DERABIS COLLEGE

Derabish, Kendrapara, Odisha, 754289

Criterion I

1.3 Curriculum Enrichment

1.3.2 Percentage of students undertaking project work/field work/ internships (Data for the latest completed academic year)

Principal
DERABISH COLLEGE

DERABIS DEGREE COLLEGE

A PROJECT REPORT ON

ABSENTEEISM AMONG COLLEGE STUDENTS

SUBMITTED BY:-

NAME- Rasmita Malik

Roll No- 17010120401800029

YEAR-2019-20

GUIDED BY :-

Sri Gurucharan Sethi (H.O.D)
(Department of Sociology)
Lect. In Sociology

Derabish Degree College, Derabish, Kendrapara- 754289

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- ❖ Chapter-1

  - ➢ Introduction

- ❖ Chapter-11

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  - ➢ Methodology

- ❖ Chapter-iv

  - ➢ Analysis

- ❖ Chapter-v

  - ➢ Findings

CERTIFICATE

This is to certify that the project report entitled "ABSENTEEISM AMONG COLLEGE STUDENS " (With special reference to Derabish College) Submitted to the Department of Sociology for the partial fulfilment of Degree of Bachelors of Arts is a record of original work done by Rasmita Malik bearing Roll No. 17010120401@ 029 during 2019 under the supervision and guidance of Sri Gurucharan Sethi Department of Sociology, Derabish College and it has not formed the award of any Degree/Diploma/Associate ship/Fellowship or other similar title to any University.

Supervisor & Guide

Principal
DERABISH COLLEGE

DELARATION

I, hereby declare that the project work entitled "HERE TEEISM AMONG COLLEGE STUDENT (with special reference to Derabish College) Submitted to Department of Sociology for the partial fulfilment of the of the degree of BACHELOR OF ARTS is a record of original work done by me during 2019 under the supervision and guidance of Sj Gurucharan Sethi H.O.D In Sociology, Derabish College, Derabish.

Place: Derabish

Date: 22.7-2.

Rasmita malik
Signature of the Candidate

Principal
DERABISH COLLEGE

ACKNOWLEDGEMENT

I take this opportunity to acknowledge with great pleasure. deep satisfaction. and gratitude. I convey my profound thanks to the Head of the Department of Sociology.Derabish College for having consented to undertake this project.

My wholehearted and profound thanks is to Sj Gurucharan Sethi. H.O.D & Miss. Pratima Swain, Lect. In Sociology Department Sociology. Derabish College, For their valuable support, worthy guidance encouragement kind co-operation and timely help to complete this research in time.

I extend my sincere thanks to all my department faculties' friends and respondents who helped me to complete this project successfully.

Rasmita Malik
Signature of Student

Principal
DERABISH COLLEGE

INTRODUCTION

By absenteeism we mean, the schedule time off from college occurs when a student is not present at class during a normal scheduled college period. In colleges, frequent unexcused absences are considered to be truancy, and many have substantial legal penalties for both the students and the parents. Frequent absence from college is associated with failing grades, poor performance, and disciplinary problem and long-tem social difficulties. As for students, they should have self aware within themselves about the issue. Being absent is not helping them to achieve their aimed goals in their studies. Occasionally, it shows the students hidden attitude or hidden personality of not fully responsible towards themselves and towards others plus they could be labeled as the type of person which having the disciplinary problems within themselves. In addition, excessive absenteeism may lead to lower performance rate, incur problems in their moral and behavior as they are not having the interest in attending classes in schools or colleges. College has its own number of day's classes. Things could get worst when they could be expelled from the examination or expelled from their college which then will be placed in alternative colleges if they are continuously absent throughout the year. In consequences, they will earn huge losses as they had waste time, money and effort since they had study in college for certain period of time.

One of the most common areas where classroom practices of individual faculty members differ is attendance policy. Some faculty requires attendance. Some faculty count attendance positively in grade determination while others count the lack of attendance against the student's grade. Even most faculty who don't require attendance by their students encourages attendance in variety of ways. Inherently

Principal
DERABISH COLLEGE

DIFFERENT TYPE OF VEGETABLES IN BARIMUL LOCALITY

A project submitted in partial fulfilment of the Degree of

Bachelor of Science

BY

Name of the Student

RANJIT KUMAR SWAIN

Univ. Roll No & Regd. No.
17020102401800054

Under the Guidance of

Dr. DEBABRATA NAYAK
Department of Botany
in partial fulfilment of the Degree of
BACHELOR OF SCIENCE IN BOTANY
(DSE - 4)

Principal
Derabish College, Derabish

DEPARTMENT OF BOTANY

Derabis (Degree) College, Derabis, Kendrapara
Utkal University, Vani Vihar, Bhubaneswar
2017-2020

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Principal

DERABISH COLLEGE

CERTIFICATE

This is to certify that the dissertation entitled "*Different Types of Vegetables in Barimul Locality*" submitted by Arjit Kumar Swain to Utkal University, Bhubaneswar in partial fulfilment of the requirements of Bachelor of Science Degree in the Department of Botany is a original research work carried out by his, under my supervision and guidance. The content of this dissertation in full or in part has not been submitted to any other Institute or University for the award of any Degree or Diploma.

Date:

Place:

HOD,

Department of Botany

Supervisor & Guide

SYNOPSIS

As we know plants and their products are very much useful for living beings. They can be used as edible purposes and other economic uses. Hence here in the project we introduce some of these important plants which are easily available to our locality and have some salient properties by which, most commonly food, identified diseases. Here we represent all the plants individually with their classification, description, uses by which any one can easily identify the plants and will use it as they required.

Principal
DERABISH COLLEGE

METHODOLOGY

In order to know the different uses and other edible purpose of the vegetable plants, we (the students of Botany department) have been visited to different places of Derabis. We have collected different plants from different places and details data about different plants along with it's description, photograph and economic uses and etc. are attached have one by one.

ଦେରାବିଶ ମହାବିଦ୍ୟାଳୟ, ଭେରାବିଶ

ଓଡ଼ିଆ ଭାଷା ଓ ସାହିତ୍ୟ ବିଭାଗ
ସମ୍ମାନ ଶ୍ରେଣୀ ପରୀକ୍ଷା ପରିସମାପ୍ତି ନିମନ୍ତେ

ଟବେକ୍ସାମ୍ବର ନିବନ୍ଧ

ଶିକ୍ଷାବର୍ଷ - ୨୦୧୯ - ୨୦୨୦

ପ୍ରବାଦ ଓ ପ୍ରବଚନରେ ସମାଜ ଜୀବନର ଚିତ୍ର ଆଲୋଚନା କର

ବିଭାଗୀୟ ମୁଖ୍ୟ   ଉପସ୍ଥାପିକା

ଓଡ଼ିଆ ଭାଷା ଓ ସାହିତ୍ୟ ବିଭାଗ   ନାମ - କେବଳା ସାହୁ

ସମ୍ମାନ ଶ୍ରେଣୀ - ଓଡ଼ିଆ

ପଞ୍ଜୀକରଣ ସଂଖ୍ୟା - BA17 -80

ବିଶ୍ୱ ବିଦ୍ୟାଳୟ ପଞ୍ଜୀକରଣ ସଂଖ୍ୟା - ୧୭୦୧୦୬୫୪୫୮୦ 064

ଓଡ଼ିଆ ଭାଷ ଓ ସାହିତ୍ୟ ବିଭାଗ (ସମ୍ମାନ ଶ୍ରେଣୀ)

ଦେରାବିଶ ମହାବିଦ୍ୟାଳୟ, ଦେରାବିଶ

ଖୋର୍ଦ୍ଧା - ୭୫୪୨୮୯

Principal
Derabish College, Derabish

ଓଡ଼ିଆ ଭାଷା ଓ ସାହିତ୍ୟ ବିଭାଗ ସମ୍ମାନ ଶ୍ରେଣୀ

ଡେରାବିଶ ମହାବିଦ୍ୟାଳୟ, ଡେରାବିଶ
କେନ୍ଦ୍ରାପଡ଼ା

ପ୍ରମାଣ ପତ୍ର

ଡେରାବିଶ ମହାବିଦ୍ୟାଳୟର ଓଡ଼ିଆ ଭାଷା ଓ ସାହିତ୍ୟ ବିଭାଗର ସମ୍ମାନ ଶ୍ରେଣୀ ପରୀକ୍ଷାର ପରିସମାପ୍ତି ନିମନ୍ତେ ମୋ ପ୍ରତ୍ୟକ୍ଷ ତତ୍ତ୍ୱାବଧାନରେ "ପ୍ରବାଦ ଓ ପ୍ରବଚନରେ ସମାଜ ଜୀବନର ଚିତ୍ର ଆଲୋଚନା କର" ଶୀର୍ଷକଟି ନିବନ୍ଧଟି ପ୍ରସ୍ତୁତ କରିଛନ୍ତି । ଏହା ତାଙ୍କର ନିଜସ୍ୱ ଗବେଷଣାମୂଳକ ସୃଷ୍ଟି ଚେତନ ଉଜ୍ଜ ନିବନ୍ଧଟି ମୌଳିକ ଚିନ୍ତା ପ୍ରସ୍ତୁତ ଏବଂ ଗବେଷଣାଧର୍ମୀ ମନେ ହୁଏ ।

ଦିଗଦର୍ଶକ

ଧନେଶ୍ୱର ନାୟକ

ତାରିଖ –

DERABISH COLLEGE

ସୂଚୀପତ୍ର

ପ୍ରଥମ ଅଧ୍ୟାୟ :-

ଉପକ୍ରମ

ଦ୍ୱିତୀୟ ଅଧ୍ୟାୟ :-

ସମାଜ ଜୀବନର ଚିତ୍ର

କ. ଭାଗ୍ୟବାଦ ଓ କର୍ମବାଦ   ଖ. ଦାର୍ଶନିକତା

ଗ. ସମାଜର ବିଭିନ୍ନ ବର୍ଗ ଓ

     ନାରୀମାନଙ୍କର ପରିଚୟ

ଘ. ପରକୀୟା ପ୍ରୀତିର ଅସାରତା   ଙ. ପାରିବାରିକ ଚିତ୍ର

ଚ. ବାଣିଜ୍ୟ ଓ ଅର୍ଥନୀତି   ଛ. ସାମାଜିକ ଜୀବନ

ଜ. ସାମାଜିକ ନୀତିନିୟମ   ୟ. ୟଣ ଭଙ୍ଗବାଦ

ଝ. ଭାଗ୍ୟବାଦ ଓ ନୀତିବାଦ   ଟ. ୟଣଭଙ୍ଗବାଦ

ଠ. ସହ୍ କର୍ମବାଦ   ଡ. ଭୌତିକ ବାଦ

ତୃତୀୟ ଅଧ୍ୟାୟ

ଉପସଂହାର

୧ . ପ୍ରବାଦ ଓ ପ୍ରବଚନରେ ସ[.....]ର ଚିତ୍ର ଆଲୋଚନା କର ?

ଉପକ୍ରମ :-

'ପ୍ରବାଦ' ଓ 'ପ୍ରବଚନ' ଶବ୍ଦଦ୍ୱୟ ଓ[.....] ସାହିତ୍ୟରେ ଜାହିଁ , ବିଶ୍ୱର ଯେ କୌଣସି ସାହିତ୍ୟରେ ପରିଦୃଷ୍ଟ ହୋଇଥାଏ । ଇଂରାଜୀ Proverb ଶବ୍ଦର ଓଡ଼ିଆ ଆଭିଧାନିକ ଅର୍ଥ ହେଉଛି 'ପ୍ରବଚନ' । ଏହି Proverb ଶବ ଲାଟିନ୍ Proverbium ଶବ୍ଦରୁ ଆନୀତ । ଯାହାର ଅର୍ଥ ହେଉଛି ଲୋକରେ ବ୍ୟବହୃତ । ତାହା କେବଳ ପ୍ରବଚନ ନାମରେ ନାମିତ ହୋଇପାରେ । ଅନ୍ୟ ଅର୍ଥରେ କହିଲେ ଏହି ପ୍ରବଚନ ବା ପ୍ରକୃଷ୍ଟ ବଚନ ସଦା ସର୍ବଦା ପ୍ରକୃଷ୍ଟ ଭାବରେ ହିଁ ଲୋକସମାଜରେ ବ୍ୟବହୃତ । କେବଳ ଗ୍ରାମୀଣଙ୍କ କ୍ଷେତ୍ରରେ ନୁହେଁ ,ନାଗରିକ ମାନଙ୍କ କ୍ଷେତ୍ରରେ ମଧ୍ୟ ଏହା ସ୍ୱୀକୃତ ଓ ଗ୍ରହଣ ଯୋଗ୍ୟ । ଏ ସମ୍ପର୍କରେ ମତଦେଇ ଡଃ ନଟବର ସାମନ୍ତରାୟ କୁହନ୍ତି —ଜାତି ବା ବ୍ୟକ୍ତି ବିଶେଷର ରଭାର ଅନ୍ତର ପ୍ରଦେଶରୁ କୌଣସି ଚିନ୍ତାଧାରା ନିଃସୃତ ହୋଇ ଯେତେବେଳେ ଲୋକରେ ଜନପ୍ରିୟତା ଅର୍ଜନ କରେ । ଲୋକଙ୍କ ଦ୍ୱାରା ସତ୍ୟ ବୋଲି ଅନୁମୋଦିତ ତଥା ଗୃହିତ ନହେଲେ କୌଣସି ବିଶିଷ୍ଟ ଚିନ୍ତା ପ୍ରବଚନ ପଦବୀରେ ଆରୂଢ଼ ହୋଇନପାରେ । ତେଣୁ ପ୍ରବଚନ ଏକ ନିର୍ଦ୍ଦିଷ୍ଟ ସମୟରେ ଏକ ନିର୍ଦ୍ଦିଷ୍ଟ ବ୍ୟକ୍ତି ବିଶେଷଙ୍କ ବଚନ ହେଲେ ହେଁ ସର୍ବଲୋକଙ୍କଦ୍ୱାରା ଯେତେବେଳେ ବହୁ ଭାବରେ ତାହା ସତ୍ୟ ବୋଲି ଗୃହିତ ହୁଏ ତାହା ପ୍ରବଚନ ନାମ ଧାରଣ କରେ ।

ସେହିପରି ପ୍ରବାଦ ଶବ୍ଦଟି ପ୍ର-ଉପସର୍ଗ + ବାଦ୍ ଶବ୍ଦରୁ ସୃଷ୍ଟି । ଏହାର ଅର୍ଥ ପ୍ରକୃଷ୍ଟ ବିଚାର ମତ ,ବାକ୍ୟ ବା କଥନ । ଜନଶ୍ରୁତି କିମ୍ବଦନ୍ତୀ ଓ ପରମ୍ପରା ଗତ ବାକ୍ୟ ଏହାର ଅନ୍ତର୍ଭୁକ୍ତ ହୋଇଥାଏ । ଏହାର

DERABISH DEGREE COLLEGE

DEPARTMENT OF CHEMISTRY

A PROJECT REPORT ON

"TO STUDY AND CALCULATE THE CONTENT OF ASCORBIC ACID IN CITRUS FRUITS"

THIS PROJECT IS SUBMITTED FOR THE PARTIAL FULLFILMENT OF THE REQUIRMENT

FOR THE 6TH SEMESTER EXAMINATION IN CHEMISTRY FOR THE SESSION 2020-21

SUBMITTED BY:
HARICHANDAN DAS
+3 3RD YEAR SCIENCE (CHEM.HONS)
COLLEGE ROLL NO:-BS-18-015
UNIVERSITY ROLL NO:-1802010340180013

GUIDED BY:- Bikram Kumar Mohanty
(Reader in Chemistry)

Principal
Derabish College, Derabish
Kendrapara

DATE OF SUBMISSION:-14/07/2021

DECLARATION

I Harichandan Das, Hereby declare that the project work entitled " TO STUDY AND CALCULATE THE CONTENT OF ASCORBIC ACID IN CITRUS FRUITS" submitted by me for the partial fulfillment of Bachelor in Science in DERABISH DEGREE COLLEGE, DERABISH in my original work and has not been submitted earlier either to DERABISH DEGREE COLLEGE, Derabish or to any other institution for the fulfillment for any course of study .

I also declare that no chapter of this manuscript whole or in part is interoperated in this project from any earlier work done by others or me.

Signature: Harichandan Das

Place: Derabish

Roll no: 1802010340180013

Date: 14/07/2021

Class: +3 3rd year science

(Chemistry Hons.)

Principal
DERABISH COLLEGE

ACKNOWLEDGEMENT

I take the opportunity to express my feelings and gratitude to those person of premise of eminence whose help and support enable me to complete this work.

I am immensely indebted to Bikram Kumar Mohanty whose constant encouragement and abiding interest have been a continuous source of help and simulation for me throughout the preparation of this report.

Last but not the least my sincere thanks to my friends for their encouragement help and co-operation during the project work.

Principal
DERABISH COLLEGE

HOD CERTIFICATE

This is to certify that Harichandan Das , a student of 3rd year , B.Sc., chemistry(H) of DERABISH DEGREE COLLEGE has successfully prepared the report on the topic " **TO STUDY AND CALCULATE THE CONTENT OF ASCORBIC ACID IN CITRUS FRUITS**" under my guidance and supervision for the academic year 2020-21.

