.Tv Cameras can help to improve of behavior of policeman.
- ❖ Peak season of tourism municipality should manage the extra car parking.
- ❖ Tourism season time, sufficient doctors should be appointing in the government Hospital.

Conclusion

Tourists are the means of tourism, if tourists are felt pleasure in the tourism destination, tourism and destination of tourism will be develop. The development of tourism will be fruitful for economy and society.

References:

1. www.uttarakhand tourism.com.in.
2. Identification of tourism circuits across india: Intrim report Uttarkhand, submitted to Ministry of tourism, Government of India, page 6.
3. census 2011.
4. www.uttarakhand tourism.com.in.
5. Identification of tourism circuits across india: Intrim report Uttarkhand, submitted to Ministry of tourism, Government of India, page 9.
6. www.phdcci.in.
7. Uttarakhand at a glance 2010-2011, Ministry of Road Transport & highways, Annual report 2010-2011.
8. km.Anjani, Synopsis on the topic of, Role of tourism in economic development of uttarakhand, H.N.B. Garhwal University, Srinagar Uttarakhand.
9. Shanker.Ambhore, The Dynamic of tourism and human resources development in India in new Millennium, Research link -40, vol-vi(5) July, 2007, page 53.
10. Identification of tourism circuits across india: Intrim report Uttarkhand, submitted to Ministry of tourism, Government of India, page 12.
11. www.nainitaltourism.com.im

