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# OLS: Is That So Useless for Regression with Categorical Data?

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pp 227–242 | [Cite this chapter](#)

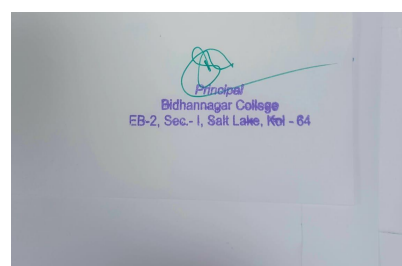
Atanu Biswas, Samarjit Das & Soumyadeep Das 

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## Abstract

Binary/categorical response data abound in many application areas poses a unique problem; OLS-based model may lead to negative estimate for probability of a particular



# SUSTAINABLE MANAGEMENT OF AQUATIC RESOURCES

## PART-II

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## A STUDY ON THE EFFECTS OF ALPHA-CYPERMETHRIN TO FISH, *CYPRINUS CARPIO* (LINNAEUS, 1758)

Suman Bej and Nimal Chandra Saha

### ABSTRACT

The study was done on the acute toxicity of alpha-cypermethrin to fish, *Cyprinus carpio*. The behavioural changes of fish were also recorded during the study. 24, 48, 72 and 96 h LC<sub>50</sub> values of alpha-cypermethrin to *Cyprinus carpio* were 15, 13, 10 and 8 µg/l respectively. A significant variation ( $p < 0.05$ ) between mortality rate of fish and concentrations of the test chemical at all the exposure times (24, 48, 72 and 96 h) was found. The mortality rate of fish at 24h of exposure varied significantly ( $p < 0.05$ ) from the rate of mortality recorded at 72 and 96h of exposures. A dose dependent change in the behaviour of the fish was also recorded at all the exposure times (24, 48, 72 and 96 h).

**Keywords:** Acute toxicity, Alpha-cypermethrin, LC<sub>50</sub>, *Cyprinus carpio*, Behavioural changes

### INTRODUCTION

Alpha-cypermethrin is a synthetic and non-systemic pyrethroid insecticide. It is highly active and acts as contact and stomach poison. As a neurotoxin it acts on the axons in the peripheral and central nervous system by modulating sodium ion channels (Yordanova *et al.*, 2009). Alpha-cypermethrin is widely used in the field of agriculture, forestry, pisciculture and other domestic purposes for controlling different insects (Stephenson *et al.*, 1984; Das and Mukherjee, 2003). After the use of alpha-cypermethrin in the field of agriculture and forestry, it may drift away to the natural aquatic ecosystem through run-off and exert its acute and delayed toxic effects to a variety of organisms (Chamber, 1994; Yordanova *et al.*, 2009; Bej *et al.*, 2015). The fish and aquatic invertebrates are the most effected non-target organisms (WHO, 1992; Gredlich and Pilgner, 2003).

The reports on the acute toxicity of alpha-cypermethrin to fish are scanty. 24h LC<sub>50</sub> values of alpha-cypermethrin to common mirror and silver barb are recorded as 4.50 µg/l and 20.0 µg/l respectively (Girayson *et al.*, 1990). Sarikaya (2009) and Yilmaz *et al.* (2004) found that 96h LC<sub>50</sub> values of alpha-cypermethrin for Nile tilapia and guppies were 1.99 µg/l and 0.43 µg/l respectively. 48h LC<sub>50</sub> value of beta-cypermethrin in male guppies


# RECONCEPTUALIZING TEACHING AND LEARNING

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**ADOLESCENTS STRESS IN EVERYDAY LIFE :  
RETHINKING TEACHERS ROLE**

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ASSISTANT PROFESSOR, BIDHANNAGAR COLLEGE (AFFILIATED TO WEST  
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**ABSTRACT :**

stress is uncertain and unavoidable also. The present study is conducted to know teachers experiences of adolescents stress in everyday life. The objectives of this study is to aware the teachers about adolescents stress and the cause and effects of stress among students. In modern days students are facing various problems and challenges. They experience various stress in day to day life. To solve these problems and challenges teachers can help them by organizing different types of curricular and co curricular activities. This study will help the teachers, parents and students to cope with stress.