Signature:

Bikram Kumar Mohanty

14/07/2021

Reader in Chemistry

(HOD DEPARTMENT OF CHEMISTRY)

Principal
DERABISH COLLEGE

GUIDE CERTIFICATE

This is to certify that Harichandra Das, 3rd year, B.sc, Chemistry (H) has prepared the report on the project entitled "TO STUDY AND CALCULATE THE CONTENT OF ASCORBIC ACID IN CITRUS FRUITS". The report is the result of his efforts and endeavour. The report is found worthy of acceptance as final project report. He has prepared the report under my supervision.

Signature: *M dutch*

Bikram Kumar Mohanty 14/07/2021

Reader in Chemistry

Date: 14/07/2021

Principal
DERABISH COLLEGE

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Principal
DERABISH COLLEGE

ABSTRACT:-

To study and calculate the content of ascorbic acid in different citrus fruits.

IDENTIFICATION OF PROBLEMS: -

To study and calculate the content of ascorbic acid in different citrus fruits. Vitamin C or ascorbic acid in citrus fruits is a water soluble carbohydrate like substance involved in certain metabolic processes of animals. Although most of the animals can synthesise vitamin C, it is necessary in the diet of some including men and other primates. It also acts as a powerful antioxidant which fights against free-radical induced diseases [1-5]. Nevertheless, an ascorbic acid excess can lead to gastric irritation, and the metabolic product of vitamin C (oxalic acid) can cause renal problems [6]. vitamin C inhibits oxidation processes responsible for apple juice aroma [7]. In order to prevent scurvy, disease characterized by haemorrhage especially in skin and mucous membranes Vitamin C was identified as a curative agent for survey in 1928. The name ascorbic acid is derived from the expression anaisearbatic vitamin, referring to vitamin's ability to prevent and to curve scurvy. First isolated in 1928 by Hungarian biochemist and Nobel Prize winner Albert Seent Ceyorghi. Vitamin C has been the object of continued active laboratory research to determine the specific mechanism of action of cells.

Principal
DERABISH COLLEGE

DERABISH DEGREE COLLEGE

A PROJECT REPORT ON
CHILD LABOUR IN INDIA

SUBMITTED BY:-

NAME:-MADHUSMITA NAYAK

Roll No:-2001012040180094

YEAR:-2023

Guided By:-

Sri Gurucharan Sethi (H.O.D)

(Department Of Sociology)

Derabish Degree College
Derabish, Kendrapara-754289

Principal
Derabish College, Derabish
Kendrapara

ACKNOWLEDGEMENT

I take this opportunity to acknowledge with great pleasure. Deep satisfaction. and gratitude. I convey my profound thanks to the Head of the Department of Sociology.Derabish College for having consented to undertake this project.

My wholehearted and profound thanks is to Sj Gurucharan Sethi. H.O.D, department of Sociology Department Sociology. Derabish College, For their valuable support, worthy guidance encouragement kind co-operation and timely help to complete this research in time.

I extend my sincere thanks to all my department faculties' friends and respondents who helped me to complete this project successfully.

madhumita Nayak

Signature of Student

Principal
DERABISH COLLEGE

DECLARATION

I, hereby declare that the project work entitled *Child. Labour In India* " (with special reference to Derabish College) Submitted to Department of Sociology for the partial fulfilment of the of the degree of BACHELOR OF ARTS is a record of original work done by me during 2023 under the supervision and guidance of Sj Gurucharan Sethi, Lect. In Sociology, Derabish College, Derabish.

Place: Derabish
Date: 18/5/2023

Madhusmita Nayak
Signature of the Candidate

Principal
DERABISH COLLEGE

CERTIFICATE

This is to certify that the project report entitled " _Child labour_ _In India,_ " (With special reference to Derabish College) Submitted to the Department of Sociology for the partial fulfilment of Degree of Bachelors of Arts is a record of original work done by _MADHUSMITA NAYAK_ bearing Roll No. _20010204018007_ during 2023 under the supervision and guidance of Sri Gurucharan Sethi Department of Sociology, Derabish College and it has not formed the award of any Degree/Diploma/Associate ship/Fellowship or other similar title to any University.

Supervisor & Guide

Principal
DERABISH COLLEGE

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  - ➢ Analysis

- ❖ Chapter-v
  - ➢ Findings

Principal
DERABISH COLLEGE

DERABIS DEGREE COLLEGE

Derabish . Kendrapara
Department of sociology

A PROJECT REPORT ON

CHILD LABOUR IN INDIA

SUBMITTED BY:-

NAME-Chinmaya kumar Behera

Roll No- 1601012040180011

YEAR-2018-19

GUIDED BY :-

Sri Gurucharan Sethi (H.O.D)
(Department of Sociology)
&
Pratima Swain
Lect. In Sociology

Verify

Derabish Degree College, Derabish, Kendrapara- 754289

Principal
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CERTIFICATE

This is to certify that the project report entitled " _Child Labour_ _in India_ " (With special reference to Derabish College) Submitted to the Department of Sociology for the partial fulfilment of Degree of Bachelors of Arts is a record of original work done by _Chinmaya Kumar Behera_ bearing Roll No. _16010120401801_ during 2019 under the supervision and guidance of Sri Gurucharan Sethi Department of Sociology, Derabish College and it has not formed the award of any Degree/Diploma/Associate ship/Fellowship or other similar title to any University.

Gurucharan Sethi

Supervisor & Guide

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PARTICIPATION & CONTRIBUTION OF WOMEN IN THE FREEDOM STRUGGLE

A Dissertation Submitted to Derabis Degree College

For the partial fulfillment of the requirements for the award of the degree of

BACHELOR OF ARTS
IN
DEPARTMENT OF HISTORY

~:Submitted By:~

NARENDRA SAHOO
ROLL NO.:- 2001010940180053

~:Under the Guidance of:~

RUDRANGI PATTANAIK

(Lect. in History)

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DEPARTMENT OF HISTORY
DERABIS COLLEGE, DERABIS
KENDRAPARA, ODISHA

DECLARATION

I hereby declare that the project work entitled **"PARTICIPATION & CONTIBUTION OF WOMEN IN THE FREEDOM STRUGGLE"** (with special reference to Derabis College) Submitted to Department of History for the partial fulfillment of the of the degree of BACHELOR OF ARTS is a record of original work done by me during 2023 under the supervision and guidance of Rudrangi Pattanaik, Lect. in History, Department of History, Derabis College, Derabis.

Place:

Date:

Narendra Sahoo

Signature of the Candidate

Principal
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ACKNOWLEDGEMENT

I take this opportunity to acknowledge with great pleasure, deep satisfaction, and gratitude. I convey my profound thanks to the Head of the Department of History, Derabish College for having consented to undertake this project.

My wholehearted and profound thanks is to Rudrangi Pattanaik, Lect. In History, Department History, Derabish College, for their valuable support, worthy guidance encouragement kind co-operation and timely help to complete this research in time.

I extend my sincere thanks to all my department faculties' friends and respondents who helped me to complete this project successfully.

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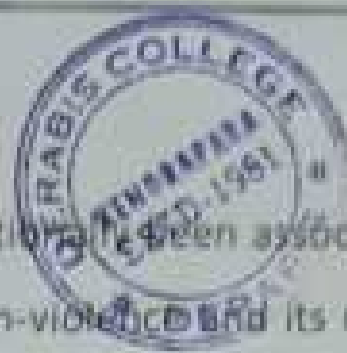- ❖ Chapter- III

  - ➢ Methodology

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  - ➢ Findings

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Introduction:

The Indian freedom struggle has conventionally been associated with the organized nationalist movement of Satyagraha, non-violence and its major advocates-Gandhi, Nehru and Patel. This perception of the movement has lent to it a monochromatic and patriarchal nature. The organised resistance against the British in fact finds history in the 1800's, when in its infancy pioneers were not only male leaders, but also rebel female leaders like the Rani of Jhansi. However, with the progression of the struggle into a more structured and coherent movement, the role of women and their nationalist contributions also changed. The change, however, cannot be viewed as a linear transformation. Instead, it is a layering or fragmentation that makes the role of women and femininity during the freedom struggle a more complex phenomenon. This can clearly be seen in Gandhi's views on the role of women, where they are encouraged to embody the virtues of the mythological Sita-Draupadi and dismiss the more "situationally" accurate Rani of Jhansi symbol. Thus, this report will attempt to analyze the multifaceted role of the woman freedom fighter in India by contrasting her militant and autonomous contributions to her more passive and "domestic" contributions during Satyagraha. This will be done by contrasting female militant and revolutionary tendencies, as seen in the contributions of the rebel leader Rani LakshmniBai, with the Gandhian theory on women's role and contributions during the Satyagraha movement and its subsequent effect on the work of the Gandhian prototype, Sarojini Naidu. However, in studying Naidu's work it is apparent that she tried to rebel from Gandhi's narrowly defined characterization of woman. It is thus conducive to mention that it is difficult to solely view the contributions of the freedom fighters in terms of labels, which in turn renders this complex persona of femininity during the period.

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ECONOMIC EMPOWERMENT OF WOMEN THROUGH SELF-HELP GROUP

A Dissertation Submitted to Derabis Degree College

For the partial fulfilment of the requirements for the award of the degree

of

BACHELOR of ARTS

IN

DEPARTMENT OF POLITICAL SCIENCE

Submitted by

Prasanta Kumar Malik

Roll No:- 1601011640180092

Under the Guidance of

Sr.Prof. Santanu Kumar Mati

H.O.D, Political Science

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KENDRAPARA, ODISHA

DECLARATION

I do hereby declare that the dissertation work entitled "*A Economic Empowerment Of Women Through Self-Help Group*" for my Bachelor Degree has been carried out by me in the Department of Political Science, Derabis Degree College and further that it has not been submitted earlier part to any institutes or university for the award of any degree or diploma.

Prashanta kumar malik

Prasanta Kumar Malik
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CERTIFICATE

This is to certify that the dissertation entitled "*Economic Empowerment Of Women Through Self-Help Group*" submitted by *Prasanta Kumar Malik* to Utkal University, Bhubaneswar in partial fulfillment of the requirements of Bachelor of Arts Degree in the Department of Political Science is a original research work carried out by his under my supervision and guidance. The content of this dissertation in full or in part has not been submitted to any other Institute or University for the award of any Degree or Diploma.

Date:-

Place:-

Santanu Kumar Mate'

HOD,
Department of Political Science

Santanu Kumar Mate'
02-04-19
Supervisor & Guide

chinmaya ku pradhan
2-04-19

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Acknowledgement

- With the long cherished moments of completion of this project, with warm gratitude and regards, I recall the people who have encouraged and helped me.

- First of all, I extend my deepest gratitude to my revered supervisor Sr. Prof. Santanu Kumar Mati under his active guidance I completed my long cherished dream. He provided moral support, affectionate encouragement, critical analysis and priceless suggestions at all stage of my thesis Work. Since my three years of academic engagements under his active supervision, I learned many things which I cannot explain within a paragraph. Honesty, sincerity and punctuality are the core principle of his behavior which always inspires me to follow the same path for my future academic career. Again, I sincerely thanks from the core of my heart to my supervisor.

- I am immensely thankful to all my respected teachers of my Department— Sr. Prof. Santanu Kumar Mati, Brundaban Das and Sandeep Bal, scholars for their valuable suggestions and guidance throughout my work.

- I am cordially indebted to libraries of Derabis Degree College, Kendrapara, odisha.

- It is essential to acknowledge and appraise from the bottom of my heart, to my Friends for assisting me to overcome towards the accomplishment of my thesis work.

- The painstaking efforts of editing has meticulously been done by my respectable friends and seniors and my others inseparable friends despite their own academic works, for which words fall short

- The words will be insufficient to owe my gratitude to my father and mother who have become a perennial source of inspiration for me throughout my life for their constant support and motivation. I am thankful to all my family members for their encouragement.

Prasanta Kumar Malik
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CONTENT

ROLE OF KISAN CREDIT ON AGRICULTURAL DEVELOPMENT

A PROJECT REPORT SUBMITTED TO
DERABIS DEGREE COLLEGE, KENDRAPARA
IN PARTIAL FULFILMENT OF
BACHELORS DEGREE OF ARTS IN ECONOMICS

BY : BIJAY SHANKAR PANDA

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DECLARATION

This is to certify that the Project entitled "**Role of Kisan Credit On Agricultural Development**" is done by myself under the direct supervision of **Mr. Sanjay Kumar Mishra**, H.O.D, Department of ECONOMICS, Derabis Degree College, for the partial fulfillment of B.A degree in Economics from Derabis Degree College, Kendrapara.

Place: Kendrapara

Date: 2.4.19

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Certificate by the Supervisor

This is to certify that the Project entitled *"Role of Kisan Credit On Agricultural Development"* is done by **Bijay Shankar Panda** a Sixth Semester student of B.A degree in Economics, under my direct supervision and guidance during the year 2019, as a partial fulfillment of B.A degree in Economics from Derabis Degree College, Kendrapara.

Place: Kendrapara

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CERTIFICATE BY THE HEAD OF THE DEPARTMENT

This is to certify that the Project entitled *"Role of Kisan Credit On Agricultural Development"* is prepared by **Bijay Shankar Panda** under the direct guidance and supervision of Mr. Sanjay Kumar Mishra, H.O.D of Economics Department, Derabis Degree College, Kendrapara, during the year 2019 as a partial fulfillment of B.A degree in Economics from Derabis Degree College, Kendrapara.

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ACKNOWLEDGEMENT

I would like to thank my supervisor **Mr. Sanjay Kumar Mishra.** H.O.D Dept. of Economics for his enthusiasm, wise words and continuing support throughout this research.

I would also like to thank Ms. Sanjukta Sethi for her support in completing my project. I am also thankful to my friends for providing their wholehearted support & co-operation in completing the project.

Last but not the least I feel very fortunate and thankful to my college for giving me this wonderful opportunity to work on such project and do the research.

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ଉପସ୍ଥାପିକା

ସ୍ୱର୍ଣ୍ଣଲତା ରାଉତ

ସମ୍ମାନ ଶ୍ରେଣୀ –ଓଡ଼ିଆ

ପଞ୍ଜିକରଣ ସଂଖ୍ୟା-ବି.ଏ.-୧୯-୦୯

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ପ୍ରମାଣ ପତ୍ର

ଦେରାବିଶ ମହାବିଦ୍ୟାଳୟର ଓଡ଼ିଆ ଭାଷା ଓ ସାହିତ୍ୟ ବିଭାଗ, ସମ୍ମାନ ଶ୍ରେଣୀ ଚତୁର୍ଥ ଷାଣ୍ମାସିକ ପରିକ୍ଷାର୍ଥୀ ନିଜେ ମୋ ପ୍ରତ୍ୟକ୍ଷ ତତ୍ତ୍ୱାବଧାନରେ 'ପ୍ରବାଦ ଓ ପ୍ରବଚନରେ ସଂସ୍କୃତିର ଚିତ୍ର' ଶୀର୍ଷକ ନିବନ୍ଧଟି ପ୍ରସ୍ତୁତ କରିଛନ୍ତି। ଏହା ତାଙ୍କର ନିଜସ୍ୱ ଗବେଷଣାଲବ୍ଧ ସୃଷ୍ଟି ଅଟେ। ଏହା ନିବନ୍ଧଟି ମୌଲିକ ତଥା ପ୍ରସ୍ତୁତ ଏବଂ ଗବେଷଣାଧର୍ମୀ ମଧ୍ୟ ଅଟେ।

ତପସ୍ୱିନୀ:
ସ୍ୱର୍ଣ୍ଣଲତା ନାୟକ

ନିର୍ଦ୍ଦେଶକ:
ଡକ୍ଟର କିଶୋର ଚନ୍ଦ୍ର ମହିବ

External
Sudhir Kumar Bhoi
18/7/2022

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କୃତଜ୍ଞତା

ଏହି ପ୍ରକଳ୍ପଟି ପ୍ରସ୍ତୁତ କାର୍ଯ୍ୟ ପ୍ରଥମେ ଦେରାବିଶ ଆଚ୍ଚଳ ଶିଶ୍ୟ ଏ ଦେଶିବାମଳ ଦାୟ କ ଦୟଣାଳଧିତେ ଭକ୍ତିପୂତ ପ୍ରଣାମ ଜଣାଉଛି । ନୂତନ ତଥ୍ୟ ସଂଗ୍ରହରେ ଯେଉଁମାନେ ମୋ ଭିତରେ ଉତ୍ସାହ ଓ ପ୍ରେରଣା ଭରିଦେଇଛନ୍ତି ସେମାନେ ହେଉଛନ୍ତି ମୋର ପୂଜ୍ୟ ଗୁରୁ ଡକ୍ଟର କିଶୋର ଚନ୍ଦ୍ର ମଲ୍ଲିକ , ଶ୍ରୀଯୁକ୍ତ ଧନେଶ୍ଵର ନାୟକ ଓ ଡ଼ଃ ପୁଷ୍ପା ପଟ୍ଟନାୟକ ମହୋଦୟ, ତେଣୁ ଏହି ଅବସରରେ ମୁଁ ସେମାନଙ୍କ ଭକ୍ତିପୂତ ପ୍ରଣାମ ଜଣାଉଛି ।

ପ୍ରକଳ୍ପଟିର ତଥ୍ୟ ସଂଗ୍ରହ ନିମନ୍ତେ ମୋର ଦିଗ୍ଦର୍ଶକ ଦେରାବିଶ ମହାବିଦ୍ୟାଳୟର ମୋର ପୂଜ୍ୟ ଗୁରୁ ଡକ୍ଟର କିଶୋର ଚନ୍ଦ୍ର ମଲ୍ଲିକ ସାହାଯ୍ୟ ଓ ସହଯୋଗ କରିଛନ୍ତି । ତାଙ୍କର ତତ୍ତ୍ୱାବଧାନ ଓ ବହୁମୂଲ୍ୟ ସମୟ ବିନିଯୋଗରେ ମୋର ପ୍ରକଳ୍ପଟି ପ୍ରସ୍ତୁତ ହୋଇପାରିଛି । ଏହି ଅବସରରେ ମୁଁ ତାଙ୍କ ଭକ୍ତିପୂତ ପ୍ରଣାମ ଜଣାଉଛି ।

ସୁସ୍ମିତା ସ୍ୱାଇଁ

ସୂଚୀପତ୍ର

ବିଷୟ

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୧ . ପ୍ରବାଦ ଓ ପ୍ରବଚନରେ ସମାଜ ଜୀବନର .... ଆଲୋଚନା କର ?

