

Anthropogenic Impact and Ethnographic Study of Flora and Fauna of Silvassa Region

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Abstract: *This research study presents a comprehensive investigation into the vegetation, floristic diversity, and anthropogenic influences within the Silvassa region. The study aims to elucidate the distribution patterns of vegetation, document the diverse flora, and understand the intricate relationships between plant species and their environment. Through a combination of participatory observation, data analysis, plant collection, interviews, and mapping, this research offers valuable insights into the botanical and ecological aspects of Silvassa. Both primary and secondary data sources were utilized to gather a holistic understanding of the area's flora and vegetation. The research methodology encompassed participation in local activities, soil property evaluation, and analysis of historical rainfall data, season-based plant collection, and ethnobotanical documentation. Interviews with local inhabitants facilitated the recording of traditional plant uses and local names. Additionally, herbarium specimens were created, rare endemic plants were cataloged, and photographic documentation of plant species and forest environments was undertaken. Group talks, field observations, and semi-structured interviews enriched the data collection process, providing qualitative dimensions to the study. However, certain limitations were acknowledged during the study.*

Keywords: anthropogenic, impact, ethnographic, flora, fauna, silvassa region.

I. INTRODUCTION

Individuals, since antiquated times generally have been for the most part subject to establish assets for their essential requirements like food, medication, fiber, grub, cover, and so on. Previously, they were straightforwardly reliant upon plants however because of change through modernization and with movement of science and innovation in the greater part of the districts on the planet this reliance on plants as an immediate source has been extensively diminished. No different either way, the ancestral's and other native individuals, who have generally lived in the woodlands, keep on excess totally reliant upon plants for their endurance.

Living near the nature, the ancestral individuals have absorbed extraordinary information about plant use for different purposes through the course of their extremely old experience. A few texts have been composed till date giving subtleties of the normal assets and their utilities yet the new work in various regions of the planet show that still tremendous repository of customary information about utilitarian parts of plants is as yet immaculate. A large portion of the specialists have accomplished surprising work under the title. Such examinations might prompt track down new data on unexploited normal assets and new purposes of existing assets as wellsprings of medication, food, and so forth. However, at certain spots ongoing changes in disposition of individuals living in and close by backwoods is because of territory uprooting, deforestation, modernization, and so forth have prompted decline and even vanishing of this rich information framework. Along these lines, it is fundamental for assemble their whole information on plant use prior to losing it until the end of time. It is surely known now that straightforwardly or in a roundabout way human's existence has forever been firmly associated with the plants.

There is basically no human doings in which plants don't assume a part. Subsequently, in vastest sense, has a connection with pretty much every other staff of science and field of information. Today has turned into a huge and key area of innovative work in medication research, protection of biodiversity and all around viewed as in financial advancement of the district. In the new past there has been a general tendency towards reclamation of the native

arrangement of medication. Indeed, even the created nations furnished with current allopathic meds, have begun understanding the possibilities of conventional arrangement of medication.

What's more, the chase after clever natural medications has been reinforced by the refusal of allopathic medications by individuals and the developing fascination for home grown cures. There is a steadily expanding cognizance among individuals about the utilization of home grown drugs, which are accepted to be protected and don't make unwanted incidental effects like the vast majority of the cutting edge engineered medications and this mindfulness is one of the causes, which spurred enormous overall interest for natural medications.

The current work centers explicitly around the biostratigraphy investigations of the Palana and Kolayat developments of the Ambari and Bedpa , Silavassa Dadra and Nagar Haveli Untamed life Safe-haven is a natural life safe-haven situated in the Indian Association Region of Dadra and Nagar Haveli and Daman and Diu. The asylum incorporates the Satmalia Deer Park and Vasona Lion Safar. Only a few subsurface localities are available for easy accessibility and a good yield of fossils. The principal areas of examination are the Palana and Kolayat developments uncovered in the subsurface at Gurha opencast lignite mine at the town, situated around 70 km SW of Silavassa (lat. 27.878249°; long. 72.870389°) and Bedpa opencast lignite mine at the Stream Damanganga moves through the association region and opens into the Bedouin Ocean. Dadra and Nagar Haveli is lined by the Indian territories of Maharashtra and Gujarat. Scopes of the Sahyadri Heaps of the Western Ghats lie in the locale. The main control of individuals of the association region is agribusiness. In excess of 40% of the complete region contains timberland locale that are wealthy in verdure. The absolute region of the area is separated into 3 towns in Dadra and 69 towns in Nagar Haveli. Silvassa , Dadra and Nagar Haveli (lat. 27.103577°; long. 74.066346°).

