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INSTITUTIONAL HISTORY OF COLONIAL FORESTRY: A HISTORY OF FOREST SCHOOL

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ABSTRACT

The nature of Environmental History of India offers a wide range of fluidity to reveal the untouched narratives. The study primarily sheds light on the evolution of Scientific Forestry Education in India and touches on the domain of Institutional History. The paper is primarily divided into three sections. The first section discusses various fundamental works of Environmental History and examines the different environmental frameworks. The second section provides an insight into the trajectory of Ranger school and its significance in establishing the Forestry Education mechanism in Colonial India. The last section carefully provides a conclusion and aims to place the School in the Intellectual Framework of Scientific Forestry in India.

KEYWORDS: *Environment, Education, Forestry, Ranger School, Desiccationism.*

INTRODUCTION

The twentieth century in the global context marked a special meaning in terms of decolonisation, advent of post modernism and re-emergence of massive climatic and ecological consciousness; the new intellectual currents exposed the socio-economic forces at play. The world at the arrival of the second half of the century had witnessed massive human outrage and catastrophe, meanwhile the decolonisation of large territories posed new challenges to the new nations. Innovative questions based on the legitimacy of world systems were being asked, and academia was looking at deeper levels of solutions for societal problems. The academic shift in history writing, at this point, was an inevitable phenomenon; it is in this light that the Environmental History in India took its shape. It would be an inaccurate presumption to accept the paucity of any environmental history writing

being done before the 1970's; though the Environmental History as an academic discipline developed only after the 1970's. The arrival of this period marked wide creative fusions and in this light many disciplines were merging to provide accurate accounts of social reality. The social memory of different cultures and societies were being documented to provide answers to the missing links in knowledge. The Modern Environmental History which is relatively new in India attempts to narrate the various accounts on environmental theme, which are commonly related to Irrigation, Soil management, agro-ecology, forest management, ethno botany, eco feminism, etc. The lack of historical accounts on the environmental changes and its impact on the Human society were the reasons for the rise of Environmental History.

In the Hills of Uttarakhand when the Chipko movement began in 1973, it acted as the catalyst in the Indian History writing. The Chipko movement was the first ecological movement of India which gained the attention of a global audience for the display of ecological consciousness and non violent techniques of protest. The movement was a Jan Andolan (People's Movement), as it had local peasants including a large sum of women as active participants. The movement was a shout against the cutting of trees by private contractors in the fragile Himalayas. The people sung the chipko song¹ which spoke explicitly about the exploitative Forest laws. The people poured their voices to save their priceless hills and its ecology from the disasters of nature; it was not just an ecological movement but an expression of outrage against the misuse of forests and misuse of privilege. The movement successfully gained the attention of environmentalists, historians, sociologists and many known journalists. The most prominent question which emerged was about the forest policies and its implications both in retrospect and in current times. The roots of scientific forestry were being traced to unearth the flaws in the forest management system. The Historians of Modern Indian Historiography took upon themselves to uncover the history of Scientific Forestry in Colonial India, to disclose the motives of Colonial Government.

The path breaking work by Ramchandra Guha in 1980's laid the foundation of Modern environmental history in India.² His works opened the doors to many new questions which revolved around the nature and motives of Colonial Scientific Forestry. According to Guha the British government introduced Scientific Forestry and monopolized the forests to create a massive surplus for monetary gains and imperial expansion. The Imperial Government endorsed the restriction on forest use by indigenous people and destroyed the traditionally communal forest management practices, thus shattering the indigenous systems of ecological management. He also highlighted the Forest Law in both pre and post independent India and drew comparisons between the two periods; he declared them both to be identical and exploitative in nature.³ The forests were not merely a source of resources, but a method to dictate or to rule the indigenous people by means of restrictive laws. Guha's work represented a model which showcased Marxist relationship of man with nature and British Forces acting as the agent, which alienated the man from its environment or his means of production. He traced the roots of ecological destruction in independent India to the commercialized forestry in the Colonial era.

Gradually many important works on new themes poured in. An important study by Jayanta Bandhyopadhyay and Vandana Shiva unveiled the emergence of ecological movements in relation to the advent of commercialized

¹ Shiva, Vandana, & Mies, Maria. *Ecofeminism*. Bloomsbury Academic, United Kingdom, 2014, pp.246.

² Guha, Ramachandra. "Scientific Forestry and Social Change in Uttarakhand." *Economic and Political Weekly*, vol. 20, no. 45/47, 1985, pp. 1939–52, <http://www.jstor.org/stable/4375015>. Guha, Ramachandra. "Forestry in British and Post-British India: A Historical Analysis." *Economic and Political Weekly*, vol. 18, no. 44, 1983, pp. 1882–96, <http://www.jstor.org/stable/4372653>. Guha, Ramachandra. *The Unquiet Woods: Ecological Change and Peasant Resistance in the Himalaya*. Oxford University Press, Delhi, 1989.

