



Vidya Vikas Mandal Pathrud's,
Shankarrao Patil Mahavidyalaya, Bhoom
Department of Zoology

Zoology deals with the structure, embryology, evolution, classification, habits, and distribution of all animals, both living and extinct. For someone who is interested in making a career in Zoology will be required to deal with both the existing, dead and quite possible the extinct species of the animal kingdom. Study of Zoology is great importance to man. It has helped man to recognize the living things and to adapt himself according to the environment.

The students of Zoology can learn about animals and Zoological principles which may help them for proper maintenance of life. Zoologist acquires the power to evaluate the nature which is not possible by the other means. The scope applied Zoology is innumerable. It provides the knowledge of medicine, dentistry, Veterinary medicine, medical technology, nursing, Museum Work, Zoological teaching, zoological research, agriculture, environmental science and conservation. Genetics is the branch of zoology. Its knowledge has brought revolution in plant and animal breeding. There is every possibility that our nonrenewable natural resources Will be exhausted in near future. The conservation of these natural resources may be possible through Zoological knowledge.

There is equilibrium between plants and animals on the earth. There is always a struggle for food and space which may lead to serious consequences. Man is also included In this struggle and is associated with other animals due to some other needs. Some of them are useful or harmless but some are definitely harmful to man. One can have a thorough knowledge of these associations through the study of Zoology.

This study is carried out in several branches of Zoology as follows:

BRANCHES OF ZOOLOGY

The study of animal life is ancient, but its scientific incarnation is relatively modern. Until the comparative anatomical study on morphographs by Hunter and Cuvier, the modern areas

of zoological investigations have occurred. Gradually zoology expanded behind the comparative anatomy to include the following sub-disciplines:

- Ecology
- Taxonomy
- Zoography, it is also known as descriptive zoology.
- Cell biology & Genetics
- Comparative Zoology.
- Soil Zoology.
- Comparative anatomy.
- Herpetology.
- Animal Physiology.
- Entomology.
- Behavioral ecology.
- Ornithology.
- Ethology studies animal behavior.
- Invertebrate and Vertebrate Zoology.
- Taxonomically oriented disciplines identify and classify species and study the structures and mechanisms specific to those groups.

SCOPE OF ZOOLOGY IN THE FIELD OF HEALTH AND DISEASE

Zoological Knowledge and theories are applicable to maintain health and to control the epidemic diseases. But still there are some dangerous medical problems which needs further study, For example, control and cure of cancer and cardio-vascular diseases.

Protozoan and helminthes are responsible for causing many diseases. In addition, some animals act as vectors. The transference of disease producing parasites or their infective stages are performed By Anopheles (Malaria), sand-fly (kala-azar), Tse-tse (sleeping sickness), house-fly (typhoid). The control and cure of these diseases are studied by economic zoologists. The progress of medical technology is intimately connected with the application of drugs on animals. The drug for curing diabetes was discovered with experiments on dogs. Similarly, the drugs for Diphtheria, typhoid and other diseases were found only after tiresome experiments

on animals. Without these animals it would have been impossible to discover the medicines for several human diseases.

SCOPE OF ZOOLOGY IN THE FIELD OF AGRICULTURE

Agriculture is a part of applied zoology. Various types of living organisms are closely associated in a particular environment. Earthworms being lower soil upwards so that air and water can enter Properly. Similarly, insects pollinate the flowers, bacteria decompose the dead animals and plants present in the soil which is observed by the plants. All these are important facts for agricultural science. Insects destroy agricultural crops, domesticated animals and wood. The amount of harm caused by the insects is beyond our estimate. A variety of rodents eat considerable number of grains and cereals

Both in the field and storage areas. These problems have been solved to great extent from the knowledge and application of zoological principles.

SCOPE OF ZOOLOGY IN THE FIELD OF INDUSTRY

Various animals products of animals such as coral, pearl, honey, wax, silk, lac, shell of turtle, bones, feather, tusk, leather and fur are of high demand. These products can be increased from our knowledge of production of these items.

One of the most important uses of animals is as food. Almost in every phylum there are few species which form the food of man like lobsters, crabs, fishes, turtles, frogs, birds and mammals. We use various types of birds (chicken, fowl, duck, etc.) and mammals (goat, sheep etc.) for our diet. The improvement of these animals is one of the major tasks of zoologists. Application of zoological science in the field of fishers is well known. It is the study of economic zoology for the higher production of food crops and fisheries to meet the challenge of food shortage during recent times.