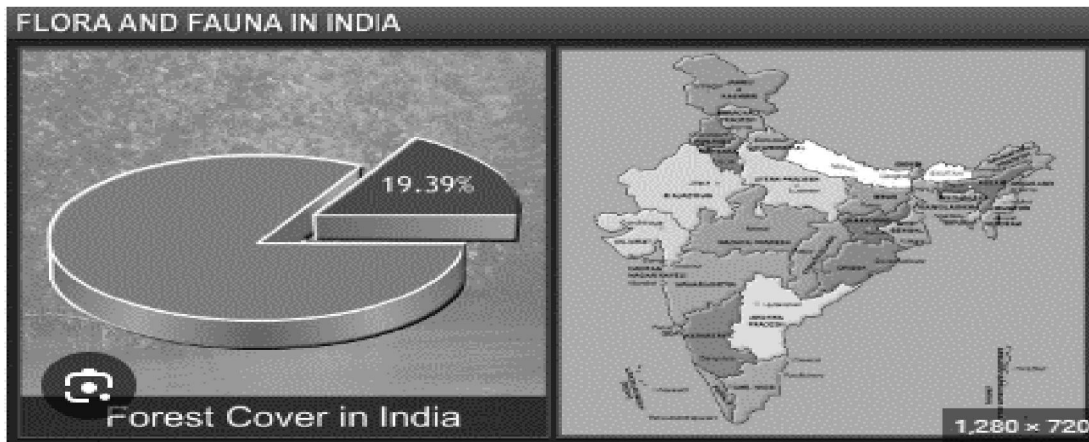


Figure 1.1: flora and fauna by shiving in map or percentage

II. ETHNOBOTANY

In the distant past, people living on this planet would have gone hunting in the woods in order to satisfy their need for food. This yearning and wandering for plant material such as bark and leaves to protect one from dangerous climatic conditions led to the formation of both the discipline of ethnobotany and the practice of field study. A new multidisciplinary field of study known as "Ethnobotany" came into being as a result of the interaction between plants and the indigenous peoples of the planet. Although in the past many other titles such as aboriginal botany, anthrobotany, anthropological botany, botanical anthropology, and phytoanthropology were also used, the term "ethnobotany" has gained widespread acceptance and is now the most commonly used term. By looking at the definitions or focusing on the subject, one may gain an understanding of the significance of ethnobotanical studies and the applications they have.

Since the beginning of their species, humans have relied heavily on plants for food and other necessities of life. Since the dawn of civilization, people have relied heavily on palms and cane as a significant category of plants, mostly for the purpose of providing for their nutrition. Different sections of palms and canes have been employed in a significant manner, in addition to their usage as food and fodder, as materials for the construction of houses, as hunting and fishing

implements, and as weapons of war. They are also utilized for the purpose of treating and warding off a variety of diseases that can affect humans as well as domestic animals. Even the prehistoric man felt the urge to get relief from the different physiological discomforts they experienced via the use of plant remedies. Since the beginning of human civilization, several healing practises have emerged that are mostly derived from the use of plants. Ayurveda, Homoeopathy, Siddha, and Unani are only few of the ancient medical practices that have been created in India by various groups of people throughout the centuries. More over three quarters of the world's population continued to get their main medical treatment from this plant-based traditional medical system. Since 5000 B.C., people in India have been using palms for medical purposes. This practise is said to have originated in the country. Palms are also the raw material from which many processed foods and commodities are derived. The progression of civilisation has brought with it an increase in the frequency with which society must contend with the emergence of new disease-causing organisms. In order to deal with conditions like this, several more formulations or drugs are required.

2.1 Scope of Ethno botany in the Silvaasa

Ethnobotany, which is defined as the study of the relationship between plants and people, is an intriguing field that unravels the complex web of ways in which humans have interacted with the plant kingdom. This goes beyond merely compiling a list of plant species to investigate the in-depth relationships that exist between different cultures and their respective natural environments. One of the most important aspects of ethnobotany is the practice of compiling a list of the various ways in which plants have traditionally been used, which can range from providing sustenance in the form of food and medicinal practices to serving more practical purposes such as serving as building materials. When they do so, ethnobotanists reveal the extraordinary breadth of human knowledge regarding the characteristics and applications of plants, knowledge that has been handed down from generation to generation. This academic field serves as a link between the past and the present, shedding light on the ways in which our ancestors manipulated the natural world to fulfill their requirements and provide for themselves.

In addition, ethnobotany acknowledges that plants are not only commodities but are also stores of cultural importance in their own communities. Every plant has a history, is associated with a myth, and is used in different kinds of ceremonies and rituals. In conventional botanical research, the symbolic and spiritual dimensions of plants are frequently ignored; however, ethnobotanists investigate the cultural narratives that surround plants in order to uncover these aspects. This facet of ethnobotany highlights the significant influence that plants play in the formation of the cultural identities and traditions of cultures all over the world.

III. METHODOLOGY

The present investigation was conducted from Silvassa region of India. Information about the use of plants was collected from the tribals. A questionnaire was prepared to collect information. Devotees or Vaidyas were interviewed and questionnaires were filled. Information about native medicinal plants growing in the natural habitats of Silvassa was collected. Also samples of plant species were collected and photographs of each plant were taken for easy identification. Plant species were identified with the help of flora and keys. Information regarding botanical name, family name, local name, habit, part used, disease, method of preparation and availability was recorded.