ଉପକ୍ରମ :-

'ପ୍ରବାଦ' ଓ 'ପ୍ରବଚନ' ଶବ୍ଦଦ୍ୱୟ କେବଳ ଓଡ଼ିଆ ସାହିତ୍ୟରେ ନାହିଁ , ବିଶ୍ୱର ଯେ କୌଣସି ସାହିତ୍ୟରେ ପରିଦୃଷ୍ଟ ହୋଇଥାଏ । ଇଂରାଜୀ Proverb ଶବ୍ଦଟିର ଓଡ଼ିଆ ଆଭିଧାନିକ ଅର୍ଥ ଦେଉଛି 'ପ୍ରବଚନ' । ଏହି Proverb ଶବ୍ଦ ଲାଟିନ୍ Proverbium ଶବ୍ଦରୁ ଆନୀତ । ଯାହାର ଅର୍ଥ ଦେଉଛି ଲୋକରେ ବ୍ୟବହୃତ । ତାହା କେବଳ ପ୍ରବଚନ ନାମରେ ନାମିତ ହୋଇପାରେ । ଅନ୍ୟ ଅର୍ଥରେ କହିଲେ ଏହି ପ୍ରବଚନ ବା ପ୍ରକୃଷ୍ଟ ବଚନ ସଦା ସର୍ବଦା ପ୍ରକୃଷ୍ଟ ଭାବରେ ହିଁ ଲୋକସମାଜରେ ବ୍ୟବହୃତ । କେବଳ ଗ୍ରାମୀଣଙ୍କ କ୍ଷେତ୍ରରେ ନୁହେଁ ,ନାଗରିକ ମାନଙ୍କ କ୍ଷେତ୍ରରେ ମଧ୍ୟ ଏହା ସ୍ୱୀକୃତ ଓ ଗ୍ରହଣ ଯୋଗ୍ୟ । ଏ ସମ୍ପର୍କରେ ମତଦେଇ ଡଃ ନଟବର ସାମନ୍ତରାୟ କୁହନ୍ତି —ଜାତି ବା ବ୍ୟକ୍ତି ବିଶେଷର ସୀମାର ଅତର ପ୍ରଦେଶରୁ କୌଣସି ଚିନ୍ତାଧାରା ନିଃସୃତ ହୋଇ ଯେତେବେଳେ ଲୋକରେ ଜନପ୍ରିୟତା ଅର୍ଜିନ କରେ । ଲୋକଙ୍କ ଦ୍ୱାରା ସତ୍ୟ ବୋଲି ଅନୁମୋଦିତ ତଥା ଗୃହିତ ନହେଲେ କୌଣସି ବିଶିଷ୍ଟ ଚିନ୍ତା ପ୍ରବଚନ ପଦବୀରେ ଆରୂଢ ହୋଇନପାରେ । ତେଣୁ ପ୍ରବଚନ ଏକ ନିର୍ଦ୍ଦିଷ୍ଟ ସମୟରେ ଏକ ନିର୍ଦ୍ଦିଷ୍ଟ ବ୍ୟକ୍ତି ବିଶେଷଙ୍କ ବଚନ ହେଲେ ହେଁ ସର୍ବଲୋକଙ୍କଦ୍ୱାରା ଯେତେବେଳେ ବହୁ ଭାବରେ ତାହା ସତ୍ୟ ବୋଲି ଗୃହିତ ହୁଏ ତାହା ପ୍ରବଚନ ନାମ ଧାରଣ କରେ ।

ସେହିପରି ପ୍ରବାଦ ଶବ୍ଦଟି ପ୍ର-ଉପସର୍ଗ + ବାଦ୍ ଶବ୍ଦର ସୃଷ୍ଟି ।ଏହାର ଅର୍ଥ ପ୍ରକୃଷ୍ଟ ବିଚାର ମଢ ,ବାକ୍ୟ ବା କଥନ । ଜନଶ୍ରୁତି କିମ୍ବଦନ୍ତୀ ଓ ପରମ୍ପରା ଗତ ବାକ୍ୟ ଏହାର ଅନ୍ତର୍ଭୁକ୍ତ ହୋଇଥାଏ । ଏହାର

ଘୋଷଣା ନାମା

" ଓଡ଼ିଶା ଲୋକଗୀତରେ ଚଟ-ଜମାଲି " ନିବନ୍ଧ ପତ୍ରଟି ମୋ ଦ୍ୱାରା ଲିଖିତ । ଏହା ଦେରାବିଶ ମହାବିଦ୍ୟାଳୟର ଷଷ୍ଠ ବର୍ଷୀୟ ପାର୍ଟି ଉଦିଚ୍ଚ ।

ଏହି ସଦଭିଟି ଏ ପର୍ଯ୍ୟନ୍ତ କୌଣସି ଅନୁଷ୍ଠାନରେ ପରିଣା ପାର୍ଟି ଦାଖଲ ହୋଇ ନାହିଁ ।

ବିଶ୍ୱମୟୀ ଶିଂହ

ଦସ୍ତଖତ

୭।୪

Principal
DERABISH COLLEGE

-:କୃତଜ୍ଞତା :-

ଏହି ପ୍ରକଳ୍ପଟି ପ୍ରସ୍ତୁତି ପାଇଁ ପ୍ରଥମେ ପ୍ରଭୁ ଜଗନ୍ନାଥଙ୍କର ପାଦପଦ୍ମରେ ବିନମ୍ର ଭକ୍ତି ଅର୍ପଣ କରୁଛି । ମୋ ଭିତରେ ଥିବା ଅଜ୍ଞାନ ପକ୍ଷକୁ ଦୂରକରି ଦିଏ ମୋତେ ଜ୍ଞାନର ପ୍ରଦୀପ ଜାଳିବା ପାଇଁ ପ୍ରତିପଦକ୍ଷେପରେ ମୋତେ ପ୍ରେରଣା ଦେଉଛନ୍ତି । ସେ ଦେଉଛନ୍ତି ମୋର ପରମପୂଜ୍ୟା ଗୁରୁମା ଡକ୍ଟର ପ୍ରଜ୍ଞା ପଟ୍ଟନାୟକ ମହୋଦୟା । ତାଙ୍କ ନିକଟରେ ମୁଁ ଚିରୋବକୃତଜ୍ଞ ।

Principal
DERABISH COLLEGE

Principal
DERABISH COLLEGE

DERABISH DEGREE COLLEGE

DERABISH,KENDRAPARA

DEPARTMENT OF PHYSICS

A Project Report On

"ELECTROMAGNETIC INDUCTION"

A project submitted to DERABISH DEGREE COLLEGE,Derabish in partial fulfilment of the requirement for +3 final year science in physics(hons.) 6th seme. 2021

Submitted By:

Name-Saros Sutar
+3 3rd yr. Science
Roll no-5018-017
Regd no 18020117-4015001-4

Under the Guidance of:

Prof. Aswini Kumar Prusty
Lect. in Physics
Dept. of Physics
Derabish Degree College

DEPARTMENT OF PHYSICS
DERABISH DEGREE COLLEGE
DERABISH

DEPARMENT OF PHYSICS
DERABISH DEGREE COLLEGE
DERSBISH, KENDRAOARA
SUPERVISOR'S CERTIFICATE

This is certified that the project report entitled **"ELECROMAGNETIC INDUCTION"** is prepared by Barsa Sutar a student of 6th Semester of B.Sc. Degree in physics under my direct supervision and guidance during the year 2021 as partial fulfillment of B.Sc. Degree in physics from Derabish Degree College, Derabish, Kendra Para.

Date: 22/5/21

Place: Derabish college, Derabish

Signature of Supervisor

Dept. Of Physics

Derabish Degree College, Derabish

Principal
DERABISH COLLEGE

ACKNOWLEDGEMENT

I would like to express my special thanks of gratitude of my teacher **Prof. Ashwini Kumar Prusty,** who gave me the golden opportunity to do this wonderful project on the topic **"ELECTROMAGNETIC INDUCTION"**

Which also helped me in doing a lot of research and I come to know about so many things. I am really thankful to him.

I would also like to thank to my friends who helped in lot in finishing this project within the limit time. I am making this project not only for marks but also increase my knowledge.

I also thanks all who helped me to complete this project

Barsa Sutar

Barsa Sutar

Date: 22/5/24

Principal
DERABISH COLLEGE

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- Introduction

- Induced Magnetic Flux

- Faraday's Law of Induction: Lenz's Law

- Motional EMF

- Eddy Currents and Magnetic Damping

- Electric Generators

- Transformers

- Electrical Safety: Systems and Devices

- Inductance

Examiner

ସୂଚୀପତ୍ର

❖ ❖ ❖

Principal
DERABISH COLLEGE

(ପ୍ରଥମ ଅଧ୍ୟାୟ)

THYROID DISEASE

In partial fulfillment of the requirements for the
award of degree of BACHELOR IN SCIENCE (Zoology Hons.)

Submitted by:-
SOUBHAGYA LAXMI DAS
Regd. No.-20020108401800<u>51</u>
6th Sem. 2023

Under the Guidance of
Miss. Subhashree Behera
H.O.D, Dept. of Zoology

Principal
Derabish College, Derabish

DEPARTMENT OF ZOOLOGY
Derabis (Degree) College, Derabis, Kendrapara
Utkal University, Vani Vihar, Bhubaneswar
2020-2023

CERTIFICATE

This is to certify that " Soubhagya Laxmi Das " has successfully completed and submitted the Bachelor's of Science Project entitled " THYROID DISEASE IN DERABISH BLOCK " to Derabish Degree College on 12|05|• 2023.

The project was conducted under the guidance of " Miss. Subhashree Behera ", who has supervised the research work and provided the necessary guidance throughout the project. The project was undertaken by the student as a partial fulfillment of the requirements for the award of the Bachelor's degree in Zoology from Derabish Degree College .

Principal
Derabish College, Derabish
Kendrapara

Behera
13/05/23
Lect. in zoology
Derabish college
Derabish
HOD,
Supervisior & Guide

DECLARATION

I do hereby declare that the dissertation work entitled
" *Thyroid Disease* " is an original work carried out by me
in the laboratory of Zoology department, Derabish
Degree College, Derabish, Kendrapara has not been
published or submitted in part of full, for any other
degree in any college or institution.

Principal
Derabish College, Derabish
Kendrapara

Soubhagya Laxmi Das

Soubhagya Laxmi Das
DEPARTMENT OF ZOOLOGY
DERABISH DEGREE COLLEGE, DERABISH

ACKNOWLEDGMENT

I would like to express my heartfelt gratitude to my guide, " Miss. Subhashree Behera" for her unwavering support and guidance throughout the course of this project.

Without her constant encouragement and insightful feedback, this project would not have been possible. Her expertise in the field and willingness to share her knowledge have been invaluable to me.

I would also like to thank my family and friends for their unwavering support and encouragement throughout this project.

Finally, I would like to thank UTKAL UNIVERSITY for providing me with the opportunity to pursue this Bachelor's of Science program and for equipping me with the knowledge and skills needed to complete this project successfully.

This Projects is true to the best of my knowledge.

THANKING YOU

6TH SEMESTER

DEPT.OF ZOOLOGY

Signature of the student

CONTENTS

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Kendrapara.

INTRODUCTION

Thyroid disease is a prevalent condition that affects a significant proportion of the global population, with an estimated 200 million people worldwide suffering from thyroid disorders. The thyroid gland, located in the neck, produces hormones that regulate various bodily functions such as metabolism, heart rate, and body temperature. When the thyroid gland malfunctions, it can lead to a range of disorders, including hypothyroidism, hyperthyroidism, thyroid nodules, and thyroid cancer. These conditions can cause a wide range of symptoms and have potentially serious health consequences if left untreated. The diagnosis and management of thyroid disease require a multidisciplinary approach, involving various medical professionals such as endocrinologists, radiologists, and surgeons. There are various diagnostic tools and treatment options available, including blood tests, imaging studies, medication, surgery, and radioactive iodine therapy. However, effective management of thyroid disease requires an understanding of the underlying pathophysiology of the condition and the appropriate use of diagnostic and treatment modalities.

This project aims to provide a comprehensive overview of thyroid disease, including its pathophysiology, diagnosis, treatment, and management. The project will also explore the risk factors, symptoms, and complications associated with thyroid disease. It will analyze the diagnostic tools used to identify thyroid disease and the treatment options available, including medication, surgery, and radioactive iodine therapy. Finally, the project will cover strategies for managing thyroid disease and improving patient outcomes, including lifestyle modifications and follow-up care. Page 4 of 17 By providing a comprehensive overview of thyroid disease, this project aims to increase awareness and understanding of this common disorder and provide guidance for effective diagnosis and management. It is hoped that this project will be a valuable resource for medical professionals, patients, and their families seeking information about thyroid disease.

THYROID HERMONE

- **Thyro-xine(T$_4$)**
- **Triiodothyronine (T$_3$)**
- **Calcitonin**

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1
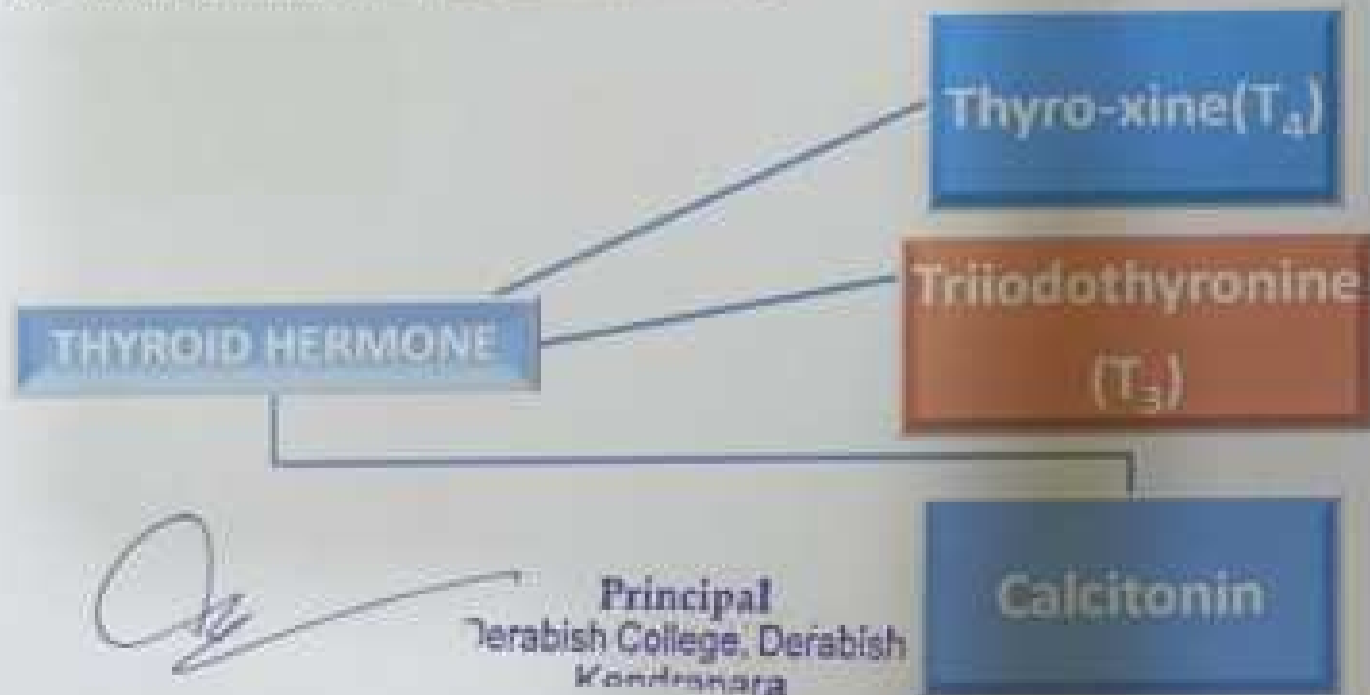
SYNTHESIS: Both T4 and T3 are iodine containing derivatives of thyronine which is a condensation product of two molecules of the amino acid tyrosine.