3. INTRODUCTION OF DEPARTMENT

Bhoom tahsil is most Socio-economically, educationally backward and climatically dry which comes in Osmanabad district. Vidya Vikas Mandal, Pathrud established in 1984. The

institute formerly started with Arts and Commerce faculty. In 2003 College introduced Science faculty as a need for rural students in and around Bhoom region”. Institution is affiliated to Dr. Babasaheb Ambedkar Marathwada University, Aurangabad.

Afterwards in 2009 University Grant Commission, New Delhi (UGC) and State government of Maharashtra fully granted our science faculty. In the beginning phase Department of Zoology was run on Clock Hour Basis (CHB) by Mr. R.C. Charate. In December 2010, Dr. N. D. Padwal appointed as Assistant Professor of the Department as permanent teaching faculty. Today department runs with one permanent faculty and One on C.H.B. still supportive non-teaching staff is not available.

(A) OBJECTIVES OF THE DEPARTMENT

The main objective of establishing the faculty to provide the up to date subject knowledge to the students. Educate them to the extent that the hand they have got necessary qualification true to knowledge. Form this point of view our university receives syllabus every five-year upto now there was great diversity in curricula of different Indian universities which inhibited the mobility of student form one university to other. To ensure and have uniform curricula at U.G. levels in Indian universities U.G.C. developed a model curriculum and forwarded the same to all universities for updating their respective curricula.

(B) PROGRAMS OFFERED AND ESTABLISHMENT

Sr. No	Course	Particulars	Establishment
		B. Sc. F. Y.	June 2003
1	UG	B. Sc. S. Y.	June 2004
		B. Sc. T. Y.	June 2005

4. FORMER TEACHERS AND THEIR CONTRIBUTIONS

Sr. No.	Name of the Teaching staff	Tenure	Contribution of Teacher to the Department
1.	Mr. R.C. Charate	2007-2016.	Contribution in Setup of the Under-Graduate Zoology.
2.	Miss. N.N. Jagdale	2010-2011.	Very Short Tenure in the Department
3.	Miss. V.K. Falke	2018-2020	Contribution for two years participated in Excursion Tour

5. ACHIEVEMENTS OF DEPARTMENT

(A) RESEARCH SCHEMES/ PROJECTS UNDERTAKEN BY
THE DEPARTMENT OF ZOOLOGY
COMPLETED:-01,

Title of the Project	Name of Principal Investigator	Name of the Funding Agency	Duration	Remarks
Tapeworm Diversity of goats from Osmanabad region	Dr. N.D. Padwal	Dr. B. A. M. University, Aurangabad	2 Years	Completed

6. FACULTY MEMBERS

Sr. No.	Name of the Teaching staff	Designation	Tenure
1.	Dr. N.D. Padwal	Assistant Professor and Head	2010 to till date
2.	Mr. G.S. Khandare	Assistant Professor	2018 to Feb 2023(CHB) 10 th Feb. 2023 to till date
3.	Miss D.G. Giri	Assistant Professor	2023 to till date

Brief Information of Existing Faculty

Dr. Nitin Devendra Padwal

M.Sc., Ph.D. (Zoology)

Assistant Professor and Head,

padwalnitin7@gmail.com

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Date of Birth : 29/05/1982

Date of Joining : 14/12/2010

Area of Research : Parasitology

Publication : Research Papers : 36

Expertise : Taxonomy of Helminth Parasites

Subjects taught : Invertebrates and Vertebrates Zoology,
Parasitology, Ecology

Teaching Experience : 12 Years

Special Interest : Innovative Idea, Research activity.

Special Achievements: BOS Member

Delivered Lecture in Indian Science Congress
2023

Conferences attended:	International :	17
	National :	24
	State :	04
	Workshop :	09

8. FUTURE PLAN

- To give training to Students for ICT to use internet.
- To organize “National Conference”
- Participation in National, International conferences to know latest of latest in our discipline.
- To arrange meetings with our students and guardians regarding curriculum and teaching twice a year.
- To start the P. G. Department and skill-based courses.