³ Guha, Ramachandra. "Forestry in British and Post-British India: A Historical Analysis." *Economic and Political Weekly*, vol. 18, no. 45/46, 1983, pp. 1940–47, <http://www.jstor.org/stable/4372677>.

economy in the modern era. The work highlights the presence of traditional ecological sense amongst various societies; it diligently covers the issue of economic class struggle in the urban- industrial society. The argument talks about the survival of microeconomics in the dominant market based economy and puts across the view that ecological movements are people's response for their survival and preservation of their life support systems.⁴ Vandana Shiva has been vastly vocal about the importance of indigenous agroecology and sustainable food systems. In her globally acknowledged work on Eco- feminism, she has thrown light on the role of women in regulating the traditional ecological systems. According to Shiva women are the custodian of biodiversity, they preserve traditional knowledge through practice, and this crucial role has been vastly ignored by 'progressive' market favoring economies.⁵

Similarly an enticing study by Neeladri Bhattacharya unearthed the implications of colonial rule on the pastoralists of the Northern region of the subcontinent. Bhattacharya's work introduced the various pastoral communities and their traditional sustenance patterns. His work shed light on the British intervention in the forests and grazing lands through stringent legal mechanisms and its deep impact on the survival of this fragile system. The colonial government's boost on the agrarian economy and land acquisition through strict bans, further affected the migration patterns. The neglect of colonial consideration to the pastoral life systems had various economic and social effects; the communities were even ridiculed for their demeanor and lifestyles.⁶

Another important study by Dhirendra Datt Dangwal highlighted the implications of scientific forestry in the U.P. Hills region. He has put forward the argument that the commercial forestry in the Hilly terrain introduced several changes in the ecological setup which in return drastically affected the hill agriculture.⁷ Dangwal has underlined the increased demands on agricultural production by the British Government in the nineteenth and twentieth century and its further deteriorating condition due to the restriction on use of common lands for traditional use.⁸ The restriction on use of common lands alienated the indigenous population from utilizing the lands for fuel, fodder and other crucial raw material, which majorly impacted the traditional agricultural pattern.

Similarly, Atluri Murali's study attempted to highlight the mutually coexisting system of agriculture, pastoralism and forest in the pre- colonial Andhra. Murali mentions the imbibed ecological sustenance in the traditional system of religion, culture and political regime which was disturbed under the colonial 'scientific' rule. He stressed on the various imperial methods of exclusion which created unrest amongst the regional masses. The restriction on the communal use of forests and imposition of heavy dues on the people ultimately gave rise to popular discontent in the form of peasant and tribal movements in 1920's.⁹

An important representation of traditional conservation forest systems were highlighted through the study of Sacred Groves in various parts of India. Sacred Grooves were those forests in India which were maintained through various religious and cultural institutions. Madhav Gadgil in 1975 wrote an article on the Sacred Grooves

⁴ Bandyopadhyay, Jayanta, and Vandana Shiva. "Political Economy of Ecology Movements." *Economic and Political Weekly*, vol. 23, no. 24, 1988, pp. 1223–32, <http://www.jstor.org/stable/4378609>.

⁵ Shiva, *Ecofeminism*. Op.cit., pp. 164.

⁶ Bhattacharya, Neeladri. "Pastoralists in a Colonial World." *Nature, Culture, Imperialism: Essays on the Environmental History of South Asia*, Arnold, David. & Guha, Ramchandra. (eds), Oxford University Press, Delhi, 1995, pp.49- 85.

⁷ Dangwal, Dhirendra, Dutt. "Forests, farms and peasants: Agrarian economy and ecological change in the U.P. hills 1815-1947." *Studies in History*, Vol. 14, No,2, July- December, pp.349-371.

⁸ Ibid., pp.349-371.

⁹ Murali, Atluri. "Whose trees? Forest Practices and Local Communities in Andhra, 1600- 1922*." *Nature, Culture, Imperialism: Essays on the Environmental History Of South Asia*, Arnold, David. & Guha, Ramchandra. (eds), Oxford University Press, Delhi, 1995, pp.86-122.

of Maharashtra region, he pointed out the prevalence of well conserved forest patches which exhibited climax vegetation, thus signaling the successful survival of these forests.¹⁰ The author highlighted the importance of these crucial forest pockets as a repository of traditional medicines and herbs. According to Gadgil, these forests promoted preservation of biological diversity. These Sacred forests were closely tied to the surrounding communities who associated these forests with various Taboos and religious beliefs. Nanditha Krishnan has also worked on the importance of Sacred Groves in the conservation of various biological species and economic systems. She has judiciously illuminated the changing perception of forests in the various periods of time and space. Her study traces the existence of sacred groves in the ancient times, in the form of tapovana and brings to attention the latest figures on the existing grooves in various parts of India while also pointing out the presence of precious plant species in these regions.¹¹

In retrospection we observe that based on the two decades of historical accounts on environmental history two models emerge in the Picture. The two models highlight narratives from different angles using various sources in different time periods. The historians of modern environmental history do not agree on the motivations and implications of the British Forest Policy. In Modern Indian History we have encountered two models which have tried to unearth the pattern of Colonial Action in the ecological context. The first model is the Guha- Gadgil model and another is Grove model, both models provide rigorous arguments from their suitable angles. Guha-Gadgil Model of environmental history supports the existence of a strong conservation and prudent ecological sense amongst the indigenous masses of the subcontinent and the destruction of pre-existing traditional conservation institutions by colonial governance. The model supports the view that the Colonial Scientific Actions and policy making was solely driven by commercial and materialistic interests. The advent of British Forces was seen as the Watershed moment by these historians.¹²