STORAGE: Thyroglobulin containing iodinated tyrosil and thyronil residues transported to the interior of the follicles and remains stored as thyroid colloid till it is taken back into the cells by endocytosis and broken down by lysosomal proteases.

RELEASE: The T4 and T3 so released is secreted into circulation while MIT and DIT residues are deiodinated and the iodide released is reutilized. The uptake of colloid and proteolysis are stimulated by TSH: the quiscent gland has follicles distended with colloid and cells are flat or cubical, while the TSH stimulated gland has columnar cells and colloid virtually disappears Normal human thyroid secretes 60-90 µg of T4 and 10-30 µg of T3 daily.

Thyroid function tests (TFTs)
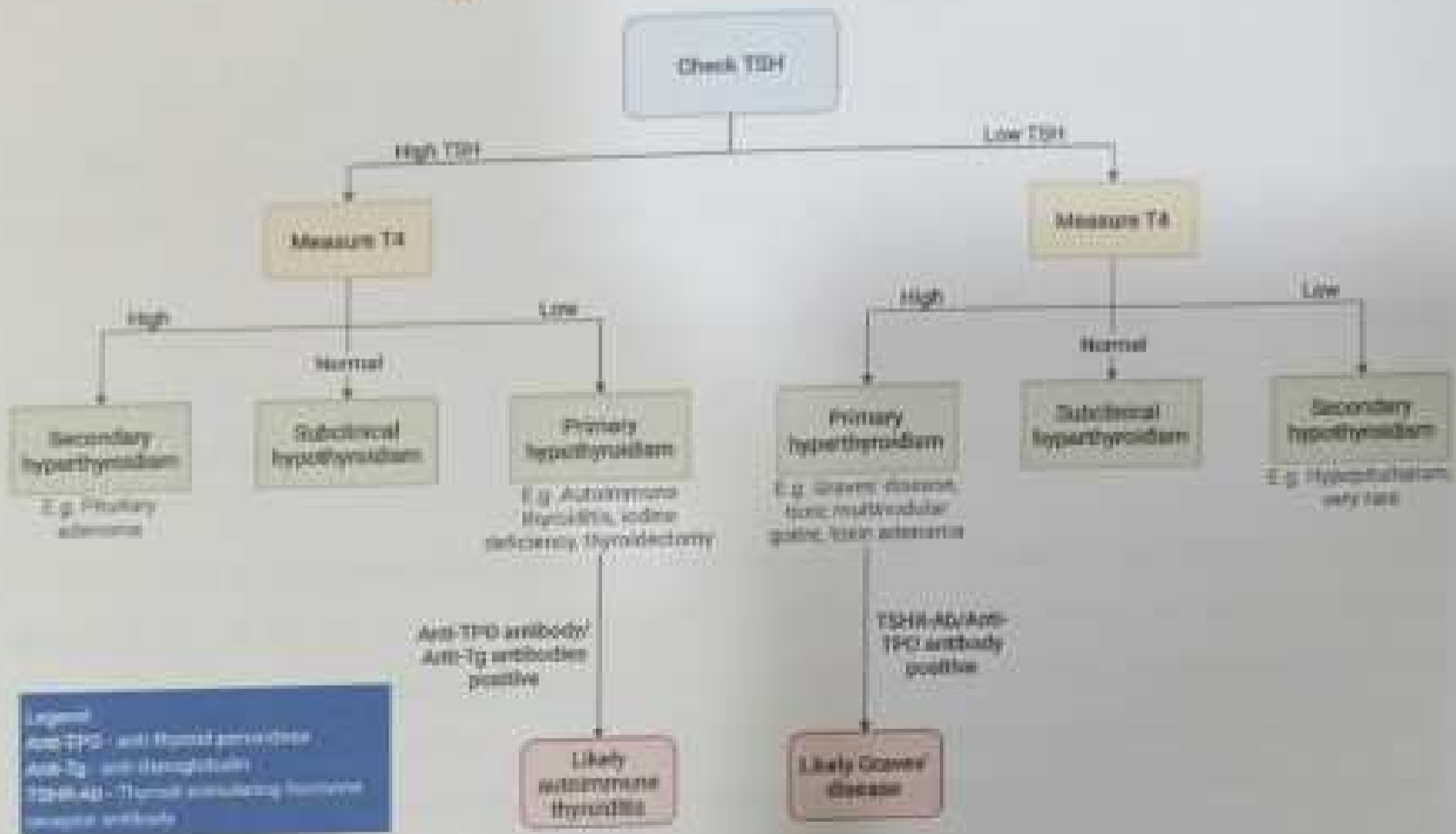
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2

REVIEW OF LITERATURE ON THIS PROJECT TOPIC:-

Literature review on various techniques for diagnosing thyroid [_____] (2017) has performed a research study on "Artificial neural network system for [_____]" The proposed paper focuses on using Artificial Neural Network (ANN) as a [_____] of artificial intelligence to diagnose thyroid diseases. Multilayer feed forward architecture of ANN is adopted in the proposed design and the back propagation is selected as learning algorithm to accomplish the training process. The continuous values of three laboratory blood tests are used as input signals to the proposed system of ANN. Used 655 samples of real patients from certified advanced hormones laboratory in Kerala city. All types of thyroid diseases that may occur in patients are taken into account in design of system as well as the high accuracy of the detection and categorization of thyroid diseases are considered in the system. The result of this research shows that the proposed ANN system is able to precisely diagnose thyroid disease and can be exploited in practical.

The selected ANN has high classification rate which is about 99.2%. As a result, the proposed structure of ANN can effectively categorize the type of thyroid cases. The system is simulated via. MATLAB Software to evaluate its performance.

Amato et al. (2013) had carried out a research study on the title "Usage of Artificial Neural Network (ANN) in medical diagnosis". The objective shows that the capability, philosophy, limitations and powerful use of artificial neural network in the medical diagnosis, how it is useful

for physicians to diagnosis more reliable and therefore, increases patient satisfaction. They have created Artificial Neural Network (ANN) based diagnosis architecture, all the medical data has put into it and find the minimum optimal value. The Artificial Neural Network (ANN) based medical diagnosis architecture worked on various diseases like diabetes, cancer and cardiovascular diseases. In the model also discussed about how can be build the database, training and verification of the database using Artificial Neural Network (ANN) and how can be test in medical practice. The study also, suggested usefulness of Artificial Neural Network (ANN) in future.

Sharpe et al. (1993) performed a research on "artificial neural networks in diagnosis of thyroid function from in vitro laboratory tests". The main objective was to study this showing the potential benefit of using Artificial Neural Network (ANN) for the diagnosis of thyroid function. In this study used the two Artificial Neural Network (ANN) architectures and back propagation

algorithms where they are multilevel perceptron and Learning Vector Quantization (LVQ). They have used clinical material as a data set to be train by Artificial Neural Network (ANN) architectures.

Also, used the software neural works professional II package for onchat mapping of data was done on SYSMAT/SAMPLE add-on module. Trained the data set on both the Artificial Neural Network (ANN) architecture and shows the desired output.

Using neural network: Prerana and Taneja (2015) has done the research on "Predictive data mining for diagnosis of thyroid disease using neural network". The main objective was for this study to introduce proposed Artificial Neural Network (ANN) concept research as an alternative for the earlier prediction of a disease. To train the proposed artificial neural network used two types of learning where in they are Supervised Learning (SL) and Unsupervised Learning (USL). They have done the predictive analysis of thyroid disease based on these above mentioned learning's. They have divided the process into three stages, data collection and classifying, architecture selection and learning and compare network performance and reaching to the best answer. From experiments they have proven that Levenberg Marquardt method is better in performance in comparison of simple gradient descent algorithm. Used MATLAB as a tool for data analysis purpose.

Review and Survey of Artificial Neural Network in Medical Science". The objective for the study was how proposed Artificial Neural Network (ANN) techniques will be more useful in medical science field to help in diagnosis and predict the more precise output. They have discussed about the various Artificial Neural Network (ANN) Techniques. They have also shown the Fundamental working principle of artificial neurons. In this research, a Decision Support System (DSS) is proposed to diagnose nodules into benign and malignant by analyzing data via. Artificial Neural Network (ANN). In this research study, 63 samples are taken out of dataset provided which are utilized to test and train the neural network based on algorithm. As a result, 95% accuracy is reached. In this research, mentioned four methods Bayesian networks, decision trees and simple classification models including Artificial Neural Network (ANN) are also useful for decisions in medical treatment.

Razia et al. (2015) have performed a research study on "A decision support system for prediction of thyroid disease a comparison of multilayer perceptron neural network and radial basis function neural network". In this research, they have used two neural network models Multilayer Perceptron (MLP) and Radial Basis Function Networks (RBFN) for the prediction of onset of

thyroid disease using the data generated in real life. The models multilayer perceptron is trained and tested with back-propagation algorithm whereas Radial Basis Function Networks (RBFN) was trained and tested with SPSS Software. It has been shown from experiments done that radial basis network can be successfully used for the diagnosis of thyroid disease.

Cross-validation approach: Rastogi and Bhalla (2014) has done the research work on "A study of neural network in diagnosis of thyroid disease". The main study focus on Artificial Neural Network (ANN) is considered as the best solutions to achieve the goal. A cross-validation approach has been used for sampling variability. They also discussed about the hybrid neural network structure called CSFNN combines RBF and MLP in one single network. In this design, the nodes behave either as MLP or as RBF. The propogation rule for CSFNN comes employing using analytical equations using mistreatment a one. Also, mentioned the various normalization methods. Statistical or z-score normalization, min-max normalization, Median normalization, Sigmoid normalization, Statistical normalization, though the use of these normalization methods will increase the efficiency of network performance.
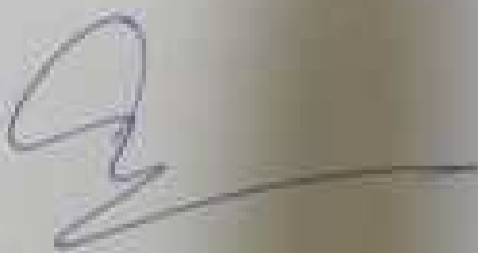
Gopinath (2017) has performed a research study on "Comparative study on classification algorithm for thyroid data set". The main objective was to discuss the comparative study on classification algorithm for thyroid data set. They have taken the classifiers like SVM, k-NN, decision tree on which the dataset of 215 samples are given as input for classification under these classifiers to train the dataset and check behavior. It has been seen from the results that SVM classifier technique provides better accuracies as compared to last works. The proposed study performs efficiently on the dataset of 215 samples with an accuracy of 96.30. However, if we merge any other classification technique such as fuzzy classification or neural network on the output that we got from SVM algorithm, then the system.

Umadevi and JeenMarseline (2017) has performed a research study on "applying classification algorithms to predict thyroid disease". The proposed study handles the analysis of the classification of the thyroid disease based on the information gathered from the UCI machine learning repository. They have used methods artificial neural network and k-nearest neighbor applied to the prediction of thyroid disease. Used MATLAB ("MATrixL A Boratory") may be a tool for numerical computation and mental image. It was observed from the experiments, the trial of 21 parameters is used. In kNN the prediction accuracy is eightieth, ANN the accuracy is 85%. However, fuzzy ANN the prediction accuracy is 90% might provide even better accuracy rate as compared to what we got with the current study.

values in the dataset are dealt with k-Nearest Neighbor (k-NN) weighting pre-processing scheme the resultant data is provided as input to adaptive neuro-fuzzy inference system for the

Kala et al. (2010) has done the research work on "Medical diagnosis using incremental evolution of neural network". The main objective was to diagnosis of PIMA Indian diabetes. Therefore, have proposed an evolutionary neural network which is used multi-layer perceptron. Discussed about the general architecture of multi-layer perceptron neural network and the general structure of the proposed algorithm. Used the evolutionary operators which are: selection, mutation, crossover, elite, jump and new. From the experiments shown that the proposed algorithm performed better compare than the conventional multi-layer perceptron with back propagation algorithm for training, modular neural networks, connectionist evolution of neural network, radial basis function network and adaptive neuro fuzzy inference system. They are sure that proposed algorithm was able to achieve a high degree of accuracy for both training as well as testing data sets.

Razia et al. (2015) performed a research study on "A neuro computing frame work for thyroid disease diagnosis using machine learning techniques".Proposed research study based on using two neuronal models (SOM and LVQ). In this analysis, a framework victimization Self-Organized Map (SOM) beside learning vector quantization has been developed. The unlabeled thyroid data of about 215 different patients is obtained from a clinic and is used to train the SOM network using competitive learning algorithm. The researchers have also used the decision tree algorithms: Self-Organizing Map (SOM) neural networks and linear vector quantization. The experiments and results show that LVQ and SOM algorithm have better accuracy for diagnosis of thyroid disease.

Aim:

The aim of this project is to provide a comprehensive overview of thyroid disease, including its pathophysiology, diagnosis, treatment, and management. The project aims to increase awareness and understanding of thyroid disease and provide guidance for effective diagnosis and management.

Objectives:

- To provide an overview of the anatomy and physiology of the thyroid gland.
- To describe the pathophysiology of thyroid disease, including the various types of thyroid disorders and their causes.
- To explore the risk factors, symptoms, and complications associated with thyroid disease.
- To analyze the diagnostic tools used to identify thyroid disease, including blood tests, imaging studies, and biopsies.
- To discuss the treatment options for thyroid disease, including medication, surgery, and radioactive iodine therapy.
- To explore strategies for managing thyroid disease and improving patient outcomes, including lifestyle modifications and follow-up care.
- To review the current literature on thyroid disease, including recent advances in diagnosis and management.
- To provide practical guidance for medical professionals, patients, and their families on the diagnosis and management of thyroid disease.
- To highlight the importance of patient education and engagement in the management of thyroid disease.
- To identify areas for further research and improvement in the diagnosis and management of thyroid disease.

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Materials and Methodology:-

Source of data -20 subjects of every age group who are suspected to be suffer from thyroid disorders or subjects with vague symptoms were included in the study.

Method of collection of data:-

A prospective cross sectional study of 20 subjects of age group of our local area Niscintakoili which comes under Cuttack district were taken into the study. These persons were suspected to be suffering from thyroid disorders or with vague symptoms like generalised weakness, easy fatigability, Lethargy, Disintrest in daily activities, Long term fever or Cold,m uscle pain to be suspecious of thyroid disorder, were subjected to detailed clinical examination. Their blood samples were collected and send it to thyroid testing labs for detailed biochemical testing and analysis. Then the data were collected from labs in the form of Thyroid reports. The data were about the concentrations of thyroid hormones.According to the concentrations of thyroid hormones. According to the concentrations of thyroid hormones, the persons, who were sufferers of thyroid disorders, were catagorized into various spectrums of thyroid disorder like hypothyroidism, hyperthyroidism,subclinical or clinical hypothyroidism, Total T3 -0.87-2.73 ng/ml.

Materials:

For this project, the following materials will be used:

- Published research articles, reviews, and textbooks on thyroid disease.
- Online medical databases, including PubMed and Medline.
- Clinical guidelines and recommendations from professional organizations, such as the American Thyroid Association and the Endocrine Society.
- Patient education resources from reputable sources, such as the National Institute of Diabetes and Digestive and Kidney Diseases and the American Thyroid Association.
- Medical software for analyzing and organizing data.

Methodology:

The following methodology will be employed to achieve the project objectives:

Literature review:

A comprehensive review of published research articles, reviews, and textbooks on thyroid disease will be conducted. The literature review will focus on the pathophysiology, diagnosis, treatment, and management of thyroid disease. Online-medical databases will be used to identify relevant

articles, and search terms will include "thyroid disease," "hypothyroidism," "hyperthyroidism," "thyroid nodules," and "thyroid cancer."

Data analysis:

The data collected from the literature review will be analyzed using medical software to organize and categorize the information. The data will be organized according to the project objectives, including the anatomy and physiology of the thyroid gland, the pathophysiology of thyroid disease, diagnostic tools, treatment options, and strategies for managing thyroid disease.

Review of guidelines and recommendations:

Clinical guidelines and recommendations from professional organizations, such as the American Thyroid Association and the Endocrine Society, will be reviewed to identify best practices for the diagnosis and management of thyroid disease.

Patient education resources:

Patient education resources from reputable sources, such as the National Institute of Diabetes and Digestive and Kidney Diseases and the American Thyroid Association, will be reviewed to identify strategies for improving patient education and engagement in the management of thyroid disease.

Synthesis of findings:

The findings from the literature review, analysis of data, review of guidelines and recommendations, and patient education resources will be synthesized into a comprehensive overview of thyroid disease, including its pathophysiology, diagnosis, treatment, and management.

Writing and editing:

The project will be written and edited to ensure clarity, accuracy, and completeness. The project will be organized according to the project objectives, and appropriate headings and subheadings will be used to ensure easy navigation and understanding of the material.

Review and revision:

The project will be reviewed and revised by medical professionals to ensure accuracy and appropriateness of the information provided.

Dissemination:

The project will be disseminated through online platforms and medical conferences to reach a wider audience and increase awareness and understanding of thyroid disease. Thyroid disease is a common endocrine disorder that affects millions of people worldwide. It is caused by dysfunction of the thyroid gland, which can result in either hypothyroidism or hyperthyroidism. The aim of this project is to provide a comprehensive overview of thyroid disease, including its pathophysiology, diagnosis, treatment, and management. The project objectives are well-defined and will help to

provide a structured approach to the project. The literature review is an essential part of the project, as it will provide a comprehensive understanding of thyroid disease and help to identify best practices for diagnosis and management. The analysis of data collected from the literature review will help to identify patterns and trends in the information, which can be used to provide the project's conclusions and recommendations.

