



FROM THE PRINCIPAL'S DESK

I would like to congratulate the H.O.D. and the faculty members of Department of Zoology for bringing out the third volume of “Zoohunt”. The elected theme “**Functional Zoology**” will surely acquaint us with the developments in the relevant field. Hopefully the new issue of this newsletter will prove as a basis for continuous improvement and constant learning. I hope this volume will provide a novel viewpoint towards the subject and will help to develop research aptitude among the readers. My blessings and good wishes for this newsletter.

Dr. Fr. Vazhan Arasu
Principal

FROM H.O.D's DESK

Dear readers, once again it gives me immense pleasure to introduce the third volume of “Zoohunt” highlighting the events research works, achievements and activities of the Department. I thank Dr. Priyanka Sinha, dear students Ms. Divya Patel and Ms. Pranjul Nigam for their painstaking effort. I also thank all the faculty and student contributors for the successful publication of this newsletter.

Dr. P. Mukherjee

'Game of Thrones'

Ant has Dragon-Like Spikes

A dragon from "Game of Thrones" has come to life

A new ant species' dragon-like appearance inspired scientists to name it for the fire-breathing star of the popular fantasy series. The Pheidole dragon's large and distinctive spine reminded researchers of Dragon, one of the [dragons on the "Game of Thrones" TV show](#). The ant's spiny characteristics were captured in detail using 3D-imaging technology, which helped them to identify and document several new ant species. Virtual specimens were also used by the researchers to study the ant's [dragon-like spine](#).

AKRITI SINGH MSC. III SEM



Highlights

- ⇒ Newsflash
- ⇒ Research Viewpoints of faculty members
- ⇒ Students contributions
- ⇒ Departmental activities

Editors

Dr. Parnashree Mukherjee
Mrs. Runa Paul
Dr. Priyanka Sinha

Student Editors

Pranjul Nigam
Divya Patel

Sea Anemone Proteins Could Help Fix Damaged Hearing

When it comes to creatures with keen hearing ability, sea anemones are not at the top of the list. Nonetheless, new research suggests that certain proteins that help these animals repair their feathery tentacles could also eventually be used to help repair damage to cells within a mammal's inner ear. The finding comes from a study done in mice and could be an early step toward finding a treatment for people with hearing loss, the researchers said. In mammals, including humans, sound is translated from vibrations in the air into nerve signals that can be sent to the brain by highly specialized cells called hair cells. These are found within the cochlea, a fluid-filled structure of the inner ear.

GAZALA AND SARITA DAS GUPTA
MSC. III SEM



Faculty Corner

Career with Zoology Degree

- | | |
|--------------------------------|--|
| 1) Ecologist | 12) Taxonomist |
| 2) Environmental consultant | 13) Research scientist (life sciences) |
| 3) Field trials officer | 14) Biomedical scientist |
| 4) Marine scientist | 15) Environmental education officer |
| 5) Nature conservation officer | 16) Environmental manager |
| 6) Physician associate | 17) Higher education lecturer |
| 7) Fishery officer | 18) Toxicologist |
| 8) Forest ranger | |
| 8) Entomologist | |
| 9) Zoologist | |
| 10) District malaria officer | |
| 11) Ichthyologist | |

Fun Facts about Elephants:

- The largest elephant on record was an adult male African elephant. It weighed about 24,000 pounds and was 13 feet tall at the shoulder!
- Elephants can live to be over 70 years old.
- The average weight for an elephant heart is about 27 to 46 pounds!
- Elephants have a highly developed brain and the largest of all the land mammals. The brain is 3 or 4 times larger than that of humans although smaller as a proportion of body weight.
- Elephants have a slow pulse rate of 27. For a canary it is 1000!
- Elephants have poor eyesight but an amazing sense of smell.
- At the age of 16, an elephant can reproduce, but rarely has more than four children throughout her lifetime.
- Elephants have the longest pregnancy of all the animals. It takes a female 22 months from conception to give birth.
- Elephants produce ultrasound waves for communication.
- Tusks are an elephant's incisor teeth. They are used for defense, digging for water, and lifting things.

Mr. Daya Shankar Gautam

Epigenetics: - The Future of Aging Research

An emerging area of research called "epigenetics" opens the door to a scientific blending of two worlds that is nature and nurture, or more specifically genetics and environment. Epigenetics focuses on effect of environment on our genes functioning and thereby influencing our development, health, and aging. Changes in the epigenome can cause changes in gene activity. Most epigenetic changes are likely harmless, but some could trigger a disease or condition, such as your risk for age-related diseases. Source : Biology of Aging: Research Today for a Healthier Tomorrow. **Dr. P. Mukherjee**



The Hawaiian crows are incredibly good at using tools

The **Hawaiian crows** are incredibly good at using tools, according to the author Christian Rutz of United Kingdom. The critically endangered Hawaiian crow can use sticks to deftly fish for food that is out of reach. from sticks to snag larvae and insects from crevices in logs or branches.