The second model was presented by Richard Grove in 1994 in his brilliant and challenging study, in which he made an ambitious attempt to provide a glimpse on the genesis of the scientific network in the early colonial expansion. Taking away the attention from the European center he focused on the emergence of Scientific Conservation attitudes or Concerns in the Islands in response to the aggravating environmental destruction and Biological Extinction.¹³ Grove showcases the importance of peripheral scientists in shaping the scientific temperament in the metro pole regarding the evolution of colonial science and environmental context, which later was prudently utilized by the European authorities to promote their environmental agenda. He credits the initial scientific agents who used their position in the peripheral Islands to promote the desiccationist concerns to their respective governments. Drawing the examples of display of Scientific Prudence in St Helena and Mauritius he provided an excellent insight on the generation of Environmental Consciousness in the Periphery rather than the European Metropole.¹⁴

Historian Ravi Rajan in the monumental work on origin and evolution of Continental Scientific Forestry introduced new insight in the understanding of Colonial Forestry and its motivations. The scholar unearthed new resources to illuminate the character of Continental Forestry Education and attempted to take away the attention

¹⁰ Gadgil, Madhav & Vartak, V.,D. "Sacred groves of India- a plea for continued conservation." *Journal of the Bombay Natural History Society*, No. 72 (2), pp. 314-320.

¹¹ Krishna, Nanditha. "Ancient Forests and Sacred Grooves." *Critical Themes in Environmental History of India*, Chakrabarti, Ranjan (eds), Sage Publications, New Delhi, 2020.

¹² Gadgil, Madhav and Guha Ramchandra. *This fissured land: An Ecological History of India*. Oxford Publications, India, 1993.

¹³ Grove, Richard, H. *Green Imperialism: Colonial Expansion, Tropical Island Edens and the Origins of Environmentalism, 1600-1860*. Cambridge University Press, Indian Reprint, Foundations Books, Delhi, pp. 478

¹⁴ *Ibid.*, pp. 485.

from the generic debate on Colonial state motivations and provide a separate stature to Forestry Science in reshaping the State Attitudes. By primarily uncovering the roots of Continental Forestry in France and Germany, Rajan craftily reconnects the Scientific Forestry tradition infused by the British Government throughout its Empire.¹⁵ The study creates an enticing account on the Science of Forestry as an independent entity transcending continental borders through the diffusion of scientific culture in the entire British Empire.

In an attempt to captivate the Globalized History of Forestry in the British Empire Gregory Allen Barton traces the origin of environmentalism as an intellectual layer in global context. He introduces the origin and expansion of professional forest machinery throughout the British Empire, which gradually by the 20th century almost covered the entire globe. Using official data to uncover the extent of Empire Forestry, Barton mapped out the forest history from introduction of Dalhousie's Charter to the post Second World War world. He places the origin of environmentalism in the strokes of British Imperialism which formulated a space for dexterous forest management.¹⁶

Meanwhile, Richard Drayton's work on Kew Garden is an enticing study in the domain of Institutional History. His work paints the history of the British Empire from a new angle of Nature, presumed as vastly abundant in 'precious elixir', and the role it plays in fetching the empire with a garden like Eden, both economically and aesthetically. The work starts by describing the origin of Botanical Garden tradition under the influence of religious desire for search of Eden or 'Paradise' for the improvement of mankind. Similarly, he places the Kew Garden at the center of his thesis and points out its major role in being the Empire's primary repository for Botanical resources and its function in justifying the Colonial Acquisition. By tracing the history of scientific men, Drayton provides an insight into the world of plant knowledge and Kew's vital position in shaping the Botanical network of the world.¹⁷

The Studies in historical writing further moved into unexplored domains of environmental questions. The post structural paradigm in history under the Foucauldian influence posed new insight to the environmental viewpoint. It helped to understand the multiplicity of various narratives in history. The primary focal point in these studies was to capture the various processes at play rather than viewing history as an event. Mahesh Rangarajan in his celebrated study on the Forest management in the Central province region provided an insight on various methods of restrictions imposed on the forest usage by the rural population. Rangarajan highlights the evolving political strategy of the forest service in the central province in relation to the goal of land acquisition, thus breaking away from the 'watershed moment' of environmental history.¹⁸ There were variations in the power ownership in different topographical contexts, the distorted and diverse forest policies on fire protection were an example of existing parallel realities.¹⁹ Sivramkrishnan's study on Forestry in Colonial Bengal draws attention to contextual governance in various regions, where the power dynamics were determined by an assortment of regional factors

¹⁵ Rajan, Ravi, S. *Modernising Nature: Forestry and Imperial Eco- Development 1800-1950*. Orient Longman, New Delhi, 2006.