**KEYWORDS: Adolescents, Stress**

**INTRODUCTION**

Today stress among people as well as student is constantly increasing. It is one of the major problems that everyone is facing in day to day life. Stress is the main reason of maladjusted pattern of behavior. In the high technology world the academic stress constantly increasing. Due to the increased pressure mental disbalance is generally observed. Stress among students is increasing day by day. At school there is a lot of academic pressure. There are so many responsibilities to fulfill student's studies. They want to get good grade for their better future. Students spend much time at school. So the teachers aware about their behavior, attitude and stressful events. As the teachers aware about their problems so the teacher might help and support them to cope with stress.

*Reconceptual*

**CONCEPT**

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**REVIEW O**

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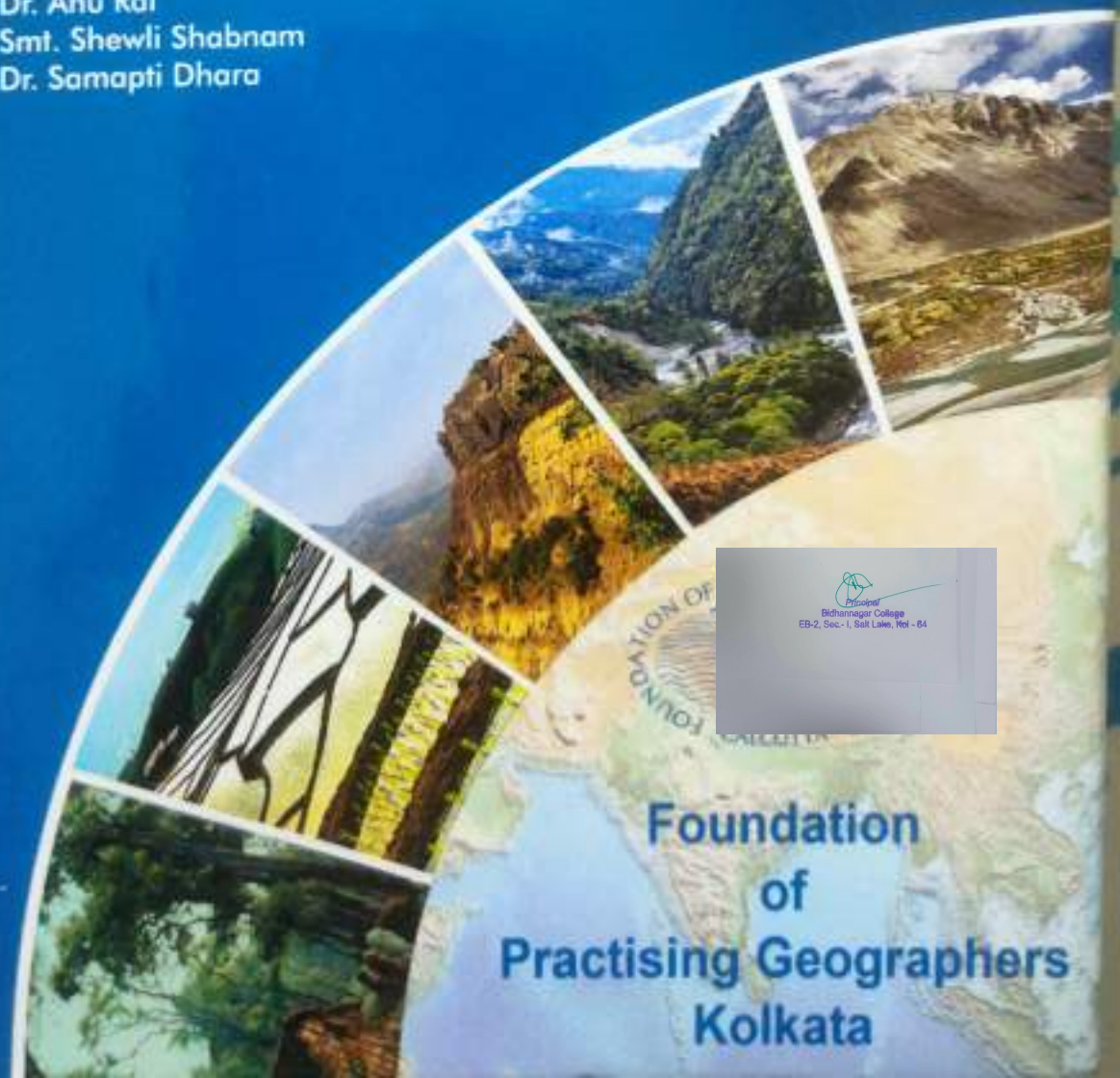
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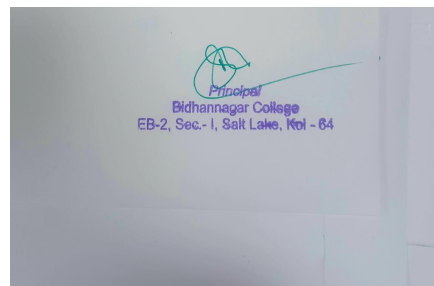
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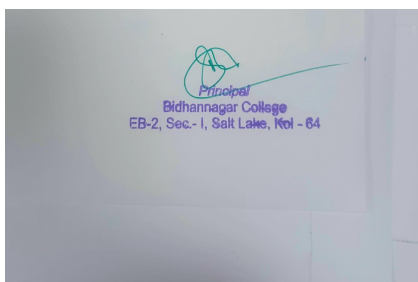
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Sudesna Chanda

