



St. Aloysius' College
(Autonomous) Jabalpur

Reaccredited 'A+' Grade by NAAC

Department of Zoology

NEWSLETTER

HOD's Desk :-

*Dear Readers,
I am delighted that the Department of Zoology is re-releasing the annual news letter ZOOHUNT Volume VI. This newsletter will definitely help to show the activities being conducted in the Department of Zoology and will also help in building up team work which is vital in today's competitive world. This newsletter will enhance the documentation culture of the department. I am thankful to teacher editor Mrs. Runa Paul as well as the student editors Ms. Devipurnima Nair and Ms. Tuhina Chatterjee for their tireless contributions and efforts to make this edition informative. I also thank all the faculty members and student contributors for the successful publication of this news letter.*

*Regards
Dr. Priyanka Sinha*



ZOOHUNT

2019-20



VOLUME-VI ISSUE-I

Human-Animal Relationship

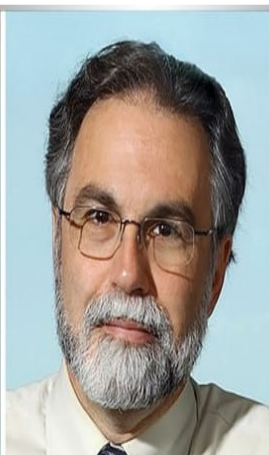
The human-animal relationship is a mutually beneficial and dynamic bond between human and animals that is influenced by behaviors considered essential to the health and well-being of both. The role of a zoologist in human-animal relationship is to know the potential of this association and help in mutual expansion, specifically to support well-being of our environment. Animal assisted therapies aim at developing certain social skills in patients on the basis of human-animal interactions. Present theory and research suggests that understanding the level of human-animal interaction is important in promoting constructive, mutually beneficial relationships between human and animals. Therefore, the objective of zoology is not just restricted to animals and research based on them. It also aims to explore the novel dimensions for re-establishment of the earth.

NOBEL PRIZE IN PHYSIOLOGY OR MEDICINE 2019

Discovery of
“How cells sense and adapt to
oxygen availability.”



Sir Peter J. Ratcliffe
(Lancashire,
UK)



Gregg L. Semenza
(New York,
USA)



William G. Kaelin, Jr.
(New York,
USA)

HIGHLIGHTS

- NEWSFLASH
- RESEARCH VIEW-POINTS OF FACULTY MEMBERS
- STUDENTS' CORNER
- DEPARTMENTAL ACTIVITIES
- STUDENTS' ACHIEVEMENTS

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- Mrs. Runa Paul.

STUDENT

EDITORS:

- Tuhina Chatterjee
- Devipurnima Nair

**YEAR OF SKILL
DEVELOPMENT**

STUDENTS' ACHIEVEMENTS



Ms Divya Yadav—
Recipient of Dr. Mrs.
Asha Khanna & Lt.
Shri S. Dutta Gold
Medal in PG Zoology
for the session
2018-19



**Sakshi Soni, & Anura-
dha Gupta M.Sc IV &
II Sem.**
Won 3rd prize in “
BIO-RANGOLI”
Competition (SRIJAN)



Jewel Noronha
M.Sc. II Sem Won- 3rd
position at university
level Essay Competi-
tion
.”150th GANDHI
JAYANTI CELEBRA-
TION”



**National Level
Webinar 2019 on
“Gandhian Values”** was
organized by PG stu-
dents to mark the 150th
birth anniversary of
Mahatma Gandhi.



**M.Sc. II Sem students won
third prize in biorangoli at
Science fest on “Role of
Women in Science
Technology and Entrepre-
neurship”** organized & spon-
sored by RDVV, Jabalpur
and MPCST, Bhopal.

FACULTY CORNER

There is only one brown panda in the world.



The story of this panda is a little sad. His name is Qizai which can be translated as “the seventh son.” Scientists found him abandoned at the age of 2 months in Central China. His parents probably didn't recognize him as their child because of his unusual color. But thanks to his color, he has become famous and now has his

own guard, park, and food made of special kinds of bamboo.

-Dr. Priyanka Sinha.

Ophichthus kailash chandra



A new snake eel species residing in the Bay of Bengal has been discovered and documented in the month of January by the Estuarine Biology Regional Centre (EBRC) of the Zoological Survey of India (ZSI) at Gopalpur-on-sea in Odisha. This new marine species has been named

Ophichthus kailash chandra into honour the vast contributions of Dr. Kailash Chandra, Director of ZSI, to Indian animal taxonomy. Ophichthus kailash chandra is the eighth species of the Ophichthus genus found on the Indian coast. It is the fifth new species discovered by the Gopalpur ZSI in the last two years.

Mrs. Runa Paul

Probiotics and health benefits

Probiotics are microorganisms that can be consumed through fermented food or supplements. Studies show that the balance or imbalance of bacteria in your digestive system is linked to overall health and diseases. Probiotics promote a healthy balance of gut bacteria and have been linked to a wide range of health benefits.

Some of the main benefits are as follows :-

1. Balances the friendly bacteria in your digestive system.
2. Helps in prevention and treatment of Diarrhoeas.
3. Probiotic supplements improve mental health conditions.
4. Certain Probiotic strains helps in keeping your heart healthy.
5. May reduce the severity of certain Allergies and Eczema.
6. Helps in reducing symptoms of certain digestive disorders.
7. May help in boosting your immune system.
8. May help in losing weight and belly fat.

(Reference—<https://www.healthline.com/nutrition/8-health-benefits-of-probiotics>)

-Dr. Daya Shankar Gautam.