¹⁶ Barton, Gregory. A. *Empire Forestry and Origin of Environmentalism*. Cambridge University Press, Cambridge, 2002.

¹⁷ Drayton, Richard. *Nature's Government: Science Imperial Britain, and the "Improvement" of the world*. Orient Longman, New Delhi, 2005.

¹⁸ Rangarajan, Mahesh. "Production, Desiccation and Forest Management in the Central Provinces 1850- 1930." *Nature in Orient*, Grove, Richard, H., Damodaran, Vinita, & Sangwan, Satpal (eds), Oxford University Press, pp.596- 635.

¹⁹ Rangarajan, Mahesh. "Polity, Ecology and Landscape: New Writings on South Asia's Past." *Studies in History*, vol. 18, no. 1, Feb. 2002, pp. 135–147, doi: 10.1177/025764300201800107.

at play, making the forest governance full of internal contradictions, additionally the co-management of forests and shifting land ownership was an interesting feature.²⁰

The studies on colonial science have made major strides on global history, the center- periphery origin has been the focal point for debates in colonial science. Satpal Sangwan's critical study on colonial science takes away the attention from the geographical perspectives to cultural context of colonial science by throwing light on the scientific endeavors of scientists at the periphery. His argument supports the grant of equal stature to colonial science at the periphery, which was in matured stages an epitome of contextual environmental brilliance.²¹ He shed light on the process of scientific development in the colony, which initially under the Baconian impact promoted exploration and collection of natural history specimens to the Linnaean phase which focused on classification of various species.²² The work focuses on the process of professional knowledge assimilation by scientific minds at periphery in the nineteenth century context, which challenges the linear view on the motives of colonial science.

Sumit Guha in fresh insight through the ethnographic lens provided an interesting take on the Tribal 'characteristics' or 'patterns' defined in prior narratives. His work sheds light on the display of fluidity and engagement of forest tribes in the active political dynamics of their respective regions, throughout various temporal contexts. The fresh view on the social engagement of forest communities sustaining in symbiosis with the peasant groups breaks the outlook on 'tribal isolation', additionally he illuminates the shifting ecological practices of communities in differing times for economic turnover and survival. The geographical extent of Guha's study ambitiously uncovers the social and economic transitions showcased of various forest communities and their formation of Internal Hierarchies in a vast time period ranging from 1200- 1991.²³

The study by Akay Skaria on the Dangs of Western India in the Colonial period generated an interpretation on Ethnocentrism. He has focused his perspective around the concept of Wilderness or being 'jungali' by identifying the political standings of Dang Community.²⁴ He questions the basic presumptions of mainstream narratives of Jungle Harmony present in Forest Tribes. In his work, Skaria aimed to bring out the crucial political role played by the Dangs in the Post- Mughal decline. He urges the readers to re-question the decline debate and understand the politics of state-making from the lens of Wilderness, which had its own methods of creating power supremacy in the different time and context. The study also examines the position of 'Tribe' in Colonial Context, which later paradoxically represented both exotic imagery and uncivilized savagery.

Another scholar of vigor, Arun Agarwal attempted to rewrite the history of Kumaon Hills through a new lens of curiosity. Taking away the attention from works of traditional ecological prudence and eco- feminist derivations, he presents new narrative on innate Ecological understanding of Communities. Using a wide range of sources and methodology he attempted to showcase the changing Political Ecology in the 20th Century and evolving response and consciousness of the communities and villages to the governing ethos, which often were determined by varying factors. His work is an important historical account under the postmodernist currents, which captures the

²⁰ Sivaramakrishnan, Kalyanakrishnan. *Modern Forests: Statemaking and Environmental change in Colonial Eastern India*. Stanford University Press, California, 1999.

²¹ Sangwan, Satpal. "From Gentlemen Amateurs to Professionals: Reassessing the Natural Science Tradition in Colonial India 1780-1840." Grove, Richard, H., Damodaran, Vinita, & Sangwan, Satpal (eds) *Nature and Orient*, Oxford University Press, pp.,210- 236.

²² *Ibid.*, pp. 210- 236.

²³ Guha, Sumit. *Environment and Ethnicity in India 1200-1991*. Cambridge University Press, Cambridge, 2006.

²⁴ Skaria, Ajay. *Hybrid Histories: Forests, Frontiers and Wildness in Western India*. Oxford University Press, New Delhi, 1999.

shifting perceptions of the regional community under the decentralized governmental regime. In his analysis, the evolving perceptions held by people towards ecological consciousness get coined as 'Environmentalism'.²⁵

The various works on environmental history have recently mushroomed in a wide range of disciplines. The historical models presented in Modern Indian history gets divided, fused and even overlaps in certain studies. The Guha-Gadgil model favors the traditional ecological prudence in indigenous communities against the British Colonial Professional Forestry; meanwhile Grove model highlights the scientific conservationist ideologies presiding amongst Early East India Company Officials. Both the models have their shortcomings, for instance the former one overlooks the role of class distinction and caste based privileges in control of resources, while the latter one primarily utilizes the Colonial testimonies as sources to justify his claims and missed the evolution of desiccationist discourse.²⁶ Though both the models have their shortcomings, they still do remain classic interpretations. Other than these two popular models we have another important interpretation which views history as a process and not as a watershed. The new model invites environmental narratives from a vast number of academic disciplines; it gives space to new theories and fresh interpretations. Studies by Mahesh Rangarajan, Sumit Guha, Ajay Skaria, etcetera, are some examples which engage topics from wide new angles of History.