# Side Effects of Covid Vaccines Among the Bengali Indian Population

An Anthropological Report

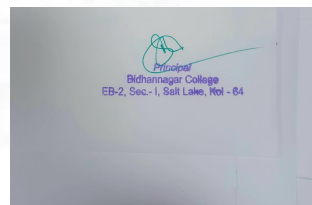


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Vaccines aid in the prevention of illness from incurable conditions by stimulating the body's adaptive immunity. It is therefore quite apparent that the only way to prevent the spread of the disease, saving human life and rescuing global economies in this pandemic time remains to vaccinate people. This is very important to identify the major side effects of these vaccines in human body as the reluctance of people to receive safe and recommended available vaccines are already a growing concern in India. This book is a report of a small-scale research conducted among the adult vaccinated Bengali populations on the basis of the reported nature of their side effects (if any) after vaccination. Different biological parameters were taken into consideration for understanding the nature of relationships of those biological traits with the degree and variations of the side effects. The major concern of the research was to focus on the association of different parameters with the severity and types of side effects of vaccination. This book can be of great use for the upcoming endeavors in the field of Covid 19 research.



Dr Sudesna Chanda is a well known Anthropologist and Assistant Professor of Anthropology in Bidhannagar college, Kolkata, India. Apart from her numerous publications and achievements in the field of Biological Anthropology, she is also the recipient of ISCA Young Scientist Award and President Gold Medal award from the government of India.



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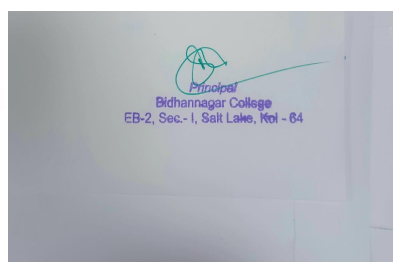
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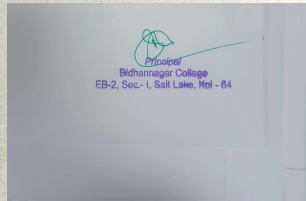
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# *Various Dimensions of* **Women Empowerment in India**

*Edited by*

**Prof. (Dr.) C. B. Bhange**

**Miss. Mamta Jangir, Dr. Niyaz Ahmed Ansari**

**Memoonah Baig**



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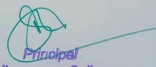
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By  
Ketaki Datta

  
Principal  
Bidhannagar College  
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SAHITYA AKADEMI

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Mauriya in the Land of Hell

Mauriya and the Minister Separam

A Tale of the Dog and the Pig

A Tale of the Wild Hen, Monkey and the Tiger

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4

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## American Transcendentalism and Ralph Waldo Emerson: Transcending Ordinary Boundaries

*Dr. Ketaki Datta*

---

This article posits "Self Reliance" and "Oversoul" by Emerson in the light of his concept of Transcendentalism, which is way different from the run-of-the-mill one. This has nothing to do with any realistic structures but an understanding of Spirituality which remains intertwined with our daily existence. And this unassuming intermingling leads on to a wholesome comprehension of existence itself. This is no religious explanation of existence, no difficult concepts of a newfangled idea, not even a new conceptual twist to an already existing one. But this is creating a bridge between our drab existence and the presence of God in a meaningful way.