IV. RESULTS AND DISCUSSION

Experimental studies were used to determine an estimate of the effect that anthropogenic activities related to tourism and pilgrimages have had on the physicochemical qualities of the soil in BONTA FOREST. The data were gathered during two distinct seasons, notably after and before the monsoon, from two distinct regions that were distinguished as disturbed and undisturbed, located in pilgrimage and tourism areas respectively. The pH measurements revealed that all of the samples, at all of the locations, during both seasons, showed a similar tendency toward an acidic character. In the pilgrimage zones, the pH ranges from 4.89 in undisturbed areas during the post-monsoon season to 5.47 in disturbed areas during the pre-monsoon season. During our time in the tourism zones, the pH varied from 5.004 in disturbed areas during the post-monsoon season to 6.52 in undisturbed areas during the pre-monsoon season. The pH values of the samples taken before the start of the monsoon season were much higher than those taken at any other time. In contrast to the tourist areas, the pilgrimage areas had a pH that was slightly on the acidic side. The results of two separate t-tests

on sample data showed that during the post-monsoon season, the pH values in pilgrimage and tourism zones were significantly different from one another. According to the findings of a paired sample t test, each of the four locations that were put through the test had a substantial shift in pH levels as the seasons changed.

The relationship between the soil and the vegetation is symbiotic in nature. On the one hand, the soil provides the nutrients, moisture, and anchorage that the vegetation needs in order to grow successfully. Then again, the vegetation gives a defensive cover to the dirt, assists with forestalling soil disintegration, and adds to the upkeep of soil supplements through the gathering of litter and its resulting decay (supplement cycling). Thus, the connection between the dirt and the vegetation is advantageous, implying that they impact each other in equivalent measure. The effects of pilgrimage and tourism disturbances on the physicochemical qualities of soil were investigated in this study. The research was carried out across a number of various seasons.

According to Ma et al. (2014), one of the most important soil properties is its pH level, which is a measure of the soil's acidity or alkalinity and determines how readily available nutrients are. In the current investigation, the pH of each of the samples was found to be in the acidic range, despite neither the location nor the time of year. Both the disturbed and the undisturbed zones of the pilgrimage revealed substantial differences in their pH values during the post-monsoon season. This indicated that the monsoon had an effect on the forest soil pH. According to Shilpkar et al.'s research from 2010, the soil in tropical forests typically has an acidic pH because of the large levels of decaying organic matter and root respiration that release a great deal of carbon dioxide. The pH values also fluctuate greatly depending on location, and it's possible that this is because of the anthropogenic influences. According to research carried out by Schoenholtz et al. (2000), the anthropogenic pressure placed on the forest led to a shift in the pH level of the soil.

Electrical Conductivity (EC) values were found to be at their maximum during the post-monsoon season in pilgrimage disturbed zones as opposed to tourism undisturbed zones. According to a number of studies, soils that have a high concentration of organic matter (humus) have a significantly greater capacity to hold on to positively charged ions than soils that do not have these elements. According to Triantafilis et al.'s research from 2002, the presence of these ions in the pores of the soil that are filled with water will increase soil EC. During the post-monsoon season, the current study found a high level of organic carbon and organic matter both in areas that had been affected by pilgrimage and in areas that had not been disturbed by tourism. It's possible that the high organic carbon content in such places is to blame for the high EC readings there.

According to Schoenholtz et al. (2000), an excessive amount of electrical conductivity in the soil can cause damage to a plant's root system and interfere with the plant's ability to absorb nutrients and water. In the pilgrimage affected zone, the principal component analysis (PCA) revealed a substantial association between the elemental carbon content and the nutrients. According to research conducted by Triantafilis et al. in 2002, high amounts of organic matter (humus) in the soil pores elevated soil EC, which in turn increased the availability of nutrients in the soil. PCA in tourism untouched zone likewise demonstrated association between EC with OC and other nutrients, and as a result, the linkage was evidently confirmed in the current study as well.

V. CONCLUSION

The results of a comparative study on the quality of the soil in each of the four zones that were selected over both seasons showed an acidic pH. It was noticed as a general phenomenon in the soil of tropical forests, where decomposing organic matter and root respiration dissolved a large amount of the carbon dioxide that was formed from them into the soil water to form a weak organic acid. This, in turn, resulted in an acidic pH for the soil. Electrical conductivity gave greatest results in the pilgrimage disturbed zone and tourist undisturbed zone, both of which have been shown to have large levels of organic matter. The breakdown of OC will result in the release of more ions into the soil pores, which will ultimately lead to an increase in the EC of the soil. An examination of the unaffected by tourism zones using principal component analysis revealed a link between OC and EC. Organic carbon and available nutrients like nitrogen, phosphorous, and potassium gave high values in the pilgrimage disturbed zone when compared to the undisturbed zone. This indicates the direct influence of nutrient pollution that is occurring as a result of organic pollutants generated as part of the Sabarimala pilgrimage.

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