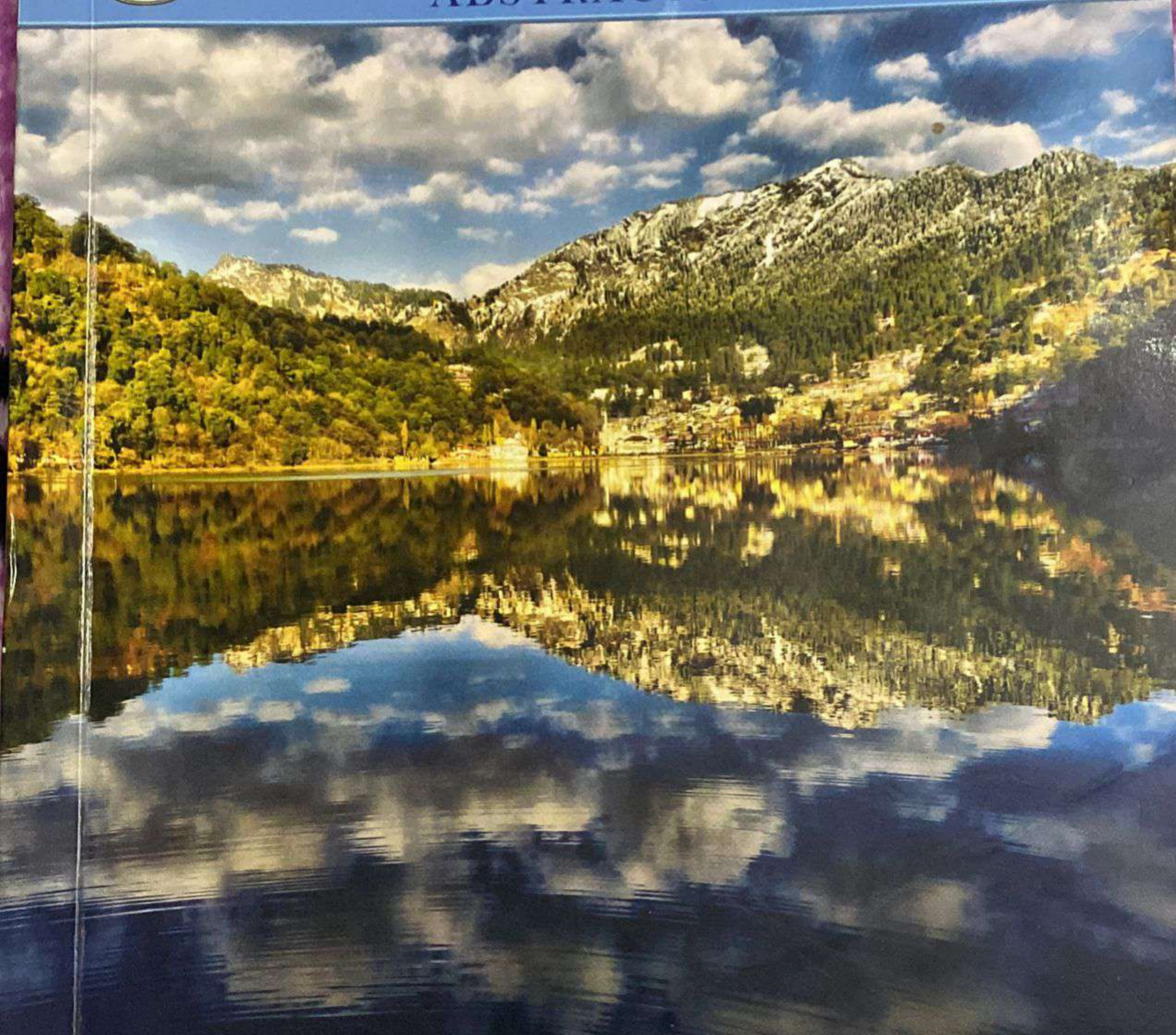


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ABSTRACTS



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Pallidus respectively. The major constituents in both the *Callistemon* species was 1,8-cineole (eucalyptol), constituting 63.59% and 56.21% of the total essential oil composition. Beside this the other major compounds in *C. viminalis* were α -phellandrene (4.34%), myrcene (1.26%), γ -terpinene (1.68%), linalool (1.41%), terpinene-4-ol (1.68%), whereas myrcene (1.15%), α -phellandrene (5.41%), p cymene (1.50%), limonene (1.29%), 2-carene (5.8%), linalool (6.62%), α -terpineol (2.80%), methyl cinnamate (2.93%) and germacrene D (2.32%) were the major constituents of *C. pallidus*. The antioxidant potential was determined using DPPH radical scavenging assay, Iron chelating activity, Reducing power and Nitric oxide radical scavenging activity. Both the species shows good DPPH radical scavenging activity (*C. viminalis* $IC_{50} = 4.67 \pm 0.09$) and (*C. pallidus* $IC_{50} = 3.69 \pm 0.15$) with respect to standard BHT ($IC_{50} = 0.34 \pm 0.11$). Both the oils also exhibit good metal chelating activity (*C. viminalis* $IC_{50} = 5.23 \pm 0.13$), and (*C. pallidus* $IC_{50} = 4.73 \pm 0.05$) with respect to standard citric acid ($IC_{50} = 0.634 \pm 0.00$). The species *C. pallidus* exhibit strong reducing power ($IC_{50} = 3.83 \pm 0.54$) than *C. viminalis* ($IC_{50} = 6.92 \pm 0.64$) in comparison to standard BHT ($IC_{50} = 2.46 \pm 0.25$). Thus by this study we concluded that both the *Callistemon* species serve as a valuable bioresource of 1,8-cineole (eucalyptol) and further the antioxidant potential indicate their use in ethanopharmacological applications.

Keywords: *Callistemon viminalis*; *Callistemon pallidus*, essential oil composition; 1,8-cineole; antioxidant potential.

OP-16

Applying machine learning techniques in Breast Cancer diagnosis

Arpita Joshi and Ashish Mehta

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Breast cancer is one of the most common reasons of death among women as well as male in worldwide. In the field of medical science accurate diagnosis of breast cancer is major problem. From the available literature it has been found that there are various Machine Learning techniques can help researchers and doctors to help in the diagnosis of Breast Cancer. This paper presents a comparative analysis of various machine learning techniques for detection of breast cancer. Using the experimental study, we select the best technique in order to identify breast cancer. In this study, the Wisconsin Breast Cancer dataset (available from UCI machine repository) was used and analysed. The performance of each technique is evaluated using various performance measures like accuracy, sensitivity, specificity, F-score.