### I

#### Concept and Ideology

American Transcendentalism might have remained as an impossible idea locked between the covers of a book or the folds of an unrealistic concept or belief if Ralph Waldo Emerson had not come to think out of the box and add a different dimension to it. We are acquainted with the basic tenets of American Transcendentalism



## CHAPTER - 9

# HISTORY OF RIVERS AND ECOLOGY OF THE TISTA-BRAHMAPUTRA VALLEY

**BHASKAR ROY**

*Assistant Professor, Department of History,  
Bidhannagar College, Salt Lake City, Kolkata  
Government of West Bengal*

### ABSTRACT

*Geographically the river Tista and Brahmaputra were the natural peripheral boundary of the rulers of Kamarupa, Koch Behar and its adjoining areas since early times. The Tista-Brahmaputra valley is bounded in the northern side by the Himalaya. This region stretched in southern side up to the confluence of the Brahmaputra and Karotoya. The Tista and Karotoya were the two rivers stood as the natural boundary of the western part of this region. The Brahmaputra and Baranadi were the eastern boundary of this region since ancient period. The extensive river network system, spreading all over this region is the lifeline of the people of this region. These rivers created extensive well-cultivated plains, the numerous hills and dales, forests and marshes, rising grounds, thick jungles etc. These are the basic geographical features of this land. These versatile environments enrich the ecology of this region which also led a deep impact on the socio-religious history of this geographical division.*

**Keywords:** *Ecology, Tista-Brahmaputra, Ka  
Behar*

The book covers different aspects and facets of river system scientifically studied, analyzed and presented by eminent scholars. Contribution from multiple authors exhibits a deep exposure of various features and characteristics of river with special case analysis of north and north-east Indian rivers. The book not only highlights the physical perspective but also envisages the socio economic approach related to river system. Detailed study and presentation from active research scholars and educationalists, makes this book a valuable asset in the research field of geography, geomorphology, geology, oceanography and hydrology. The book content is also advantageous to the undergraduate, postgraduate students of the same field and competitive exam aspirants.



**Dr Biplab Tripathy** is a well known author, educationalist, currently working as Assistant Professor and Research Co-ordinator in Arunachal University of Studies, Namsai Arunachal Pradesh. As a social scientist he has written a huge number of research papers and articles for leading newspapers and journals. He has contributed his wisdom on composing a valuable book on cultural realm of Khampti Tribe of Arunachal Pradesh. He also authored a book on women empowerment, soil geography.



**Subhechya Raha** is an author, editor and a research scholar of Arunachal University of Studies, Namsai Arunachal Pradesh. She has written numerous research papers and articles for leading newspapers and journals of national and international repute. She has been active both in the field of education and women empowerment research works. She also authored a research book on Khampti Tribe of Arunachal Pradesh along with two more books on women empowerment and soil geography.



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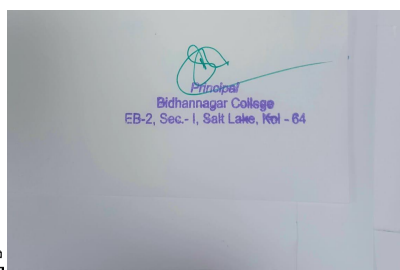
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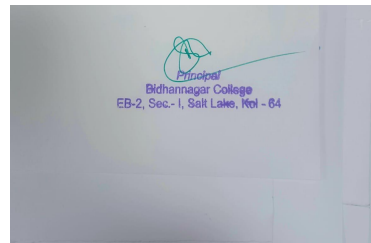
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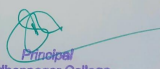


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## কোচনের বাস্তবতাস্থিতিক ইতিহাস আলোচনায় সাহিত্যিক উপাদানসমূহ (আদি মাধ্যম থেকে ব্রিটিশরাজ পর্যন্ত)

অক্ষয় রায়\*

ইংরেজি Etymology শব্দটির প্রথম প্রয়োগ পাওয়া যায় ১৮৩৯ সালে<sup>১</sup> এবং সে সময়ে বাস্তবতাকে জীবিকার একটি শাখা হিসেবে আয়োজন করা হত। তবে সময়ের সাথে সাথে বিপর্যয়িত ভরস ও পরিমি বৃদ্ধি লাগে, অস্বস্তিকর বর্তমান পরিস্থিতির কারণে একটি যত্ন বিদ্যা হিসেবে স্বীকৃতি পেয়েছে। এই নিবন্ধের সিংহভাগ অনুষ্ঠান এখন কোচনের বাস্তবতাস্থিতিক ইতিহাস হেমন সন্নিহিত উপাদান থেকে জানা যায় তা আলাদাভাবে। এই সব ঐতিহাসিক উপাদানগুলির মধ্যে সংস্কৃত সাহিত্য, বৈদেশিক সাহিত্য ও সৌন্দর্যবিত্ত বিশেষ উল্লেখযোগ্য।