Situating Ranger School in the Intellectual Framework of Scientific Forestry

The massive amount of work in the Environmental History of India has touched on a vast number of insightful historical works, especially on the Modern period. We observe that the colossal literature has still left a serious lacuna in various strands of history. One such domain of massive importance is of Institutional History, which has not grabbed much attention. Institutional History holds the potential to bridge the gap in our understanding of Environmental History. The micro analysis of an institution can formulate our understanding about the gaps and overlaps happening in the environmental debate. The nature of Indian history serves a vast number of opportunities to reframe and revise the old narratives using fresh interdisciplinary methods.

After the creation of the Forest Department in India the Colonial Government under the guidance of Sir Dietrich Brandis planned to create a strong bureaucratic base. It was recommended that only a professionally trained staff member had the maximum intellect and patience to manage the Forests. Scientific Forestry was to be infused into the veins of the Empire and in this injection of valuable modern temperament, various Forestry institutions played a significant role. The initial period marked the introduction of European Forestry training for Controlling or Superior staff in Germany and France.²⁷ The scheme was fashioned out by Dietrich Brandis himself; it was precisely introduced to vigilantly launch Continental Forestry in India. Although the continental training for officers was a concrete step in launching Scientific Forest Management, it still was far from being adequate. The department needed a strong network of trained men for handling a wide range of works; it precisely needed Foresters at all official levels working on the same line of scientific principles.

After the inception of the Forest Department, a large number of efforts were drawn to introduce professional training for the executive staff. Vast schemes over time were introduced to formulate a permanent supply of trained Ranger groups, even the enticing venture of introducing theoretical training at Roorkee Engineering College failed tragically.²⁸ Primarily the failures occurred due to the absence of officially designated instructors and infrastructure. It is in this light that a separate Institution for Ranger Training was imagined. The first idea of

²⁵ Agarawal, Arun. *Environmentalism: Technologies of Government and Making of Subjects*. Duke University Press, Durham, 2005.

²⁶ Skaria, Ajay. "Timber Conservancy, Desiccationism and Scientific Forestry: The Dangs 1840's – 1920's." *Nature and Orient*, Oxford University Press, New Delhi, 2000, pp. 597- 635.

²⁷ Brandis, Dietrich. *Forestry in India : Origins & Early Developments*. Natraj Publications, Dehra Dun, 1994, pp. 129.

²⁸ Ribbentrop, Berthold. *Forestry in British India*. Office of the Superintendent Of Government Printing, India, 1900, pp. 233.

Producing a Ranger School was pitched by Sir Richard Temple in 1873, which was meant for the Bengal region.²⁹ The Bengal Ranger School idea did not take root in the system, but it did inspire the department to contemplate a Ranger School. It was lastly under the vision of Sir Dietrich Brandis that a fine proposal was devised to introduce Forestry Education in India for the natives.

The Imperial Forest School was started in 1878 Dehra Dun, as the Central Forest School for the training of Rangers and Foresters in British India.³⁰ The Ranger Training was exclusively created to inculcate natives in the Forest Departmental working. The school was created to produce separate subordinate staff or executive staff for the department. Being the first school of the British Empire the challenges were numerous. This venture was an important opportunity for the natives to enter the British services and gain promotion to the ranks of Controlling Staff.

The Creation of school in the Dehra Dun region invited changes in the systematic management of the region. The Dehra Dun region under the North West Province of British India was demarcated into a separate circle, providing a perfect forest land for practical instruction.³¹ The selection of Dehra Dun for the inception of this important institution was a thoughtfully crafted decision. The Forests around the Dun valley exhibited wide tree species ranging from sal, deodar, oak, pine and fir, which accurately matched the desirable composition.³² Being closely associated with the Forest Institution, the circle of Dehra Dun became a beacon of Systematic Forestry.

The school was set up in the heart of the city with a beautiful campus showcasing lecture halls, Study Lab, Herbarium, Museum and a Hostel. By 1880 school received interested candidates for the training purpose and by the end of the year all were employed in forest Work.³³ The students were considered as the employees of the government and their practical service was reimbursed accordingly. The first theoretical instruction was inaugurated in July 1881 which was attended by two classes of attendees, first had ranger and forester group and second one had Forest Officers.³⁴ The courses were conducted in either English or Hindustani granting at last the certificate of either Ranger or a Forester. The enrolment in the School courses primarily granted candidates with an enticing opportunity to gain foothold in the governmental setup. The school was highly successful in creating the Ranger class of high intellect for the Provincial services.