A most unlikely efforts to treat Glioblastomas (form of cancer) using elements of the Ebola virus



Xue Zhang and Yale used a chimeric virus containing one of gene from the Ebola virus - a glycoprotein with a mucin-line domain (MLD). They injected this chimeric virus into the brains of mice with glioblastoma -- and found that the MLD helped in selectively targeting and killing the deadly glioblastoma brain tumor. Such a virus might be used in conjunction with surgery to eliminate glioblastoma tumors and help prevent a recurrence of cancer, he said.

-Dr. Manju Dixit..

STUDENTS' CORNER

These spiders make protein-packed milk for their young.



The jumping spider *Toxeus magnus* lives in China and Taiwan. Its appearance mimics that of an ant, but its parental behavior is surprisingly mammalian. The mother spider cares for the newborn spiderlings for up to 20 days—a long time for a critter whose entire lifespan is just six months to

a year. During these first 20 days, she secretes a white fluid that's rich in sugars and proteins, from its abdomen. The milk contains four times as much protein as cow's milk, according to a new study published in *Science*.

- Shirley Beck, M.Sc Zoology IV Sem.

Whose genes determine a child's intelligence?

However some studies suggest that intelligence is inherited from the mother. These findings were initially found in studies on mice, but confirmed when extrapolated to human brains. Intelligence genes are carried by the X chromosome, which are 2 with women. Even if it comes from the X chromosome of the father, it gets deactivated. Mitochondria are inherited exclusively from the Mother. Metabolic energy is supplied in the body by mitochondria, which is consumed voraciously by the brain. Thus better mitochondria can be presumed to translate into better brain function.

However only about 40-60% intelligence is inherited. More than passing on intelligence genes, a mother contributes to the child's intelligence by close bonding, building up the confidence of the child and providing a suitable environment, where the child can enhance his skills and use his intelligence.

-Devipurnima Nair, M.Sc. Zoology IV Sem.

Tiny salamander's genome may harbor the secrets of regeneration



The type of salamander called axolotl, with its frilly gills and widely spaced eyes, has other-worldly powers of regeneration. "It regenerates almost anything after almost any injury that doesn't kill it," said Parker Flowers, postdoctoral associate in the lab of Craig Crews, the John C. Malone Professor of Molecular, Cellular, and Developmental Biol-

ogy and professor of chemistry and pharmacology. If scientists can find the genetic basis for the axolotl's ability to regenerate, they might be able to find ways to restore damaged tissue in humans. The axolotl, has the largest genome of any animal yet sequenced, 10 times larger than that of humans. The advent of new sequencing technologies and gene-editing technology has allowed researchers to craft a list of hundreds of gene candidates that could be responsible for regeneration of limbs. However, the huge size of the axolotl genome populated by vast areas of repeated stretches of DNA has made it difficult to investigate the function of those genes.

- Bupeshwari, M.Sc Zoology II Sem

ZOOLOGY IS AN EXCITING FIELD OF STUDY!

By studying animals we develop a better understanding of how we, ourselves function and interact with our world around us. The search for answers to our questions puts us in the incredible position of being able to affect change, empower better choices, and develop solutions for a stronger, healthier world. Zoologists study animals. Humans evolved from animals. Whether homo sapiens is just another species of animal or a qualitative step forward in evolution is a philosophical issue but given the reality that humans constantly interact with animals and animal behavior is certain to be of benefit in improving lives.

Aside from many practical benefits derived from an understanding of animals and animal behavior, zoologists are also contributing to the body of scientific knowledge, a worthwhile goal in itself. Zoology has also made significant contributions to forensic science. Forensic pathologists can identify how long a body's been buried based on the stages of the life cycle of the insects found on the corpse.

After reading the above, one should be able to better understand how a zoologist contributes to the world as well as the importance of this field for healthy living.

- Jewel Noronha, M.Sc Zoology II Sem

A swollen wing vein helps butterflies detect low-frequency sounds.



Butterflies in the Satyrinae subfamily have ears at the base of their wings that they likely use to detect predators. Next to their ears are prominent, swollen wing veins whose function has been a mystery. Now, researchers at Carleton University in Ottawa report that the veins appear to be part of the insects' hearing system, and that when these inflated structures are ablated, butterflies lose their sensitivity to low-frequency sounds (below 5 kHz).

- Tuhina Chatterjee, M.Sc Zoology IV Sem.

DEPARTMENTAL ACTIVITIES

Hands on Training in Microtomy to enhance the technical skills (10th July—10th August 2019)



Haemoglobin of 66 girl students were checked at Seth Nathumal Girls School, Jabalpur (24-08-2019)



National Level Webinar on “Gandhian Values” was organized on 1st Oct. 2019, to mark 150th birth anniversary of Mahatma Gandhi



Certificate course on “Innovative Zoological Practices” 19/08/2019 to 19/11/2019



Guest lecture on “Poultry Management” & “Common Poultry Diseases” by Dr. Amir Khan & Dr. A.K Upadhaya on 30-08-2019



Visit to Animal Biotechnology Centre (29-01-2020)



Workshop on “Poultry farming as source of self-employment” in collaboration with Phoenix Poultry Farm, Goshalpur Jabalpur (30-08-2019 and 31-08-2019)



“ZooMania” under aegis of SRIJAN 2020 to nurture the creativity, skills and talents of the students (13/01/2020—18/01/2020)



Biodiversity Awareness Programme at Dumna Nature Reserve on 5th Feb 2020, Students got an idea about different varieties of species present in the reserve.



Internship Training 2020 on Vermicomposting as Sustainable Practice for Solid Wastes Management in Jabalpur City”



Educational Trip to Bergi Reservoir (19-02-2020)