কোচ রাজ্যটি হিন্দু-ব্রহ্মপুত্র উপত্যকার একটি নির্দিষ্ট ঐতিহাসিক অঞ্চলে কেন্দ্র করে গড়ে উঠেছিল। তবে এই দুখটি সীমিতকাল থেকেই বহু রাজবংশের উত্থান-পতনের সাক্ষী থেকেছে। ঐতিহাসিক বিবরণের মধ্য দিয়ে অসংখ্য বিভিন্ন নরমও পরিচিত; যথা রাজ্যজোহিহ, কামরা, কামরূপ, কোচ, কোচবিহার ইত্যাদি। এ অঞ্চলে তার অধীন করে এবং ঐভাবে যন্ত্রণিত সে বিদ্যা ঐতিহাসিকভাবে মনে যত্নের থাকলেও বহিঃস্থ চরিত্রপাঠ্যের মাতে 'অস্বস্তিক' একটি প্রাচীন আর্কিভ<sup>২</sup>। এমতাবী প্রত্যয় চক্র চৌধুরী বলেছেন যে, তার আশ্রিতের প্রাক মুর্ত্ত পর্যন্ত এবং প্রাথমিক ও মধ্যযুগীয় মুক্ত পর্যন্ত ইতিহাসের শাক্য-কামরূপ ছিল উৎকর্ষিত বঙ্গনারায়ণ বংশধরীতে এই অঞ্চলের সর্বাপেক্ষা প্রাচীন শাসক হিসেবে বর্তমান, হিতব্রহ্মপুত্র, শাক্যপুত্র এবং ব্রহ্মসুত্র নামক নামক বংশীয় ভারতীয় রাজার নাম পাওয়া যায়।<sup>৩</sup> তবে এসে ঐতিহাসিক সত্যতা নিয়ে মতভেদ রয়েছে। এই নাম বংশের পর তির্যক<sup>৪</sup> বংশীয় শাসকেরা এই এলাকার ক্ষমতায় অধীন হন। এর পরবর্তীকালের শাসক হিসেবে নরম ও তাঁর বংশধর, শূত্রবংশ ইত্যাদি শাসকগণের নাম উল্লেখ পাওয়া যায়।<sup>৫</sup> এরপর একাধিক শাসকের শাসনের সাক্ষী থেকেছে এই এলাকাটি। তবে চতুর্থ শতাব্দীর চিহ্নায়ের পরে ব্রহ্মপুত্র নাম থেকে পশ্চিম করতোয়া নদী পর্যন্ত ক্ষমতায়নের সীমার মধ্যে একটি এক ঐতিহাসিক অধিকার দেখা দেয়। কোচ শাসনের পরে এ অঞ্চলে কোচের রাজত্বকাল শুরু হয়। এই

\* সতেরি অধ্যাপক, প্রাচীন ভারত ও বিশ্ব ইতিহাস বিভাগ, গাজুল কলেজ ও ইতিহাসিক, কলকাতা



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# **A BOOK ON EDUCATIONAL PSYCHOLOGY**

*by: Dr. Sudipta Chakraborty, Suman Atta*



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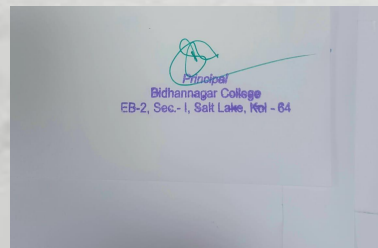


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
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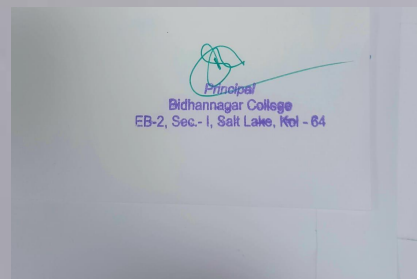
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## Position of Women of the Koch Kingdom during the Colonial Period