In July 1881 the data revealed that British India had merely 97 Rangers in the Forest Department for the executive management of the entire subcontinent.³⁵ Therefore the Government strongly suggested that the department produce at least 600 trained Rangers in the next ten years.³⁶ The school was envisioned as the Jonah of Scientific Forestry to build a stringent structure of trained men for the upkeep of the Jungles. Concisely the burden of producing finely trained men was on the shoulders of the school.

The school each year received ambitious students, both private and sponsored. The growth of the school from being a provincial to an Imperial Institution in 1884 was a significant up-scaling event. The June 1884

²⁹ The Forest School at Dehra Dun. *The Indian Forester*. No. 2, Vol. VII, October 1881, pp. 15.

³⁰ Walton, H., G. *The Gazetteer of Dehradun*, Natraj Publishers, Dehra Dun, 2016, pp. 162.

³¹ Walton, H., G., pp. 163.

³² Stebbing, Edward, Percy. *The Forests of India*. Vol. II, Jane Lane, London, 1922, pp. 504.

³³ ORDERS OF GOVERNMENT, Resolution No. 978A. Of 1880, Revenue (Forest) Department, Dated Nainital, 19, October, 1880. Forest Department Library, Lucknow, Uttar Pradesh.

³⁴ OFFICIAL PAPERS. Joint Report on the first course of theoretical instruction at the Central Forest School, Dehra Dun, by D. Brandis, Inspector General of Forests, Major F. Baily, R.E., Director of the Forest School, dated Dehra Dun, the 3rd October 1881, *The Indian Forester*, No. 4, Vol. VII, April 1882.

³⁵ *The Indian Forester*, Oct. 1881, Op.cit., pp. 121.

³⁶ *Ibid.*, pp. 121.

memorandum of the Government transferred the school to the center and granted an additional Imperial fund of 25,000 for the upkeep.³⁷ Due to the display of constant appraisal in the rules, the school evolved into an Exemplary Institution. In 1888, the Government of Ceylon instructed two of their officers to join Imperial Forest School for receiving the important training in Forestry.³⁸

The Imperial Forest School was undoubtedly a successful organ of forestry in British India; the school not only created proficient men but also perfected professional forestry education in India. The Imperial Forest School was often compared to the contemporary schools of greater infrastructure. In 1897 Dietrich Brandis stated that, “One of the most important results of the Dehradun Forest School has been, that several native officers, who had received their professional training at the school, are now being employed on the preparation of working plans for important forests, and that their work compares favorably with the work of Englishmen educated on the continent of Europe or at Cooper’s Hill College”.³⁹ The school was set up with the motive to form an institution which in case of necessity could fill the shoes of Nancy or German schools.

The staff of the school consisted of men of great caliber having compassion for forestry; these men of vigor were the pillars on which the students climbed the bureaucratic ladders. The inclusion of a wide range of Forestry and allied sciences in the curriculum was indicative of the school's commitment towards generating a far-sighted Staff. James Sykes Gamble said in 1886 that, “The Forest School at Dehra is, with the staff that we had the pleasure of meeting in October last, quite able to instruct any men who may be sent to that institution, and it does seem a waste of power that this well manned and well furnished and well housed School should not be utilized to a far greater extent than it now is by the Government. It should, under well considered regulations, be thrown open to the public, and in that case I believe that the School will not only turn out an ample supply of good forest officers for India, but also other parts of the Empire. Australia, New Zealand, the Cape, Mauritius, Egypt even, are all in want of such men, and that Dehra School, with the pine and oak forests of the Himalayas on one side, and the varied forests of the plains on the other, is the place where the widest experience can with the greatest facility be brought to bear on practical forest training”.⁴⁰

The Pioneer figures associated with the School were the founding fathers of Forestry Education in India. To understand their motivations and their contributions we should examine the facts in their respective time and context. The Forest Department had since its birth dabbled between conservation of forests and regular revenue generation. With dual responsibility on shoulders, another issue which rested was of gaining similar stature to other government departments. The lower salaries than other governmental employees were another factor responsible for creating mental unrest amongst the Foresters. Mr. Fisher in 1885 mentioned in the Directorial report of the School that, “ It is evident, however, that the main object of the Dehra Dun Forest School is to train Rangers, and it is hoped that, now that well educated young men are coming forward for these appointments, the proper status of Forest Rangers may be recognized by Civil Officers, and that they may be ranked, by the authority of the Government of India, in the same position, and be treated with the same consideration, as Inspectors of Police and other Public officers drawing similar pay to their own. This far from being the case at present, and the absence of such consideration is a substantial grievance and hinders our obtaining better men for

³⁷ 1. Separation of Forest School from the Circle. ANNUAL PROGRESS REPORT OF FOREST ADMINISTRATION FOR THE YEAR 1884-85 N.W. PROVINCES AND OUDH. SCHOOL CIRCLE. BY MR. W.R. Fisher, B.A., Officiating Conservator of Forests, School Circle. Forest Department Library, Lucknow, Uttar Pradesh.

³⁸ Training of Ceylon Forest Officers. *The Indian Forester*, No. 7, Vol. XIV, July 1888, pp. 321.

³⁹ Brandis, Op.cit., pp. 156.