Mrs. Runa Paul



Fish populations surviving estrogen pollution

Among the most common pollutants that enter the environment after passing municipal wastewater treatment are estrogens, especially the synthetic 17 α -ethinylestradiol that is used in oral contraceptives. Estrogens are potent endocrine disruptors at concentrations frequently observed in surface waters. However, new genetic analyses suggest that some fish populations can be self-sustaining even in heavily polluted waters. We now need to understand the basis of this tolerance.

Dr. Priyanka Sinha



Stored grain pests and traditional techniques of their control measures

Traditional agricultural practices and cultivars have profound effect on modern day agricultural and plant materials. Use of broad spectrum insecticides have lead to eliminate the eco-friendly species of commercially and economically important insects and thus resulted in the unbalancing of natural food chain. The increasing public awareness of the environmental contamination by toxic chemical residues has necessitated the research and development of non-chemical methods. Various storage yarns like Kuthar, Kothi, Bara, Dobli, Khalda, Matka, Bijdi, Peru etc. used for safer storage of agricultural produce and various traditional techniques including some plant products used by the local people as an additive for prolonged storage of seed grain were explored.

Dr. Manju Dixit



Students Corner

Near-blind shark is world's longest-lived

:- Greenland shark found to be at least 272 years old.

A large, almost-blind shark that lives in the freezing waters of the North Atlantic and Arctic oceans is officially the world's longest-living vertebrate, scientists say. The Greenland shark (*Somniosus microcephalus*) has a lifespan of at least 272 years, and might live as long as 500 years. That is older than the 211-year lifespan of the bowhead whale (*Balaena mysticetus*), the previous record-holder in the scientific literature. It also beats the popular, but unconfirmed tale of a famous female Koi carp called Hanako, who supposedly lived to 226 years old.

Pranjul Nigam (M.Sc. III SEM)



Animal behavior: Cuttlefish can count

Cuttlefish seem to be able to distinguish between large and small numbers, at least when it comes to food.

-Utkarsha M.Sc. III Sem



JANWAR HAI KAUN

Jaanwar kaun hai main aaj bhi na jaan paya,
Kya is kadar badal gayi hai insaaniyat teri narm kaaya,
Khooni hai tu, veheshi hai tu, har gunaaah tujh me SAMAYA,
Baithe jab ilzam ginne naam in bezubaan jeevon ka aaya,
Jaalsazi, dhokebazi, ko kehete ho "GIRGIT" ka rang badalna,
Waah re manav kya khoob ki hai sundar kritya ki bekadra tulna,
Darindo ki darindagi ko kehete ho tum "BHEIDIYA" banna,
Kabhi pucha hai us jeev se use tumhari "DUNIYA" se kya karna.

:- Kapooraj Sharma B.Sc I Sem (CBZ)

Upcoming activities

- ⇒ Declaration of the office bearers of Aloysian Zoological Society in 3rd week of Sept 2016
- ⇒ Upcoming C.C.E
- B.Sc. V SEM Microteaching (26th Sept –1 oct)
- M.Sc. I and III Sem (27– 30 Sep)
- ⇒ PG Seminars

Dogs

Study suggests that man's best friend probably understands more than we thought when we talk to them. Attention, dog owners! Your pets probably know when you're praising them — and not just by the tone of your voice. New data suggest that dogs' brains not only respond to the tone of human speech, but can also distinguish between positive and neutral words.

- Divya Patel (Msc.III Sem)



Amazing Science Facts

1. At over 2000 kilometers long, The Great Barrier Reef is the largest living structure on Earth
2. The risk of being struck by a falling meteorite for a human is one occurrence every 9,300 years
3. The combined length of the roots of a Finnish pine tree is over 30 miles .
4. Polar Bears can run at 25 miles an hour and jump over 6 feet in the air.
5. 60-65 million years ago dolphins and humans shared a common ancestor.

-Reena Chauhan M.Sc. III Sem

Departmental activities

Dept. project on "Vermicomposting"



Cultural dance on Republic Day



Excursion to biodiversity spot at Gotegaon



Zoomania 2016



Guest lecture by Dr. Aditya Mishra



Visit to fish seed centre, podi , Maihar (M.P.)



**Road show on "waste management and AIDS awareness"
Near pentinaka chowk**



**Lac culture training workshop
in sihora**



**Health awareness program in Govt
Girls Hr. Sec. School Beoharbag
Jabalpur**