Bhaskar Roy

The dynamics of the study on the Koches from the perspectives of their transformation from a tribe to a ruling class, their initiation to *Hinduism*<sup>1</sup> and finally the establishment of a kingdom that stretched from the river Karatoya in the west to the Brahmaputra in the east and from the Himalaya in the north to the coastal region of Tista-Brahmaputra in the south<sup>2</sup>, unfold the reality of the historical phenomena that have been evolving in this secluded northern part of Bengal since long time past. However, it is admitted on all hands that after the establishment of the Koch state, the rulers adopted Hinduism. As said earlier, the rulers were not only Hinduised, but they were very much influenced by the prevailing cults of Tantricism, Saktism, Neo-Vaishnavism. They were also well acquainted with astronomy, astrology, etc.

While talking about the position of women in the Koch kingdom, the statement of Harendra Narayan Chaudhri, the high ranking officer of the state is worth mentioning. He narrates,

*"The women arrange the house, husk paddy, gather and cut fuel, fetch water, prepare the meals, sometimes weave the cloth, do the marketing, wash the clothes, nurse the children, and attend upon sick and invalid, not forgetting all the while the last but not least important function of women generally, namely, gossiping and quarrelling, and speaking ill of neighbour's good things."*<sup>3</sup>

The above statement proves that the women of the Koch state spread their wings of power in all corner of the society. But Gayatri Devi, the Maharani of Jaipur state and daughter of the Koch Bihar ruling family in her autobiography mentioned that the Koch women lived 'almost the medieval lives'.<sup>4</sup> Although the royal women enjoyed some political power, the limited participation of Koch women in polity degraded their position and further lack of goodwill in implementing the state policies to develop

## **Extremophiles: Diversity, Adaptation and Applications**

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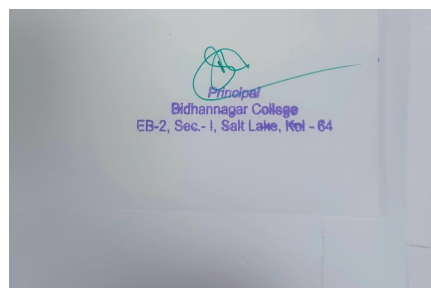
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## Anthropogenic wastes as Nest Materials of Birds and its effect on Birds' Life

Srinjoy Das<sup>1</sup> and Biswatosh Ghosh<sup>2\*</sup>

<sup>1</sup>Basirhat, North 24 Parganas, West Bengal, India;

<sup>2</sup>Department of Zoology, Bidhannagar College, Kolkata, West Bengal, India

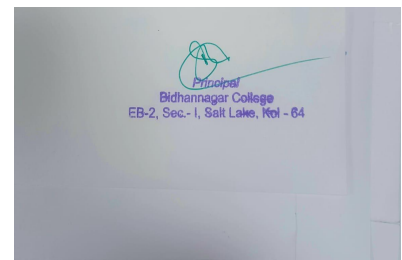
\*Corresponding Author: ghoshbizoo@gmail.com

### Abstract

Every day millions of tons of anthropogenic wastes are produced by human which cause many bad impacts on our ecosystem and biodiversity. Birds are an important part of our biodiversity. As a result, they are also affected by anthropogenic waste pollution. They start using anthropogenic wastes as nest building materials as because of un-scientific urbanization and lack of proper disposal of such wastes. That too causes many harmful effects in birds and as well as affect other animal and human populations. In a recent study, we found different anthropogenic waste materials used by different species of birds like nylon threads, hard plastic, plastic bag, fishing line, medical waste, synthetic cotton, pieces of cloth, bottle caps, plastic straw, pen, different type of plastic rope, plastic strips, balloon, and more interestingly face mask which was regularly used during covid pandemic and also other things.