The review of clinical guidelines and recommendations is also an important aspect of the project, as it will provide evidence-based guidance for the diagnosis and management of thyroid disease. By reviewing patient education resources, the project can help to identify strategies for improving patient education and engagement, which can lead to better patient outcomes. The synthesis of findings is a critical component of the project, as it will help to organize the information and provide a clear and concise overview of thyroid disease. The project's writing and editing process will ensure that the information is presented in an accessible and understandable manner. One potential limitation of the project is the reliance on published research articles, reviews, and textbooks for the literature review. There may be unpublished research or clinical experiences that could provide valuable insights into the diagnosis and management of thyroid disease. However, by using a comprehensive search strategy and online medical databases, the project can help to minimize this limitation. In conclusion, this project will provide a valuable resource for medical professionals, patients, and their families on the diagnosis and management of thyroid disease. By increasing awareness and understanding of thyroid disease and providing evidence-based guidance, the project can help to improve patient outcomes and quality of life.

RESULT

Patient 1:-

NAME : Swarnlaxmi Das
AGE/GENDER : 23 YEARS/ FEMALE

THYROID FUNCTION TEST	VALUE	REFERENCE RANGE
T_3	0.90 ng/ml	0.87 – 2.73 ng/ml
T_4	9.78 ug/dl	6.09 – 12.23 ug/dl
TSH	8.37 μIU/ml	0.35 – 5.06 μIU/ml

Patient 2:-

NAME : Madhusmita Samal
AGE/GENDER : 18 YEARS/ FEMALE

THYROID FUNCTION TEST	VALUE	REFERENCE RANGE
T_3	0.92 ng/ml	0.87 – 2.73 ng/ml
T_4	7.87 ug/dl	6.09 – 12.23 ug/dl
TSH	10.7 μIU/ml	0.35 – 5.60 μIU/ml

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Patient 3:-

NAME : Anuska Das

AGE/GENDER : 19 YEARS/ FEMALE

THYROID FUNCTION TEST	VALUE	REFERENCE RANGE
T_3	1.11 ng/ml	0.87 – 2.73 ng/ml
T_4	9.67 ug/dl	6.09 – 12.23 ug/dl
TSH	2.22 μIU/ml	6.35 – 5.60 μIU/ml

Patient 4:-

NAME : Rojalin Singh

AGE/GENDER : 23 YEARS/ FEMALE

THYROID FUNCTION TEST	VALUE	REFERENCE RANGE
TSH	2.02 μIU/ml	0.3 – 5.5 μIU/ml

Patient 5:-

NAME : Surekha Senapati

AGE/GENDER : 33 YEARS/ FEMALE

THYROID FUNCTION TEST	VALUE	REFERENCE RANGE
T_3	1.53 ng/ml	0.87 – 2.73 ng/ml
T_4	7.86 ug/dl	6.09 – 12.23 ug/dl
TSH	10.7 μIU/ml	0.35 – 5.60 μIU/ml

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Patient 6:-

THYROID FUNCTION TEST	VALUE	REFERENCE RANGE
NAME : Bijayalaxmi Panda		
AGE/GENDER : 22 YEARS/ FEMALE		
T_3	0.95 ng/ml	0.87 – 2.73 ng/ml
T_4	7.86 ug/dl	6.09 – 12.23 ug/dl
TSH	2.87 µIU/ml	0.27 – 5.0 µIU/ml

Patient 7:-

THYROID FUNCTION TEST	VALUE	REFERENCE RANGE
NAME : Rubina Kandi		
AGE/GENDER : 25 YEARS/ FEMALE		
T_3	0.95 ng/ml	0.87 – 2.73 ng/ml
T_4	7.76 ug/dl	6.09 – 12.23 ug/dl
TSH	9.84 µIU/ml	0.3 – 5.6 µIU/ml

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Patient 8:-

THYROID FUNCTION TEST	VALUE	REFERENCE RANGE
	NAME : Rasmita Das	
	AGE/GENDER : 30 YEARS/ FEMALE	
TSH	1.76 µIU/ml	0.3 – 5.5 µIU/ml

Patient 9:-

THYROID FUNCTION TEST	VALUE	REFERENCE RANGE
	NAME : Puspalata Das	
	AGE/GENDER : 40 YEARS/ FEMALE	
T3	1.10 ng/ml	0.87 – 2.73 ng/ml
T4	8.67 ug/dl	6.09 – 12.23 ug/dl
TSH	121.8 µIU/ml	0.35 – 5.00 µIU/ml

Patient 10:-

THYROID FUNCTION TEST	VALUE	REFERENCE RANGE
	NAME : Alaka Das	
	AGE/GENDER : 40 YEARS/ FEMALE	
TSH	2.87 µIU/ml	0.27 – 5.0 µIU/ml

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Patient 11:-

NAME : Rajeswari Rout

AGE/GENDER : 21 YEARS/ FEMALE

THYROID FUNCTION TEST	VALUE	REFERENCE RANGE
T_3	1.11 ng/ml	0.87 – 2.73 ng/ml
T_4	9.67 ug/dl	6.09 – 12.23 ug/dl
TSH	2.22 µIU/ml	0.35 – 5.60 µIU/ml

Patient 12:-

NAME : Anusaya Das

AGE/GENDER : 25 YEARS/ FEMALE

THYROID FUNCTION TEST	VALUE	REFERENCE RANGE
T_3	1.53 ng/ml	0.87 – 2.73 ng/ml
T_4	7.86 ug/dl	6.09 – 12.23 ug/dl
TSH	10.7 µIU/ml	0.35 – 5.60 µIU/ml

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Patient 13:-

NAME : Kabita Das		
AGE/GENDER : 42 YEARS/ FEMALE		
THYROID FUNCTION TEST	**VALUE**	**REFERENCE RANGE**
TSH	19.4 µIU/ml	0.35 – 5.60 µIU/ml

Patient 14:-

NAME : Urmila Mohanty		
AGE/GENDER : 40 YEARS/ FEMALE		
THYROID FUNCTION TEST	**VALUE**	**REFERENCE RANGE**
T_3	1.53 ng/ml	0.87 – 2.73 ng/ml
T_4	7.86 ug/dl	6.09 – 12.23 ug/dl
TSH	10.7 µIU/ml	0.35 – 5.60 µIU/ml

Patient 15:-

NAME : Anusaya Das		
AGE/GENDER : 25 YEARS/ FEMALE		
THYROID FUNCTION TEST	**VALUE**	**REFERENCE RANGE**
TSH	121.8 µIU/ml	0.35 – 5.60 µIU/ml

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Patient 16:-

<div align="center">

NAME : Sarmistha Singh

AGE/GENDER : 18 YEARS/ FEMALE

</div>

THYROID FUNCTION TEST	VALUE	REFERENCE RANGE
T_3	1.55 ng/ml	0.87 – 2.73 ng/ml
T_4	7.86 ug/dl	6.09 – 12.23 ug/dl

Patient 17:-

<div align="center">

NAME : Saipalabi Das

AGE/GENDER : 23 YEARS/ FEMALE

</div>

THYROID FUNCTION TEST	VALUE	REFERENCE RANGE
T_3	0.95 ng/ml	0.87 – 2.73 ng/ml
T_4	7.86 ug/dl	6.09 – 12.23 ug/dl
TSH	10.73 µIU/ml	0.35 – 5.60 µIU/ml

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RESULTS AND DISCUSSION

Identification of thyroid disease becomes most important and vital process in our day to day life of many patients in certain cases, it becomes a difficult task from both clinical diagnosis and statistical classification point of view. The poor performance of the traditional model based statistical methods and due to large number of interrelated patient attributes as well as extremely unbalanced group in the thyroid diagnosis problem complicates the relationship between these attributes and the patient true group membership. After the emergence Artificial Neural network (ANN) is a modeling technique exclusively used for complex functional mapping and showed progressiveness in the diagnosing process thyroid disease. After the emergence of artificial neural network, many researchers used different proportionate in order the diagnose thyroid disease in a most appropriate manner. Each of the researchers had performed different methodologies with a different objective but finally they focus on finding the accuracy and impact of thyroid diseases had not changed yet, still they do try different and wider context but eventually they all are working towards identifying the best suitable and appropriate methodology for diagnosing thyroid diseases with a fullest efforts.

Conclusion

The pathology of the thyroid gland presents the pathologist with a particular set of diagnostic problems. If best practice and the minimum data set guidelines are adhered to, the correct diagnosis should be reached in most cases. Newer techniques such as immunocytochemistry can certainly be helpful in more difficult cases but, as in all areas of pathology, histological features take precedence and good communication with the relevant clinical colleagues is paramount.

Most of the researchers focused on artificial neural networks as a diagnosing tool to increase the accuracy of performance. There was no appropriate selection of artificial neural networks architecture which certainly affects the network performance wherein it is to perform effectively to reach the high accuracy. In this study, we had identified and found the various type of appropriate architecture and techniques where in the correct selection of diagnosing will ensure the accuracy and the network complexity can be reduced, so as to achieve the best result by comparing their performance to reach the best possible. This study will certainly help the academicians and researchers to take forward a step towards identifying the best suitable and most widely used method of diagnosing thyroid diseases in a wider context.

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STUDY OF PREVALENCE OF DIABETES MELLITUS IN DERABISH BLOCK

DESSERTATION SUBMITTED IN PARTIAL FULFILLMENT OF THE BACHELOR'S DEGREE IN ZOOLOGY

ZOOLOGY : 2020-2023

Submitted by:

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B.Sc(Zoology), 6th Semester-2023

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CERTIFICATE

This is to satisfy that SUSHREE SANGITA JENA has successfully completed and submitted the Bachelor's of science project entitled THE STUDY OF PREVALENCE OF DIABETES MELLITUS IN DERABISH BLOCK on 29 May 2023.

The project was conducted under the guidance of MS. SUBHASHREE BEHERA who has supervised the research work and provided the necessary guidance throughout the project. The project was undertaken by the student as a partial fulfilment of the requirements for the award of Bachelor's degree in DERABISH DEGREE COLLEGE from DERABISH.

Guide teacher

Principal
Derabish College, Derabish

Ms. Subhashree Behera

Lecturer of zoology

Derabish degree college, Derabish

DECLARATION

I do hereby declare that the present dissertation "STUDY OF PREVALENCE OF DIABETES MELLITUS IN DERABISH BLOCK : REVIEW " is an original work carried out by me in the laboratory of zoology department, Derabish Degree College, Derabish, Kendrapara and has not been published and submitted in the part or full ,for any other degree in any college or institution.

13 May 2023

Derabish degree college,

Derabish , Kendrapara

Sushree sangita jena

(SUSHREE SANGITA JENA)

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Sushree Sangita Jena

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CONTENTS

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2. REVIEW AND LITERATURE

In 2015, there was a study conducted by Appajagol et al in Northern Karnataka, point of care blood glucose testing tool improved screening of diabetes mellitus type 2.

Kumar et al. in 2013 study about the high prevalence rate of thyroid dysfunctions was found in type 2 diabetes mellitus patients in Karnataka.

In Karnataka, Kodali and Alberti in 1995, was study in the influence of diabetes mellitus in rural-rural migrants was analyzed. Its adult population of age above 30 years, diabetes prevalence more in the rural-rural migrants than the indigenous population.

Panat et al. in 2013 on diabetes was found to be male sex specific and in females, diabetes incidences were coinciding with the menopause period.

In 2013, the study was conducted by Chaudhary et al. in Manipur lean type 2 diabetes mellitus hand low prevalence among diagnosed diabetic patients.

In North India, Bhadada et al. in 2011 conducted by the study of celiac disease prevalence is higher in patients of type 1 diabetes mellitus (11.1%).

In Central India, there was a study conducted by Taksande et al. in 2012, where he studied sensitivity and specified Indian Diabetes Risk Score (IDRS) which consists of factors like age, physical inactivity, family history and abdominal obesity was 97.50% and 87.89% respectively in predicting diabetes mellitus.

There was a study conducted by Jonas et al. 2010 where he studied about the evidence of diabetes were 5.6% or 0.5% in patients of age above 30 years which were lower than Urban population.

The study was conducted by Rajput et.al in 2013, the prevalence of gestational diabetes mellitus in Haryana. The result so obtained that gestational diabetes mellitus was found to be 7.1% in women where as the factors like pre-pregnancy weight, BMI weight gain family history, age, educational levels where found to be strongly associated with gestational diabetes mellitus.

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4. AIM AND OBJECTIVE:-

This article focuses on the types of diabetes mellitus as well as the block.

The objective of the current study is:

- To study the types of diabetes i.e. type 1 and type 2 diabetes as well as the effect of insulin levels on it.
- To study the symptoms of this disease
- To study the blood glucose level fluctuations in the collected sample.
- To study the causes of the disease.
- To study the nature of diabetes

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Case 2

Name- Saraswati Swain

Age- 43 years

Gender- Female

Symptoms Shown-

a. Weight gain

b. More thirst

c. Low vision

TABLE 2

Test	Result	Unit	Reference
FBS	142	Mg/dl	70/110
PPBs	294	Mg/dl	70/140
HDL	45	Mg/dl	40/88
LDL	80	Mg/dl	0/150

Test result- Type 2 diabetes.

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Case 3

Name- Kunia Sahoo

Age- 67 years

Gender- Male

Symptoms Shown-

a. Blurry Vision

b. Frequent Urination

c. More hunger

TABLE 3

Test	Result	Unit	Reference
FBS	160	Mg/dl	70/110
PPBS	220	M/dl	70/140
HDL	47	M/dl	40/88
LDL	86	M/dl	0/150

Test result- Type 2 diabetes.

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Case-4

Name- Manguli Rout

Age- 67 years

Gender- Male

Symptoms Shows-

a. Blurry vision
b. Bed wetting
c. More thirst

TABLE 4

Test	Result	Unit	Reference
FBS	200	Mg/dl	70/110
PPBS	310	Mg/dl	70/140
HDL	42	Mg/dl	40/88
LDL	102	Mg/dl	0/150

Test Result- Type 1 diabetes.

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Case-6

Name- Swarnalata Padhi

Age- 76 years

Gender- Female

Symptoms shown-

a. Low Vision
b. More Thirst
c. Frequent Urination

TABLE 6

Test	Result	Unit	Reference
FBS	135	Mg/dl	70/110
PPBS	190	Mg/dl	70/140
HDL	40	Mg/dl	40/88
LDL	82	Mg/dl	0/150

Test result – Type 2 diabetes.

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Case 7

Name- Sitakanta Jena

Age- 67 years

Gender- Male

Symptoms Shown-

a. Weight gain
b. Frequent Urination
c. More hunger

TABLE 7

Test	Result	Unit	Reference
FBS	132	Mg/dl	70/110
PPBS	190	Mg/dl	70/140
HDL	48	Mg/dl	40/88
LDL	89	Mg/dl	0/150

Test Result- Type 2 diabetes.

Case 8

Name- Rajkishore Jena

Age- 54 years

Gender- Male

Symptoms Shown-

a. Weight Loss
b. More hunger and thiest
c. Low vision

TABLE 8

Test	Result	Unit	Reference
FBS	130	Mg/dl	70/110
PPBS	210	Mg/dl	70/140
HDL	49	Mg/dl	40/88
LDL	92	Mg/dl	0/150

Test result- Type 2 diabetes.

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Case 9

Name- Ranjit Mohanty

Age- 35 years

Gender- Female

Symptoms Shown-

a. Increased thirst

b. More frequent Urination

c. Vomiting

TABLE 9

Test	Result	Unit	Reference
FBS	180	Mg/dl	70/110
PPBS	270	Mg/dl	70/140
HDL	44	Mg/dl	40/88
LDL	84	Mg/dl	0/150

Test result- Gestational diabetes.

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Case 12

Name- Sangita Singh

Age- 17 years

Gender- Female

Symptoms Shown-

a. Weakness

b. Bed wetting

c. Frequent urination

TABLE 12

Test	Result	Unit	Reference
FBS	195	Mg/dl	70/110
PPBS	280	Mg/dl	70/140
HDL	51	Mg/dl	40/88
LDL	195	Mg/dl	0/150

Test result- Type 1 diabetes.

Case 13

Name- Nirmala Jena

Age- 77 years

Gender- Female

Symptoms Shown-

a. Weight gain
b. Low vision
c. Feeling more hungry

TABLE 13

Test	Result	Unit	Reference
FBS	168	Mg/dl	70/110
PPBS	234	Mg/dl	70/140
HDL	52	Mg/dl	40/88
LDL	98	Mg/dl	0/150

Test result- Type 2 diabetes.

Case 14

Name- Tushar Ranjan Das

Age- 54 years

Gender- Male

Symptoms Shown-

a. Frequent Urination
b. Blurry vision
c. Feeling thirst

TABLE 14

Test	Result	Unit	Reference
FBS	148	Mg/dl	70/110
PPBS	204	Mg/dl	70/140
HDL	45	Mg/dl	40/88
LDL	96	Mg/dl	0/150

Test result- Type 2 diabetes.