Thus, continuous work and research for more innovation and updating of existing security mechanisms is a necessary measure. All such measures and their study fall under the umbrella term Cryptography.

Keywords: Cryptography, security, cyberspace, privacy, cryptic algorithms, communication protocols, Internet of Things (IoT).

OP-136

Internet of Things (IoT) in Medical Field

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In this paper, we explore the possibilities of IoT in the healthcare system. With the help of smart sensors and medical device integration now it is possible to monitor the patient health remotely with minimum IT infrastructure. The product development is fast and cheap. IoT can also significantly reduce the healthcare and treatment cost.

OP-137

Time Series Analysis of Primary Education Enrollment in India

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Education has a important place in development of any country. There is a need for a decision support system that can predict the infrastructure required in future. Time series data gathered from word data bank can help in determining the number of enrollment in schools. This paper evaluates the time series of enrollments in schools from year 1971 to 2013 using statistical tools.

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Ecological Ignorance in Development Raising Disastrous Possibilities



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Chapter 1

Agroforestry Systems Link Between Development and Environment

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ABSTRACT

The present study was carried out to identify the existing agroforestry systems and their cropping pattern in relation to development and environmental sustainability in Bhabar and Tarai regions of Kumaun Himalaya, Uttarakhand. Agroforestry is a collective name for land use systems and technologies, in which woody perennials are deliberately combined with farm crops or livestock on the same piece of land management. The current growing population pressure and their diverse needs as well as the needs of nation for infrastructural development has resulted the decline of per capita land ratio both in agriculture and forest. The agroforestry can be a most sustainable way that not only solves the socio-economic problems but also reduces the environmental degradation. The information regarding land use practices and agricultural cropping pattern was studied through extensive field survey, direct observation and semi-questionnaire methods. In the study area, farmers were practiced in five types of land use systems i.e. sole cropping,