### Key Words:

Anthropogenic wastes, nest, bird, pollution, ecosystem

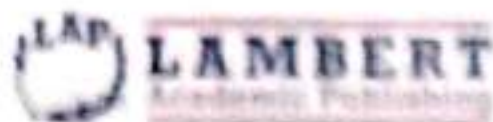
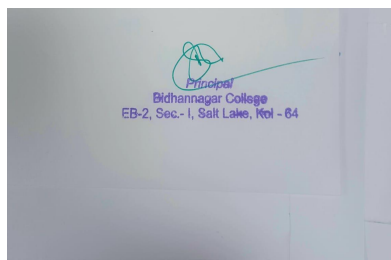




Sudeshna Chanda

# On The Variation of Primates Head Hair

An Insight into Primate Evolution

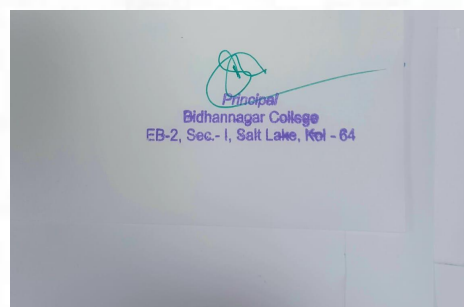




Biological variations are the prime important properties of evolution which through the process of selection shapes the animal body which are generally being considered as signatures for understanding the evolution. Like other organs and parts of animal body, hair has also a range of diversity and the microscopic details of hair strands offer certain definite and variable features as well. These are found to be useful for the purpose of identification. This book contains a doctoral work on some intricate facts of Primates head hair for the partial understanding of species specific variation and Evolution. The present study attempted to understand the variation of some histomorphological and qualitative variables of hair within different species and between different primates Genus and to identify the sexual dimorphisms within different Species. Since Sexual Dimorphism is one of the major features of evolution, sex differences in terms of different histomorphological and quantitative variables might be of basic interest for partial understanding of the evolutionary process.



Dr Sudesna Chanda, the recipient of Young Scientist Award from Indian Science Congress Association is a senior faculty in the post-graduation department of Anthropology, Bidhannagar College, Kolkata, India. Being the life member of Indian anthropological Society, she has contributed in different fields of Biological Anthropological research.



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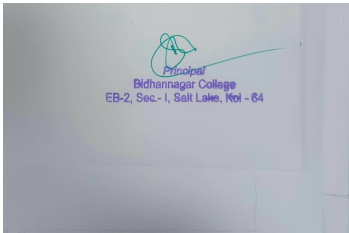
Zugl. / Approved by: In order to understand the evolutionary features and variation within and between head hair of fifteen non-human primate species and human has been taken for the investigation of histomorphological and quantitative variables

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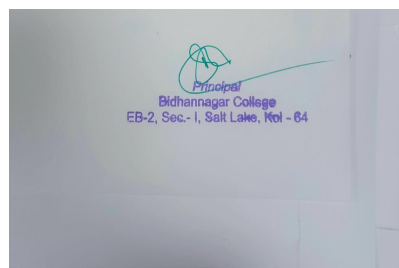
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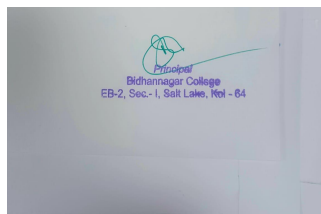
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# Targeting microbial biofilms using genomics-guided drug discovery

*Damayanti Chakravarty*<sup>1</sup>, *Dipabarna Bhattacharya*<sup>2</sup>,  
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## 1. Introduction

Biofilms can be defined as heterogenous assembly of microbial cells confined within a self-produced matrix. It is predicted that almost 80% of bacterial and archaeal cells reside in biofilms (Burmolle et al., 2010). Controlling the growth of biofilms has been one of the most researched avenues over the past few years, as it has been evidenced by numerous workers that the formation of biofilms generally tends to have a negative impact on the industrial, infrastructure, and medical fields. The matrix is made up of microbial biopolymers, which includes proteins, exopolysaccharides, and extracellular DNA, forging a distinct microenvironment (Chiang et al., 2013). Thus, for many microbes (including bacteria and archaea, as well as unicellular eukaryotes such as amoeba, flagellates, diatoms, and unicellular algae), biofilm formation is an adaptive measure that offers them protection from environmental perturbations (Costerton et al., 1995). The occurrence of biofilms is almost ubiquitous, and their expanse varies depending upon the environment in which they survive. They serve a myriad of functions such as ecosystem functioning, biogeochemical cycling, nutrient exchange between communities, and bioremediation in specific cases. Some workers also consider them to be part of the holobiont where they dwell closely with human, animal, and plant hosts. The flip side of this assemblage is that they contribute in addition to 80% to all bacterial infections in various settings, both human and industry (Fuqua et al., 2019). Thus, there is an urgent need to devise agents as well as identify targets, which could prevent the formation of such biofilms in anthropogenic and commercial settings.