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Case 15

Name- Sridhar Dandapat

Age- 49 years

Gender- Male

Symptoms Shown-

a. Weakness

b. Blurry vision

TABLE-15

Test	Result	Unit	Reference
FBS	140	Mg/dl	70/110
PPBS	210	Mg/dl	70/140
HDL	47	Mg/dl	40/88
LDL	97	Mg/dl	0/150

Test result- Type 2 diabetes.

EFFECT OF THYROID HORMONE IN AMPHIBIAN METAMORPHOSIS: A REVIEW

Dissertation submitted in partial fulfilment of the
BACHELOR DEGREE (SCIENCE)
ZOOLOGY (2022)

Submitted by:
SAGAR MALIK
Roll No – 1902010840180057

Under the guidance of

Mr. ARDHENDU SEKHER MALLICK

Principal
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DERABISH DEGREE COLLEGE, DERABISH, KENDRAPARA

Ardhendu Sekher Mallick, M.phil

Lecturer

Certificate

This is to certify that the investigations reported in this dissertation entitled "Effects of Thyroid Hormone in Amphibian Metamorphosis; a review" has been conducted by Sagar Malik under my supervision in the Department of Zoology, Derabish Degree College, derabish, Kendrapara. The work reported herein is original and has not been submitted in part or full to this or any other College for Degree.

There is nothing in his habits and character which may debar him from the Bachelor of Science Zoology completion certificate.

Ardhendu Sekher Mallick

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DECLARATION

I do hereby declare the present dissertation entitled "Effect Of Thyroid Hormone In Amphibian Metamorphosis "A Review" & an original work carried out by we in the laboratory of Zoology Department. Derabish Degree College Derabish, Kendrapada , and has not been published or submitted in part of full for any other degree in any college institution .

Sagar Malik

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ACKNOWLEDGEMENT

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I

MALNUTRITION: CAUSES AND CONSEQUENCES

DISSERTATION SUBMITTED IN PARTIAL FULFILLMENT OF THE BACHELOR'S DEGREE IN ZOOLOGY

ZOOLOGY (2020-2023)

SUBMITTED BY:-

JAGANNATH MALI K

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This is to certify that JAGANNATH MALIK has successfully completed and submitted the Bachelors of Science Project entitled MALNUTRITION: CAUSES AND CONSEQUENCES to DERABISH COLLEGE, DERABISH, KENDRAPARA on 15/05/2023

The project was conducted under the guidance of MISS SUBHASHREE BEHERA, who has supervised the research work and provided the necessary guidance throughout the project. The project was undertaken by the student as a partial fulfillment of the requirements for the award of the Bachelor's degree in zoology from DERABISH DEGREE COLLEGE, DERABISH.

Subhashree Behera

Lecturer in Zoology

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DECLARATION

I do hereby declare that the project work entitled ""MALNUTRITION CAUSES AND CONSEQUENCES is an original work carried out by me, submitted to DERABISH DEGREE COLLEGE, DERABISH, KENDRAPARA, and has not been published or Submitted in the part or full, for any other degree in any college or institution.

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ACKNOWLEDGEMENT

I would like to express my heartfelt gratitude to my guide teacher, MISS SUBHASHREE BEHERA, her unwavering support and guidancethroughout the course of this project.

Without her constant encouragement and insightful feedback, this project would not have been possible. Her expertise in the field andwillingness to share her knowledge have been invaluable to me.

I would also like to thank my family and friends for their unwaveringsupport and encouragement throughout this project.

Finally, I would like to thank DERABISH DEGREE COLLEGE, DERABISH forproviding me with the opportunity to pursue this Bachelor's of Science program and for equipping me with the knowledge and skills needed tocomplete this project successfully.

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CONTENTS

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CRITICALLY ENDANGERED SPECIES IN INDIA

DISSERTATION SUBMITTED IN PARTIAL, FULFILLMENT OF BACHELOR'S DEGREE IN ZOOLOGY{2023}

SUBMITTED BY :
MAHAPRASAD DAS
ROLL NUMBER : 2002010840180045

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DEPARTMENT OF ZOOLOGY

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ଡେରାବିସ ମହାବିଦ୍ୟାଳୟ, ଡେ ଭାର୍

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This is to satisfy that **MAHAPRASAD DAS** has successfully and completed and submitted the Bachelor's of science project entiled The **THE CRITICALLY ENDANGERED SPECIES IN INDIA** on date :- 13|05|22

The project was conducted under the guidance of **MS. SHUBHASHREE BEHERA** who has supervised the research work and provided guidance throughout the project .The project was undertaken by the student as a partial fulfillment of the requirements for the award of Bachelor's degree in *DERABISH* DEGREE COLLEGE from **DERABISH.**
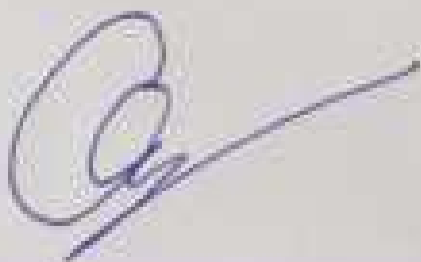
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Guide Teacher 13|05|23

Ms. Shubhashree Behera

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DECLARATION

I do hereby declare that the present disseration **"THE CRITICALLY ENDANGERED SPECIES IN INDIA: REVIEW"** is an original work carried out by me in the laboratory of Zoology department, Derabish Degree College,Derabish kendrapara and has not been published and submitted in the part or full, for any other degree in any college or institution.

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ACKNOWLEDGMENT

I would like to express my heart felt gratitude to my guide, **MS. SHUBHASHREE BEHERA. For** her unwavering support and guidance throughout the course of this project.

Without her constant encouragement and in rightful feedback, this project would not have been possible Her expertise in the field and willingness to share her knowledge have been invaluable to me.

I would also thank my family an friend for their unwavering support and encouragement throughout this project.

Finally, I would like to thank **"UTKAL UNIVERSITY"** for providing me with the opportunity to pursue this bachelor's of science program and equipping me with the knowledge and skills needed to complete this project successfully.

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ABSTRACT

India is home to a rich diversity of wildlife, including many critically endangered species that are at risk of extinction. Some of the most critically endangered animals in India include the Bengal tiger, the Indian rhinoceros, the Asiatic lion, the snow leopard, the Indian elephant, the blackbuck, the red panda, and the gharial. These species face threats from habitat loss, poaching, and human-wildlife conflict. Conservation efforts, including protected areas, anti-poaching measures, and community involvement, are crucial to preserving these species and their ecosystems for future generations. Unfortunately, many of India's animal species are threatened due to a range of human activities. One major threat is habitat loss and fragmentation caused by human development such as agriculture, mining, and urbanization. This often leads to wildlife being forced into smaller and more isolated habitats, which can reduce their genetic diversity and increase their vulnerability to other threats.

CONTENTS

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INTRODUCTION

An endangered species is a species that is very likely to become extinct in the near future either world wide or in a particular political jurisdiction. As of 2021, of the 120,372 species currently tracked by the IUCN, there are 8,404 species that are considered to be Critically Endangered (IUCN Red list Retrieved November 17,2021). As the IUCN Red List does not consider a species extinct until extensive, targeted surveys have been conducted, species that are possibly extinct are still listed as Critically Endangered. IUCN maintains a list (IUCN Red list.org Retrieved 2017-12-10) of "possibly extinct" and "possibly extinct in the wild" species, modelled on categories used by BirdLife International to categorize these taxa. The IUCN Red List provides the public with information regarding the conservation status of animal, fungi, and plant species (IUCN Red list Retrieved August 13,2020). It divides various species into seven different categories of conservation that are based on habitat range, population size, habitat, threats, etc. Each category representing a different level of global extinction risk. Species that are considered to be Critically Endangered are placed within the "threatened" category (National Geography March 17,2011. Retrieved August 13. 2020). Critically Endangered in the Red List, a species must meet any of the following criteria:

A: Population Size Reduction

1. The rate of reduction is measured either over a 10 year span or across three different generations within that species.
2. If the reasons for population reduction no longer occur and can be Reversed, the population needs to have been reduced by at least 90%
3. If not, then the population needs to have been reduced by at least 80%

B: Reduction Across a Geographic Range.

1.This reduction must occur over less than 100 km² OR the area of occupancy is less 10km2

    I.   Severe habitat fragmentation or exiting at just location

    II.   Decline in extent of occurance , area of occupancy , area /extent /quality of habitat ,number of location /subpopulation

    III.   Population Decline .

C: Population Size Reduction

1.The population size must be reduced to numbers of less than 50 MI.

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A

REVIEW AND LITARATURE

"Conserving India's Forest: An Overview of Forest Conservation Efforts in India with Case Studies "edited by Ajay Rastogi: This book provides an overview of forest conservation efforts in India including the protection of critically endangered species. The author highlights the importance of conserving forest as habitat for these animals and provide case studies of successful incitive in various parts of the country.

Sawfish: A Global Strategy for conservation "by Nick Delvy, Rachel C. Cavanagh and Senja V. Fordham. This book provides an overview of of the biology, ecology and conservation status of the large tooth sawfish. It also provides recommendations for conservation action and policy initiatives to protect sawfish populations around the world.

The Gharial "by Romulus Whitaker-This book provide a detailed account of the biological, behavior, and conservation of the gharial, a critically endangered species of crocodile found in India

"Wildlife conservation in India" by Asad R. Rahmani. This book covers a wide range topic, including the history of conservation in India, the various laws and policies related to wildlife conservation and the challenges facing conservation efforts in the country Rahmani also provides detailed profiles of some of the most critically endangered species in Indi

"Leatherback turtles: The last Giants" by Shanker. This book provides an in depth look at the biology and conservation of Leatherback turtles, including their current status and threats to their survival. Overall, these books provide valuable insights in to the critically endangerment of animal species in India and the urgent need for conservation efforts to save them from extinction.

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AIM AND OBJECTIVE

The article focuses on the various critically endangered animal species of India.

The objective of the current study is:

I. To study those species which are critically endangered and have greater chances to be extinct in the future.

II. To study these specie's habit, habitat, weather and food preference.

III. To study their cause for being endangered.

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MATERIALS AND METHODS:

I. The critically endangered species in India based on IUCN Red List are identified and the literature is collected regarding them.

II. The data on population, habitat and threats to each species are collected

III. The interviews with experts and stakeholders are conducted to gather insights into conservation efforts and challenges for each species.

IV. The prioritization framework is developed for Conservation efforts based on urgency of the threat, feasibility of conservation measure and potential impact on the species.

V. The effectiveness of current conservation efforts based on finding are evaluated.

D

MAMMALS

1. The **Pygmy Hog** (*Porcula salvania*) is the world's smallest wild pig, with adults weighing only 8 kgs. This species constructs a nest throughout the year. It is one of the most useful indicators of the management status of grassland habitats. The grasslands where the Pygmy hog resides are crucial for the survival of other endangered species such as Indian Rhinoceros (*Rhinoceros unicornis*), Swamp Deer (*Cervus duvauceli*), Wild Buffalo (*Bubalus arnee*), Hispid Hare (*Caprolagus hispidus*), Bengal Florican (*Eupodotis bengalensis*) and Swamp Francolin (*Francolinus gularis*). In 1996, a captive-breeding programme of the species was initiated in Assam, and some hogs were reintroduced in Sonai Rupai area in 2009.

* **Pygmy hog-sucking Louse** (*Haematopinus oliveri*), a parasite that feeds only on Pygmy Hogs will also fall in the same risk category of critically endangered as its survival is linked to that of the host species.

Habitat: Relatively undisturbed, tall 'terai' grasslands.

Distribution: Formerly, the species was more widely distributed along the southern Himalayan foothills but now is restricted to only a single remnant population in Manas Wildlife Sanctuary and its buffer reserves.

Threats: The main threats are loss and degradation of grasslands, dry-season burning, livestock grazing and afforestation of grasslands. Hunting is also a threat to the remnant populations.

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2-4. **Andaman White-toothed Shrew** (*Crocidura andamanensis*), **Jenkin's Andaman Spiny Shrew** (*Crocidura jenkinsi*) and the **Nicobar White-tailed Shrew** (*Crocidura nicobarica*) are endemic to India. They are usually active by twilight or in the night and have specialized habitat requirements.

Habitat: Leaf litter and rock crevices.

Distribution: The Andaman White-toothed Shrew is found on Mount Harriet in the South Andaman Islands. The Jenkin's Andaman Spiny Shrew is found on Wright Myo and Mount Harriet in the South Andaman Islands.

The Nicobar White-tailed Shrew (*Crocidura nicobarica*) is found in the southern tip of Greater Nicobar Island and is also recorded in the area extending from the Campbell Bay National Park to the Galathea River in the Andaman and Nicobar Islands.

Threats: Habitat loss due to selective logging, natural disasters such as the tsunami and drastic weather changes.

Andaman White-toothed Shrew
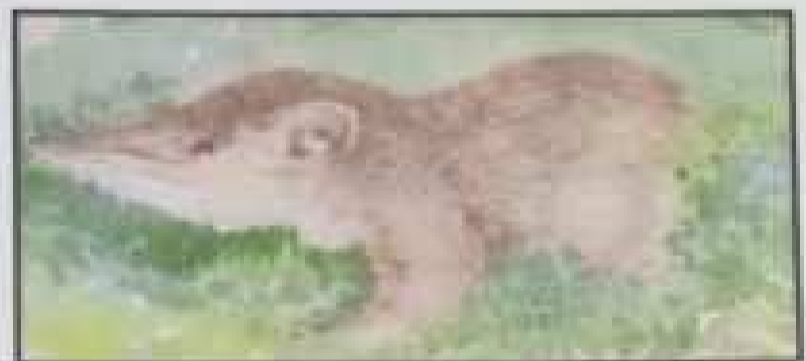
Jenkin's Andaman Spiny Shrew
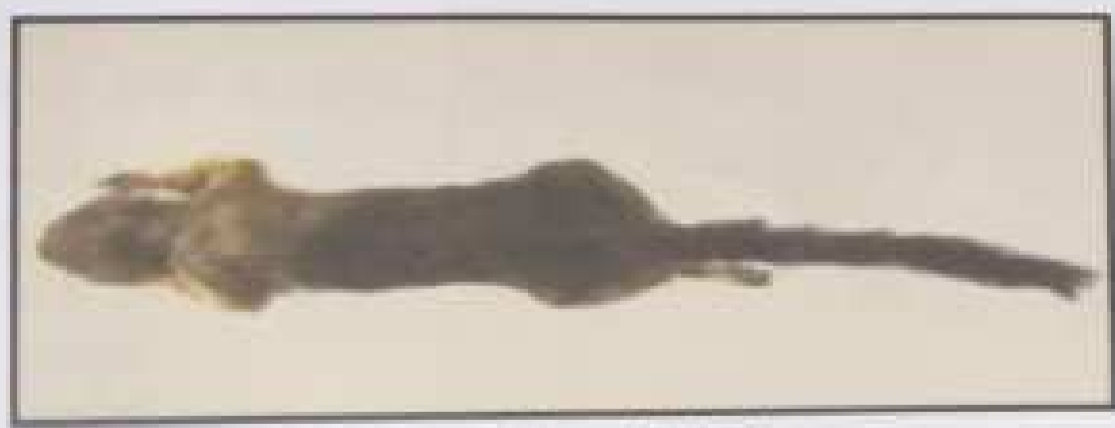
Nicobar White-tailed Shrew

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5. **Kondana Rat** (*Millardia kondana*) is a nocturnal burrowing rodent that is found only in India. It is sometimes known to build nests.

Habitat: Tropical and subtropical dry deciduous forests and tropical scrub.

Distribution: Known only from the small Sinhagarh Plateau (about one km^2), near Pune in Maharashtra. Reported from an elevation of about 1,270 m above mean sea level.

Threats: Major threats are habitat loss, overgrazing of vegetation and disturbance from tourism and recreational activities.

6. The **Large Rock Rat** or **Elvira Rat** (*Cremnomys elvira*) is a medium sized, nocturnal and burrowing rodent that is endemic to India.

Habitat: Tropical dry deciduous shrubland forest, seen in rocky areas.

Distribution: Known only from Eastern Ghats of Tamil Nadu. Recorded from an elevation of about 600 m above mean sea level.

Threats: Major threats are habitat loss, conversion of forests and fuel wood collection.

7. The **Namdapha Flying Squirrel** (*Biswamoyopterus biswasi*) is a unique(the only one in its genus) flying squirrelthat is restricted to a single valley in the Namdapha Tiger Reserve in Arunachal Pradesh.

Habitat: Tropical forest.

Distribution: Found only in Namdapha Tiger Reserve in Arunachal Pradesh.

Threats: Hunted for food.

8. The **Malabar Civet** (*Viverra civettina*) is considered to be one of the world's rarest mammals. It is endemic to India and was first reported from Travancore, Kerala. It is nocturnal in nature and found exclusively in the Western Ghats.

Habitat: Wooded plains and hill slopes ofevergreen rainforests.

Distribution: Western Ghats.

Threats: Deforestation and commercial plantations are major threats.