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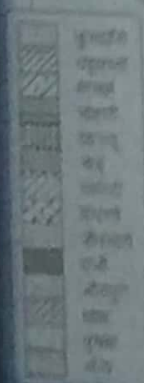
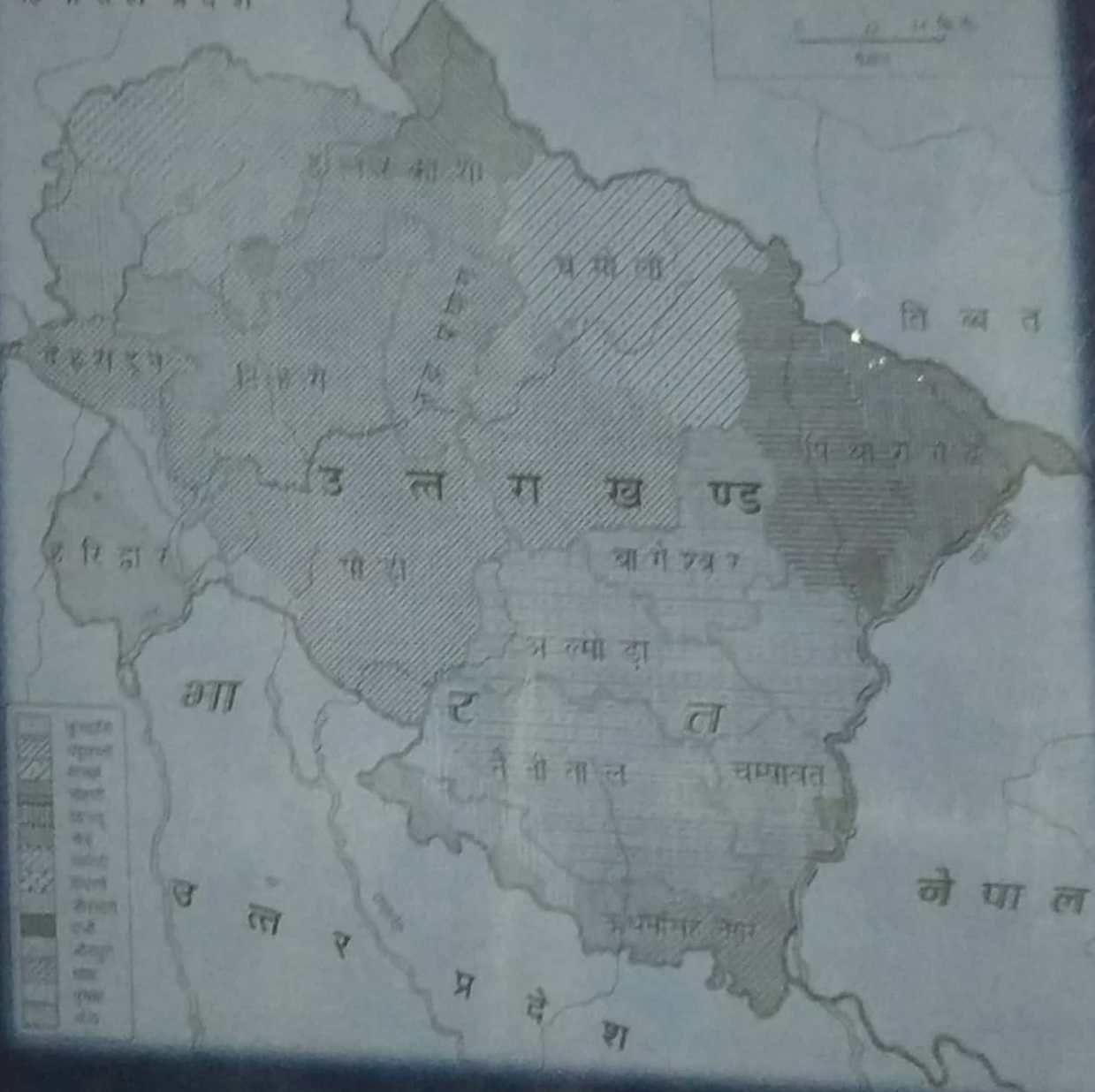
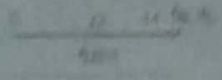
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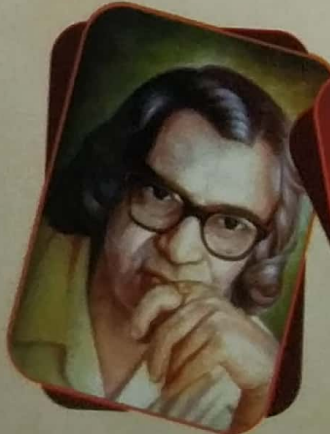