⁴⁰ The Forest Conference At Dehra Dun, James Sykes Gamble, *The Indian Forester*, No. 12, Vol. XII, December 1886.

the Forest Department, the steady improvement in the revenues of which depends principally on the exertions of the men in charge of the ranges".⁴¹ Similarly in 1886, J.S. Gamble mentioned that the pay of Inspector General of Forests was lower than a District Collector.⁴²

In retrospect the School favorably advocated the needs of Native Forestry Students. The Introduction of the Vernacular Course of Forestry in the 1884 Memorandum was one fine example of the school's flexibility. The vernacular class under the School's wing granted lower certificates to foresters. The course was started especially to train the Foresters who worked on the Forest Frontlines to defend the Empire's Forests from any destruction. Another glimpse of the school's flexibility can be captured in the provision of grant of lower certificate to rangers in case of failure in higher classes.⁴³ The departmental structure even provided further opportunities to gain timely promotions and stature over a certain period of time. These provisions or prospects were fashioned out by the scientific leaders engaged in the School's Board. In simple words the school was an expression of High Scientific temperament carried by the first generation foresters of the Subcontinent.

Another major branch associated with the Forest School was the journal named The Indian Forester. The journal was a standardized platform for the Foresters to discuss and initiate scientific conversations related to forestry and allied sciences. Satpal Sangwan credits the journal for being a baton of Scientific Forestry; he highlights that the journal was indeed the face of people's expression and due to its outreach it was prominent in shaping the Tenets Forest Department in India.⁴⁴ The journal was an important stage for crucial discussions on scientific and bureaucratic matters like the importance of forests in climate change, Local Proprietary Rights, Internal discord amongst Civil and forest administrators, importance of Botany in Forestry Education, etcetera. The lively debate remained ignited through the channel of the journal cautioned the government about the serious issues and thus in return helped to formulate its strategy.

The final promotion of status from being a school to a forestry college in 1906 and later in 1929 into Research Institute clearly states the obvious success the school had. The Research Institute or the Forest Research Institute still holds an important place in the Forestry Education in India. The impact of the school is invaluable in terms of Scientific Forestry Education. Its position is unmatched in the history of the subcontinent, as not only was it the first Forest School of the British Empire it also gave a successful model of a Forest school to the world. Following the example of Imperial Forest School other schools were also made on similar patterns. It was registered that by 1900 the school had granted 360 ranger's certificates and 112 vernacular certificates.⁴⁵ Mere reservation of forests was not the key to the success of the Forest Department, but a strong army of trained men were required to work the forests. By the close of the century the Staff was neatly classified into three levels with different functions on their nomenclatures. This division of staff was the bedrock of scientific forestry in the British Empire, as through these ranks, men of Intellect rose and created a contrasting narrative of Environmental History. Through understanding the History of Ranger School we can trace back the roots of Forestry Education in India. It brings out the new perspectives which remained uncovered in the previously conducted historical works.

Conclusion

⁴¹ The Forest School at Dehra Dun. *The Indian Forester*, No. 10, Vol. XII, October 1886, pp. 449

⁴² *The Indian Forester*, Dec 1886, Op.cit.

⁴³ Memorandum of Conditions for the admission and training of Students at the Forest School, Dehra Dun, dated the 3rd June, 1884, Dehra Dun Forest School. *The Indian Forester*, No. 1, Vol. XI, January 1885, pp. 15

⁴⁴ Sangwan, Satpal. "Making of a popular debate: The Indian Forester and the emerging agenda of state forestry in India, 1875- 1904". *The Indian Economic and Social History Review*, No. 2, Vol. 36, Sage, New Delhi, 1999, pp. 187- 237.

⁴⁵ Stebbing, Edward, Percy. *The Forests of India*. Vol. II, Jane Lane, London, 1922, pp. 507.

In the current context it is no rare occurrence that mass cutting of Forests by Government for infrastructural purposes is taking shape. The relationship between Climate Change and deforestation is now widely exposed and in the digital era this relationship gets more attention than ever.⁴⁶ The intricate balance between development and forest protection had been a topic of serious discussions in the late 20th century. We simply place the roots of forest departmental working principles in the British era. In this framework the position of Ranger School provides an insight into the current function of the Forest Department. The Imperial Forest School reshapes our analysis and brings out the multi faceted picture of complexity at play. The previous studies on Scientific Forestry and its Origin by Richard Groove and Ravi Rajan fail to unearth the history of Ranger School.

The school was opened in British India in 1878, the time when the forest department had just begun to reach the roots of deep dark Jungles. In this context the need of the hour was to create a forest department which could provide a regular source of timber along with the best management plan for its regeneration. Scientific Forestry borrowed from the German and French Forestry was the Department's best shot. Under the pioneers like Dietrich Brandis, Berthold Ribbentrop, William Schilich, Major Bailey, J.S. Gample, etc., the department found its right direction. The school was an important wing of the Forest Department for changing the Face of Indian Forestry. The school created a professional Ranger and Forester class and also housed the Working Class Branch, Indian Forester Journal Head Office and Forest Survey of India. Having strong ties to major departmental branches, the school exceeded the expectations in just a few years. The school ran from 1878-1906 as the Ranger School, which got promoted to Imperial Forest Research Institute and College in 1906.