9-10. The **Sumatran Rhinoceros** (*Dicerorhinus sumatrensis*) is the smallest and most endangered of the five rhinoceros species. It is now thought to be regionally extinct in India, though it once occurred in the foothills of the Himalayas and north-east India. The **Javan Rhinoceros** (*Rhinoceros sondaicus*) is also believed to be extinct in India and only a small number survive in Java and Vietnam.
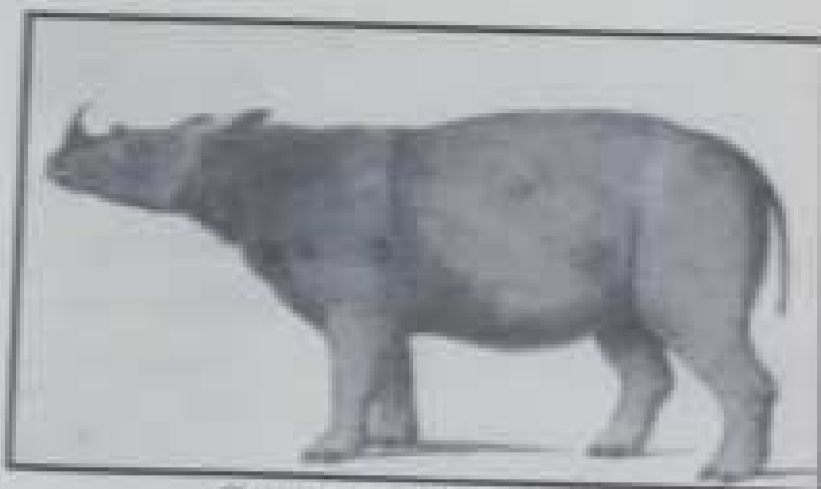
Sumatran Rhinoceros
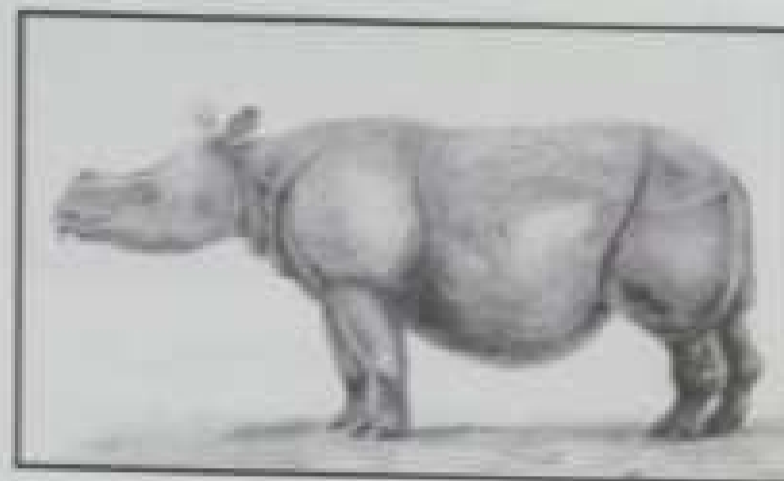
Javan Rhinoceros

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REPTILES

1. The **Gharial** (*Gavialis gangeticus*) is the most uniquely evolved crocodilian in the world, a specialized, river-dwelling, fish-eater. The dire condition of the gharial reflects the tragedy of our rivers, where we stand to not only lose other endangered taxa such as the Ganges River Dolphin (*Platanista gangetica*) but also the use of their waters for human consumption and other needs.

Andrew Leith Adams (1867) wrote: "abounds in all the great rivers of Northern India...Ten or twenty may be frequently seen together."

Habitat: Clean rivers with sand banks.

Distribution: Only viable population in the National Chambal Sanctuary, spread across three states of Uttar Pradesh, Rajasthan and Madhya Pradesh in India. Small non-breeding populations exist in Son, Gandak, Hoogly and Ghagra rivers. Now extinct in Myanmar, Pakistan, Bhutan and Bangladesh.

Threats: The combined effects of dams, barrages, artificial embankments, change in river course, pollution, sand-mining, riparian agriculture and ingress of domestic and feral livestock caused irreversible loss of riverine habitat and consequently of the gharial.

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2. The **Hawksbill Turtle** (*Eretmochelys imbricata*) is a heavily exploited species. The species is migratory in nature and nesting occurs in about 70 countries across the world. Maturation is slow and is estimated between 25 – 40 years.

Habitat: Nesting occurs on insular, sandy beaches.

Distribution: In India they are found in the Andaman and Nicobar Islands, the coast of Tamil Nadu and Orissa.

Threats: Turtle shell trade, egg collection, slaughter for meat, oil pollution and destruction of nesting and foraging habitats.

3. **Four-toed River Terrapin or River Terrapin** (*Batagur baska*) is a critically endangered turtle. The omnivorous diet of the river terrapin and other terrapin species makes them an essential part of the efficient clean-up systems of aquatic habitats.

Habitat: Freshwater rivers and lakes.

Distribution: Bangladesh, Cambodia, India, Indonesia and Malaysia.

Threats: Use of flesh for medicinal purposes, demand for eggs, which are considered a delicacy.

4. **The Leatherback Turtle**
(*Dermochelys coriacea*) is the largest of the living sea turtles, weighing as much as 900 kg. Adult leatherback turtles are excellent swimmers. They swim an average of 45-65 km a day, travel upto 15,000km per year and can dive as deep as 1200 m. Jellyfish is their primary food. The population spikes of leatherbacks coincide with abundance of jellyfish,

making them important top-predators in marine environments.

Habitat: Tropical and subtropical oceans .

Distribution: Found in tropical and temperate waters of the Atlantic, Pacific, and

Indian Oceans.

Threats:

High sea fishing operations, harvesting of eggs, destruction of nests by wild predators and domesticated species such as cats, dogs and pigs. Artificial lighting disorients hatchlings and adults and causes them to migrate inland rather than towards the sea. Threats to habitat includeconstruction, mining and plantation of exotics.

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5. **Red-crowned Roofed Turtle** or the Bengal Roof Turtle (*Batagur kachuga*) is a critically endangered turtle mainly restricted to the Ganga basin. Males have a bright red coloration during the breeding season.

   Habitat: Deep, flowing rivers but with terrestrial nest sites.

   Distribution: Found in India, Bangladesh and Nepal. In India it resides basically in the watershed of the Ganga.

   Threats: Water development projects, water pollution, human disturbance and poaching for the illegal wildlife market.

6. **Sispara day gecko** (*Cnemaspis sisparensis*) is a large gecko which dwells usually in forests, it is largely insectivorous and is active by night.

   Distribution: Endemic to Western Ghats, and found in Sispara, Nilgiris, Kavalai near Cochin.

   Threats: Habitat conversion and modification.

AMPHIBIANS

1. The **Anamalai Flying Frog** (*Rhacophorus pseudomalabaricus*) is confined to rainforests of south-western Ghats and lives at elevations greater than 1,000 m above mean sealevel.

   Distribution: It is found in AndiparaiShola, Pudothottam and the AnamalaiHills of Tamil Nadu and Kerala.

   Threats: Conversion of forest to cultivated land (including timber and non-timber plantations) outside the Indira Gandhi National Park, and extraction of woodand timber by local people are the major threats to this species.

2. The **Gundia Indian Frog** (*Indirana gundia*) is found at an elevation of around 200 m above mean sea level.

   Distribution: Known only to exist in Gundia, Kempholey in the Western Ghats region of Karnataka, South India.

   Threats: Habitat loss caused dueto intensive livestock production, harvesting of wood and timber by local people, road construction, andthe development of tourism facilities.

3. The **Kerala Indian Frog** (*Indirana phrynoderma*) is found at elevations of around 900 m above mean sea level. Due to the presence of prominent warts and tubercles of various sizes and glandular folds on its dorsal surface, it is commonly also known as the toad-skinned frog.
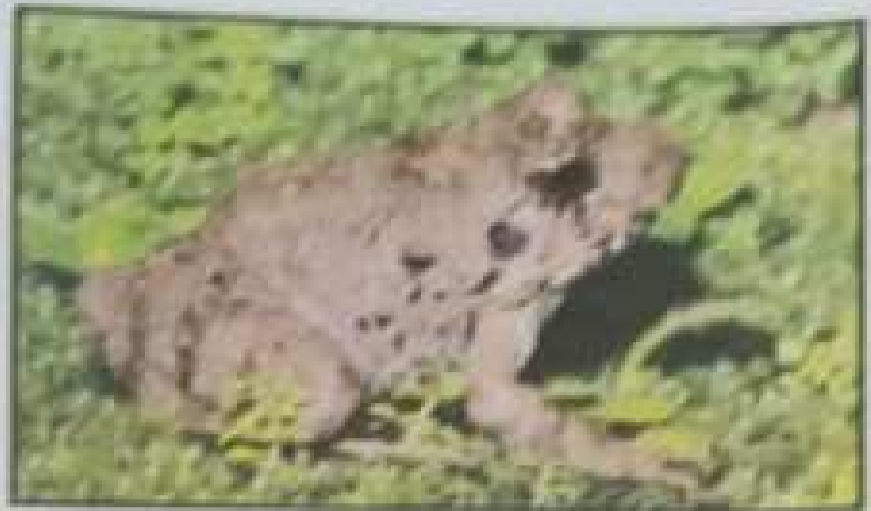
Distribution: Anamalai Hills of Kerala and Tamil Nadu in the Western Ghats of south India.

Threats: Habitat loss due to subsistence wood collection is the major threat to this species.

4. The **Charles Darwin's Frog** (*Ingeranacharlesdarwini*) is found at elevations below 500 m above mean sea level.
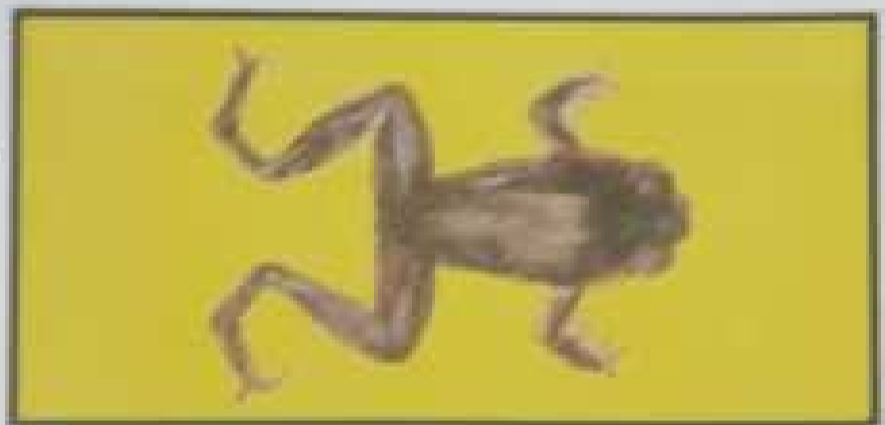
Distribution: This species is currently restricted to its type locality of Mount Harriet in South Andaman Island and Saddle Peak in the North Andaman Island, India.

Threats: Clear felling of forest

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5. The **Kottigehar Bubble nest Frog** (*Micrixalus kottigeharensis*) is only known to occur in Kottigehar, Kadur in Western Ghats of Karnataka state. Its distribution is restricted to elevation around 1000 m above mean sea level.

Distribution: This species is known to occur in Kottigehar, Kadur in the Hassan district and Bhadra in Chikamangalur district, Karnataka, India.

Threats: Habitat loss as a result of conversion to agriculture, including paddy fields and cash crops such as coconut and cashew.

6.. The **Amboli Bush Frog** (*Pseudophilautusamboli*) was recently discovered in 2009 in Amboli forest in the Western Ghats of Maharashtra. It is found at elevationsranging from 550 m to 940 m above mean sea level.

Distribution: This species has been recorded from its type locality of Amboliforest, Sawantwadi district; and Amba, Kolhapur district of Maharashtra; Londa, Belgaum district, Jog Falls-Mavingundi, Shimoga district, Castle Rock, Uttara Kannada district, Kudremukh-Malleshwaram, Chikamangalur districtof Karnataka.

Threats: Habitat loss and fragmentation due to urbanization and tourism development are themajor threats to this species.

7. The **Chalazodes Bubble** Frog (*Raorchestes chalazodes*) was described in 1876 based on a female specimen, from "Travancore", south India. There was no authentic report of this species since 1876 until its rediscovery in Febuary 2011.

   Distribution: All recorded specimens have been from the Western Ghats, India.

   Threats: Conversion of forest to intensively cultivated areas.

8. The **Small Bush Frog** (*Raorchestes chotta*) is the smallest bush frog found in India with a snout to vent length of 1.7 cm only. It was recently discovered in 2009 in Ponmudi, Kerala in the Western Ghats. It is found at elevation of 980 m above mean sea level.

   Distribution: Known only to occur in Ponmudi in Thiruvananthapuram district of Kerala, south India.

   Threats: Extensive tea and Acacia plantations threaten the habitat of this species. While the species has been found to occur in abandoned plantations, its decline suggests that this species may not be tolerant to habitat changes or other unknown and less obvious threats.

9. The **Green-eyed Bush Frog** (*Raorchestes chlorosomma*) was discovered in 2009 from Munnar in Idukki district of Kerala. This species has greyish green iris with irregular brown lines, bordered by a blue ring.

Distribution: Known only to occur in the type locality of Munnar, Idukki district, Kerala in the Western Ghats of South India.

Threats: Extensive degradation of habitat by large-scale tea, eucalyptus and wattle plantations. The expanding tourism industry is also becoming a cause of concern. Though the species seems to be adaptable, its tolerance to degraded habitats is not precisely known.

10. The **Griet Bush Frog** (*Raorchestes griet*) is a small frog of snout to vent length ranging from 2-2.2 cm only. This species occurs at elevations between 600–1, 800 m above mean sea level.

Distribution: Munnar, Devikulam and Vagaman in Idukki district of Kerala; and Anamalai Hills and Valparai in Coimbatore district of Tamil Nadu.

Threats: Habitat fragmentation due to tea and eucalyptus plantations. It is not likely to survive in the face of extensive habitat loss.

11. The **Kaikatt's Bush Frog**
(*Raiorchestes kaikatti*) was
discovered in 2009 from Kaikatti-
Nelliyampathi, in the Western
Ghats of Kerala. This species occurs
at an altitude of 1000 m above mean
sea level.

Distribution: Known only to
occur in the type locality Kaikatti-
Nelliyampathi in Palakkad district
of Kerala, south India. It is
believed to be endemic to the
Nelliyampathi Hills.

Threats: Habitat loss and
fragmentation due to small and
large-scale agricultural practices
and infrastructure development for
tourism over the past five years.

12. The **Mark's Bush Frog**
(*Raorchestes marki*) was discovered
in 2009 from Kaikatti-
Nelliyampathi, in the Western
Ghats of Kerala. This species is
found at an altitude of 1000 m above
mean sea level. Mark's Bush frog
is a small frog with snout to vent
length ranging between 2.1-3 cm
only.

Distribution: Currently known to occur only in Kaikatti-Nelliyampathi in Palakkad district, Kerala, India.

Threats: Habitat loss and fra fragmentation due to small and large-scale agricultural practices. infrastructure development and construction for tourism over the last five years. However, adaptability of this species to disturbed environments is not known.

13. The **Munnar Bush Frog**
(*Raorchestes munnarensis*) was
discovered in 2009 from Munnar
in Idukki district of Kerala. It is
found at an elevation of about
1,400m above mean sea level.

Distribution: Currently known
only to occur in two locations,
Devikulam and Munnar, Idukki
district, Kerala, south India.

Threats: Habitat clearance for
tea andeucalyptus plantations. This
threat is very
serious as there are no other known areas in the surrounding region that could be
considered assuitable habitat for the species.

14. The **Large Ponmudi Bush Frog**
(*Raorchestesponmudi*) is the largest
bush frog of Indiawith a snout to
vent length upto 4 cm.

Distribution: Ponmudi and
AgasthyamalaHills,
Thiruvananthapuram district, Gavi,
Pathanamthitta district, Vagaman,
Idukki district., Wayanad Plateau,
Kalpetta, Mananthavady and
Sultan's Battery, Wayanad district
of Kerala; Anamalai Hills and
Valparai, Coimbatore district,
Tamil Nadu.

Threats: Habitat decline and the rate of forest loss is likely to further intensify due to
the expansionof surrounding tea plantations.

15. The **Resplendent Shrub Frog** (*Raorchestesresplendens*) was described in 2010 to occur in Anamudi Summit, Eravikulam National Park in the Western Ghats. The Resplendent Shrub Frog is a unique bush frog having brick red dorsal skin with black irregular furrows and prominent glands. This is the highest elevation bush frog reported from the Western Ghats from an altitude of 2,695 m above mean sea level.

Distribution: Currently known to occur in Anamudi Summit, Eravikulam National park in the Idukki district, Kerala.

Threats: Occurs in a highly protected national park with secure habitat. Cause for observed declines remains unknown in view of its protected habitat.

16. The **Sacred Grove Bush frog** (*Raorchestes sanctisilvaticus*) is known to occur only in the Kapildhara Falls, Madhya Pradesh.

Distribution: Known only to occur in Kapildhara Falls, Amarkantak, Jabalpur District, Madhya Pradesh.

Threats: Habitat loss due to harvesting of wood for subsistence purposes, infrastructure development for tourism, and occurance of fires are the major threats to this species.

17. The **Sushil's Bush Frog** (*Raorchestes sushili*) was discovered in 2009 in Andiparai Shola in the Western Ghats of Tamil Nadu. It is found at an altitude of around 600 m above mean sea level.