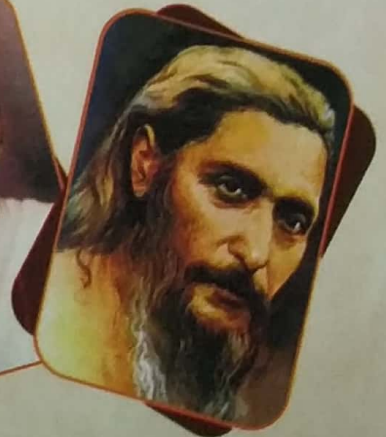
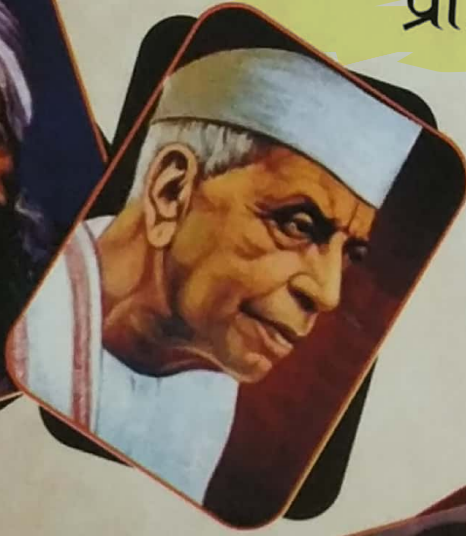
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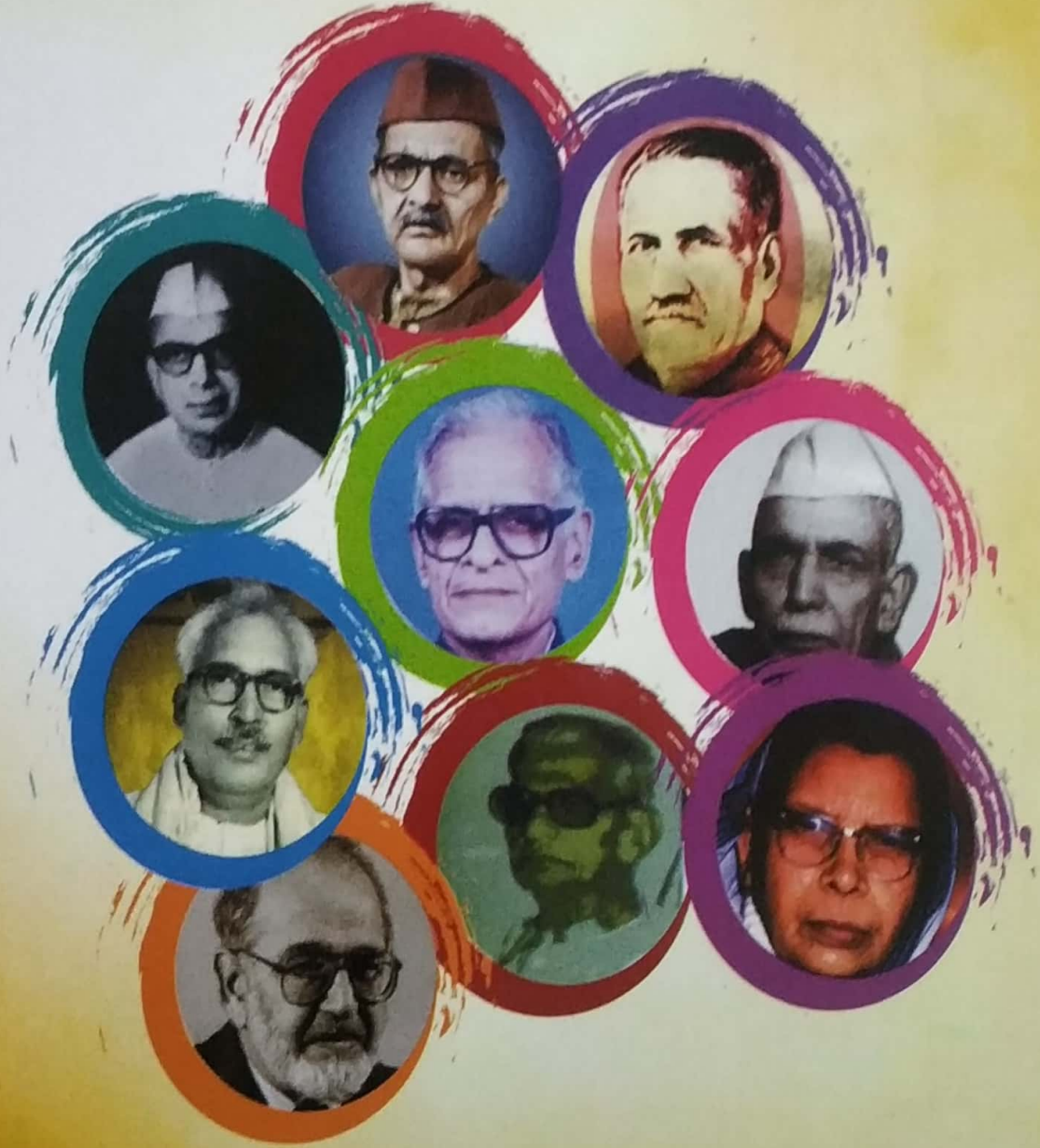


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