In the time frame between 1878- 1906 the school regularly created Executive Staff for the Department. It is observed that in this time period the Forestry tenets were primarily focused on managing the forests and creating sustained supply for future use. In 1873, Dietrich Brandis stated that, "the necessity of extensive plantations, and of careful management both of the scanty woods on dry ground, and of more productive forests along the banks of the rivers. These are the future requirements of India in consideration of public measures of his nature. For, after all, if it were not for the benefit of the people of India, there would be no reasonable ground for undertaking the arduous task of preserving and improving its forests".⁴⁷

We locate that the focus on Minor Forest Product and Non Timber goods was made in the later stages. In fact an interesting work by Richard Tucker on the Minor Products found in the Western Himalayas discusses the mutual coexistence of Hill State kings and Colonial Government in matters of Non timber Product sale.⁴⁸ The extreme shift in economic standing of the forest department was reflective of the changes in the political front, especially the First World War.

Another important observation in the current context is the changed ecological composition of the hills. The debate on the Banj Oak versus Chir Pine is a very crucial angle to understand the components of agro- ecology, climatology and Himalayan pedology. Both the species of trees are compatible with the Himalayan soil and climate, but have very different impacts. Chir Pine gained vast popularity after the First World War, when the Pine was found out to be extremely valuable for Resin Production and Railway Infrastructure (sleepers).⁴⁹ Another factor which contributed was the ease in Chir germination and its rapid growth. The ease in germination

⁴⁶ Soutick,Biswas. "Hanging' Glacier broke off to trigger India Flood," *British Broadcasting Corporation*, February 10, 2021, <https://www.bbc.com/news/world-asia-india-56007448>.

⁴⁷ Brandis, *Forestry in India*, Op.cit., pp.30.

⁴⁸ Tucker, Richrad. "Timber Conservancy, Desiccationism and Scientific Forestry: The Dangs 1840's- 1920's." *Nature and Orient*, Grove, Richard, H., Damodaran, Vinita, & Sangwan, Satpal, (eds), Oxford University Press, pp. 459- 483.

⁴⁹ Guha, "Scientific Forestry in Uttarakhand", Op.cit., pp. 1941.

process was unnerving for the surrounding communities and Regional ecology. Having needle-like leaves, the pine was highly unsuitable for grazing purposes. The leaves still cause a massive destruction to the forests, as its leaves do not facilitate grass growth and are highly flammable. The large number of recent articles and publications in this direction are testimonies enough to bring out the long term consequences of Creating Mono-Cultural Forests in Hills.⁵⁰

Having understood the environmental problems in contemporary context the question remains what role the school played in the larger picture of environmental concerns. Formulating an argument on the lines of Ajay Skaria's standpoint, the deeper analysis on the Trajectory of Forest School which stretches from 1878- 1906, shares a glimpse of the Impact of School in creating a base for Scientific Forestry. Skaria while illustrating the Dang history on Forest use brings out the evolving nature of desiccationist discourse under the demand for revenue generation.⁵¹ Similarly through our historical analysis of the School we find that the school was a major contributor in transferring Continental Forestry in India, but also that the Institute's Position as Ranger School was an inevitable phenomenon. In the Nineteenth Century the prime focus of the Institution was to introduce Professional Forestry and keep away from aggressive Commercialization. It was in the twentieth century (1906) that the Institute invited changes in its management and curriculum. The prime motive for the upgrading of the school to a research facility was precisely to aggravate the commercial results of Forestry. The new domain of research was invited into the fold to explore more commercial options in the Forests of India. The Creation of Minor Forest Products Branch, Chemistry Division and making of new post of Forest Economist in the F.R.I. were the steps taken by the Forest Department in the new direction of Commercialization.⁵² It is in this light of process in History that we need to examine the agenda of the Institution.

The major studies surrounding the regional history have rarely presented a monograph on Imperial Forest School. We should also understand that the school was not a singular entity as it worked directly under the Forest department. The school had an impact on the forest department and the department vice versa impacted the working of the school. The mutual impact was coincided by political events which again created ripples in the history of the institution. The Forest Research Institute or the successor institution was highly impacted due to the First and Second World War. The scope of the study limits us to discuss the Forest Research Institution's contribution in shaping Scientific Forestry in the Twentieth Century.

What we need to examine is that the School in its own time period had to observe certain trends of internal discord, extreme revenue targets and adoption of extreme commercialized forestry germinating in its system. We cannot ignore the fact that Dehra School was the first school of the British Empire and Indian Forests had a permanent school, even before England got itself a proper school. As the apostle of scientific forestry the school created history and its historical trajectory showcases the various contemporary intellectual factors at play.

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⁵¹ Skaria, "Timber Conservancy..", Op. cit., pp. 597.

⁵² Forest Research Institute and Colleges, Ministry of Food and Agriculture, Government of India, 1954, National Forest Library and Information Centre, Dehra Dun, Uttarakhand.

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