Distribution: Known only to occur in Valparai and its vicinity, Coimbatore district, Tamil Nadu.

Threats: Habitat loss due to small and large-scale agricultural activities such as tea and coffee cultivation in the Anamalai Hills.

18. The **Shillong Bubble-nest Frog** (*Raorchestess shillongensis*) was discovered in Shillong, Meghalaya.

Distribution: Currently known to occur in the type locality of Malki Forest, Shillong, Meghalaya and in Mizoram.

Threats: Selective logging, collection of wood for subsistence use and urbanization are major threats to the habitat of this species.

19. The **Tiger toad** (*Xanthophryne tigerinus*) was discovered in 2009 from Amboli in the Western Ghats of Maharashtra state. It is found at an altitude of around 720 m above mean sea level.

Distribution: Found only in Amboli, Sindhudurg district, Maharashtra.

Threats: Loss of forest and habitat fragmentation.

FISH

1. **The Pondicherry Shark** (*Carcharhinus hemiodon*) is a marine fish that occurs or occurred inshore on continental and insular shelves. This is a very rare and little-known species.

   Distribution: Indian Ocean – from Gulf of Oman to Pakistan, India and possibly Sri Lanka. In scattered localities spanning India to New Guinea. Has also been recorded at the mouth of the Hooghly river.

   Threats: Large, expanding, and unregulated commercial fisheries in inshore localities and habitats. If still extant, it is probably caught as bycatch, although market surveys have failed to record it. Its populations are considered to have been severely depleted as a result of continued exploitation.

2. The **Ganges Shark** (*Glyphis gangeticus*) is a uniquely adapted fish-eating shark that occurs in the turbid waters of the Ganga river and the Bay of Bengal. The small eyes suggest that it is adapted to living in turbid water, while the slender teeth of the species suggests that it is primarily a fish-eater. It grows to a maximum length of 2.04 m.
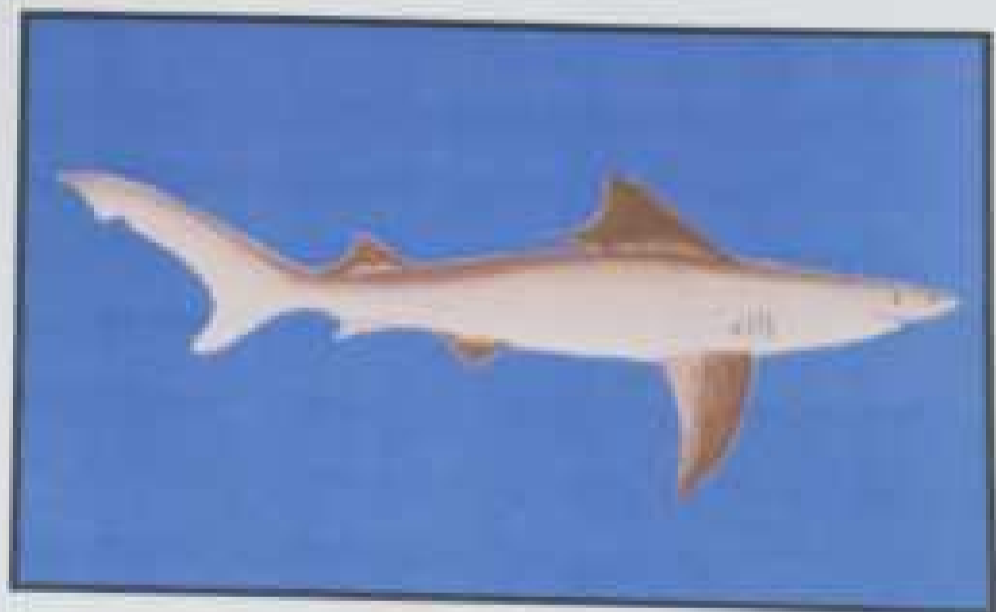
   Distribution: It occurs in India and possibly in Pakistan. The Ganga river system and Hooghly river mouth are its known habitats.

Threats: Major fisheries targeting sharks. Other probable threats include overfishing, pollution, increasing river use and construction of dams and barrages. A few jaws of the species were found to have been traded in the international market during recent years, which testifies that the species is not extinct.

3. The **Knife-tooth Sawfish** (*Anoxypristis cuspidata*) has a long narrow snout with blade-like teeth and a shark-like body. It spends most of its time near the bottom of the sea, sometimes going down to almost 40 m. It can grow up to 2.8 m. in length and can withstand a range of salinity conditions. It is found in shallow coastal waters and estuaries.

Distribution: Widespread in western part of the Indo-Pacific region, including Red Sea.

Threats: The principal threat to all sawfish are fisheries (targeted, bycatch, commercial and subsistence). Their long tooth-studded saw, makes them extraordinarily vulnerable to entanglement in any sort of net gear, including primitive fishing contraptions. When sawfish are caught in bycatch, they often end up being traded because of the very high value of their products (meat is high quality and fins and saws extremely valuable in international trade).

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4. **Large-tooth Sawfish** (*Pristis microdon*) are heavy-bodied sawfish with a short narrow saw, and grow up to 7 m in length. It is seen seasonally and very occasionally caught along with the Bull Sharks and the Green Sawfish.

Distribution and habitat : Western part of the Indo-Pacific (East Africa to New Guinea, Philippines and Vietnam to Australia). In India, it is known to enter the Mahanadi river, up to 64 km inland, and also is very common in the estuaries of the Ganga and Brahmaputra.

Threats: Same as that for the Knife-tooth Sawfish. There is also an increasing demand for sawfish in aquaria. Major habitat changes include construction of dams over rivers, siltation, pollution from industries and mining operations.

5. **Long-comb Sawfish or Narrow-snout Sawfish** (*Pristis zijsron*) grow up to 4.3m in length and are heavily exploited by humans. This species was reported as frequently found in shallow water. It inhabits muddy bottoms and also enters estuaries. Its presence has been recorded in inshore marine waters, and it goes down to depths of at least 40 m.

Distribution and habitat: Indo-Pacific region including Australia, Cambodia, China, India, Indonesia and Malaysia.

Threats: This species has been damaged intensively, both as a target species and as incidental bycatch in commercial, sport or shark-control net fisheries, as well as for aquarium display. As a result, it has become severely depleted in recent decades, and now appears to have been extirpated from many parts of its range.

SPIDERS

1. The Rameshwaram Ornamental or Rameshwaram Parachute Spider(*Poecilotheria hanumavilasumica*) was recently described in 2004, and it only found in India. It can give a nasty bite which usually is not fatal. The species is semi-social, which means they live partly in groups.

    Habitat: Arboreal and tend to live in hiding.

    Distribution: Endemic to India. Spread along the coastal savannah, tropical lowland rain forests and montane forests upto an altitude of 2000 m above mean sea level.

    Threats: Major threats causing the disappearance of this species is habitat alteration and degradation.

2. **The Gooty Tarantula, Metallic Tarantula or Peacock Tarantula** (*Poecilotheria metallica*) is steel blue in colour with patches of intense orange-yellow, black and white. It was first found in Gooty (Ooty/Udagamandalam) in south India in a burn pile during railway construction. Ever since the first picture of this spider was circulated globally, it has been in great demand in the illegal pet trade. A combination of small litter sizes and increased human pressures have made this species critically endangered.

    Habitat: Wooded mountain area of south India.

    Distribution: Endemic to India

    Threats: They are one of the most expensive spiders in the illegal pet trade. Large areas where the species occurs have been deforested, or subjected to habitat degradation due to local fuel wood collection, leading to decline in its population.

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CORALS

1. **Fire corals** (*Millepora boschmai*) are moreclosely related to jellyfish than corals. On contact, one usually feels a burning sensation similar to a sting from a jellyfish. The scientific name *'millepora'* is derived from the several small pores on the surface of these corals. They are usually yellow- green or brown in colour.

Habitat: Millepora species are generally found in murky inshore waters and display a tolerance for siltation. They often are found in clear offshore sites.

Distribution: Indonesia, Gulf of Chiriqui, Panama Pacific Province. Possibly extinct from Australia, India, Indonesia, Malaysia, Panama, Singapore and Thailand.

Threats: Collected for decoration and jewellery trade. This group is also sensitiveto temperature rise, and is thought to have completely disappeared from the majority of marine areas possibly because of growing global warming related bleaching effects.

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BIRDS

1. The **Jerdon's Courser** (*Rhinoptilus bitorquatus*) is a nocturnal bird found only in the northern part of the state of Andhra Pradesh in peninsular India. It is a flagship species for the extremely threatened scrub jungle. The species was considered to be extinct until it was rediscovered in 1986 and the area of rediscovery was subsequently declared as the Sri Lankamaleswara Wildlife Sanctuary.

   Habitat: Undisturbed scrub jungle with open areas.

   Distribution: Jerdon's Courser is endemic to Andhra Pradesh. However, 19th century records do attribute its presence in the neighbouring areas of the state of Maharashtra.

   Threats: Clearing of scrub jungle, creation of new pastures, growing of dry land crops, plantations of exotic trees, quarrying and the construction of the Telugu-Ganga Canal. Illegal trapping of birds is also a threat.

2. The **Forest Owlet** (*Heteroglaux blewitti*) had been lost for more than a century. It has an interesting history. When not sighted for decades, posters were printed and Salim Ali, the premier ornithologist of India made a public appeal to look for the bird. After 113 long years, the owlet was rediscovered in 1997 and reappeared on the list of Indian birds.

   Habitat: Dry deciduous forest.

   Distribution: South Madhya Pradesh, in north-west Maharashtra and north-central Maharashtra.

   Threats: Logging operations, burning and cutting of trees damage roosting and nesting trees of the Forest Owlet.

3. The **White-bellied Heron** (*Ardea insignis*) is an extremely rare bird found in five or six sites in Assam and Arunachal Pradesh, one or two sites in Bhutan, and a few in Myanmar. It is inherently rare, and populations have never been known to be very high.

Habitat: Rivers with sand or gravel bars orinland lakes.

Distribution: Bhutan and north-east India tothe hills of Bangladesh and north Myanmar.

Threats: Loss and degradation of lowland forests and wetlands through direct exploitation and disturbance by humans.

4-7. Out of nine species of vultures, the population of three species- **White-backed Vulture** (*Gyps bengalensis*), **Slender-billed Vulture** (*Gyps tenuirostris*) and **Long-billed** *calvus*) has also suffered a rapid decline in the recent past. Vultures keep the environment clean, by scavenging on animal carcasses. The decline in vulture populations has associated disease risks, including increased risk of spread of rabies and anthrax, besides adversely impacting the observance of last rites by the Parsis in the Towers of Silence.

Habitat: Forests, villages etc.

Distribution: Across India.

Threats: A major threat to vultures is the painkiller diclofenac used by veterinarians to treat cattle. When vultures consume these carcasses, diclofenac enters their system, but they are unable to metabolize it. Accumulation of diclofenac results in gout-like symptoms such as neck-drooping, ultimately leading to death.

White-backed Vulture

Slender-billed Vulture

Long-billed Vulture

Red-headed Vulture

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8. The **Bengal Florican** (*Houbaropsix bengalensis*) is a rare ground species that is very well known its mating dance. Among grasslands, secretive males their territories by springing ground and flitting to and fro in the air.

Habitat: Grasslands occasionally interspersed with scrublands.

Distribution: Native to only 3 countries in the world - Cambodia, India and Nepal. InIndia, it occurs in 3 states, namely Uttar Pradesh, Assam and Arunachal Pradesh.

Threats: Ongoing conversion of the bird's grassland habitat for various purposes includingagriculture is mainly responsible for its population decline.

9. **The Himalayan Quail** (*Ophrysia superciliosa*) is presumed to be extinct since no reliable records of sightings of this species exist after 1876. Intensive surveys are required as this species is hard to detect due to its reluctanceto fly and its preference for dense grass habitats. Possible sighting of this species wasreported in Nainital in 2003.

Habitat: Tall grass and scrub on steep hillsides.

Distribution: Western Himalayas.

Threats: Indiscriminate hunting during the colonial period along with habitat modification.

10. The beautiful **Pink- headed Duck** (*Rhodonessa caryophyllacea*) has not been conclusively recorded in India since 1949. Males have a deep pink head and neck from which the bird derives its name.

Habitat: Overgrown still water pools, marshes and swamps in lowland forests andtall grasslands.

Distribution: Recorded in India, Bangladesh and Myanmar. Maximum records are from north-east India.

Threats: Wetland degradation and loss of habitat, along with hunting are the main causes of itsdecline.

11. The **Sociable Lapwing** (*Vanellus gregarious*) is a winter migrant to India. This species has suffered a sudden and rapid population decline due to which it has been listed as critically endangered.

Habitat: Fallow fields and scrub desert.

Distribution: Kazakhstan, Russia, Kyrgyzstan, Tajikistan, Uzbekistan, Turkmenistan, Afghanistan, Armenia, Georgia, Azerbaijan, Iran, Iraq, Saudi Arabia, Syria, Turkey, Egypt, India, Pakistan and Oman. In India, distribution is restricted to the north and north-west of thecountry.

Threats: Conversion of habitat to arable land, illegal hunting and proximity to humansettlements.

12. The **Spoon Billed Sandpiper**
(*Eurynorhynchus pygmeus*) requires
highly specialized breeding habitat, a
constraint that has always kept its
population scarce. India is home to some
of the last existing wintering grounds of
this species(estimated at only 150-320
breeding pairsworldwide).

Habitat: Coastal areas with sparse
vegetation. No breeding records further
inland than 7 km from the seashore.

Distribution: Has been recorded in West Bengal, Orissa, Kerala and Tamil Nadu.

Threats: Habitat degradation and land reclamation. Human disturbance also
leads to highincidence of nest desertion.

13. The **Siberian Crane** (*Grus
leucogeranus*) is a large, strikingly
majestic migratory bird that breeds and
winters in wetlands. They are known to
winter at Keoladeo National Park,
Rajasthan. However the last documented
sighting of the bird was in 2002.

Habitat: Wetland areas.

- **Distribution:**
  Keoladeo National Park
  inRajasthan.

Threats: Pesticide pollution, wetland
drainage, development of prime habitat
into agricultural fields, and to some
extent, hunting.

DISCUSSION:

The overall point on discussion of critical endangered animal species in India is to highlight the serve threats faced by these species and urgent needs for conservation efforts to save their for extinction. The declined population of these animal is a cause of concern as their government and conservation organization must take necessary step to take these process by implementing measures such as habit restoration and anti poaching efforts and awareness campaign's .It is crucial and understand the importance the diversity and the role of each species in the ecosystem to ensure the survival the endangered animal .By working towards conserving these species, we cannot only protect them but also preserve the delicate balance of nature for the benefits of all living beings.

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CONCLUSION :

India is a home to significant number of critical animal endangered animal species ,Which are facing numerous threats including habitat loss ,poaching , hunting and human wildlife - conflict .Despite the efforts of Indian government and conservation organizations ,the population of these species continuous to decline .It is crucial to raise awareness about the importance of endangered animal and their conservation to ensure the survival .More efforts need to more to protect their habitat ,prevent protect to illegal wildlife trade ,and promote sustainable practices that coexist with these animal .Only by taking collective action , can we ensure that these endangered species are protected for future generation .

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EFFECT OF RETINOIC ACID ON AMPHIBIAN LIMB REGENERATION: A REVIEW

DISSERTATION SUBMITTESD IN PARTIAL FULFILMENT OF THE
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SUBMITTED BY:
JAGDISH MALIK
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CERTIFICATE

This is to certify that the investigation reported in this dissertation entitled "EFFECT OF RETINOIC ACID ON AMPHIBIAN LIMB REGENERATION: A REVIEW "has been conducted by **mr. Jagdish Malik** under my supervision in the Department of Zoology, Derabish Degree College, Derabish , Kendrapara. The work reported here is original and has not been submitted in part or full to this or any other college for degree.

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ABBREVATIONS USED

ECM	Extracellular matrix
MMPs	Matrix Metalloproteinase's
RA	Retinoid Acid
APA	Anteroposterior Axis
RAR	Retinoid Acid Receptors
RARE	Retinoid Acid Receptor
NCOR1	Nuclear receptor co-repressor 1
HDAC	Histone deacetylase
PRC$_2$	Polycomb repressive complex 2
H3K37me3	Histone H$_3$ lysine 27 trimethylation
FGF	Fibroblast Growth Factor
HOXb1	HomeoboxB1
DR	Direct Repeals
RDHS	Retinol dehydrogenises
RALDS	Retinaldehyde dehydrogenise
C4P26	Cytochrome p450 26
AER	Apical Ectodermal Ridge
RDHE2	Retinol dehydrogenise2

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EFFECT OF VITAMIN A ON TAIL REGENERATION IN AMPHIBIANS: A REVIEW

DISSERTATION SUBMITTESD IN PARTIAL FULFILMENT OF THE BACHELOR'S DEGREE (SCIENCE)
ZOOLOGY (2022)

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DECLARATION

I do hereby declare that the present dissertation entitled "EFFECT OF VITAMIN A ON TAIL REGENARATION IN Amphibians:A REVIEW" is an original work carried out by me in the laboratory of zoology department, Derabish Degree College, Derabish, Kendrapara has not been published or submitted in part or full, for any other degree in any college or institution.

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This Projects is true to the best of my knowledge.

Hemanta Behera

THANKING YOU

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