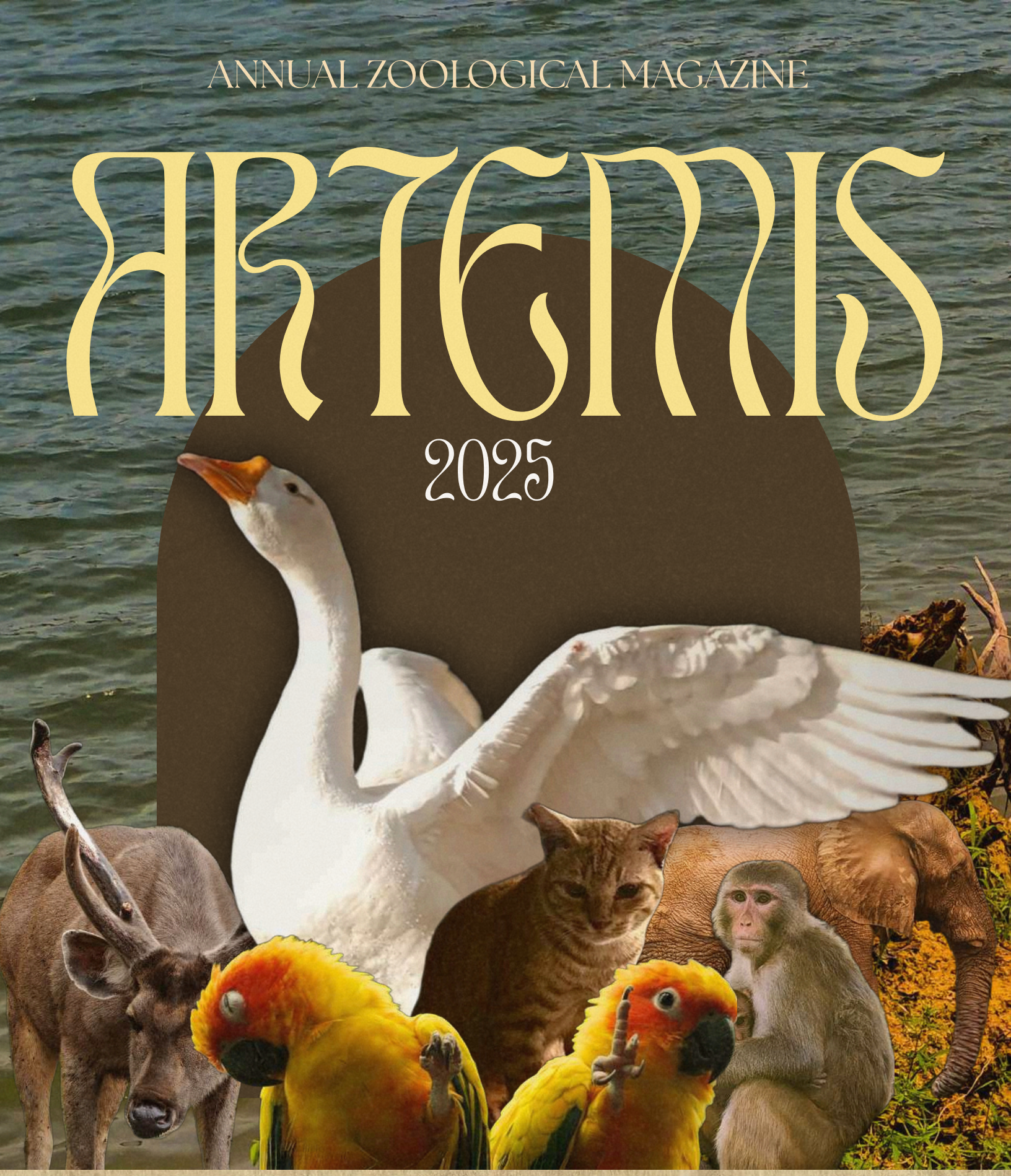
ANNUAL ZOOLOGICAL MAGAZINE

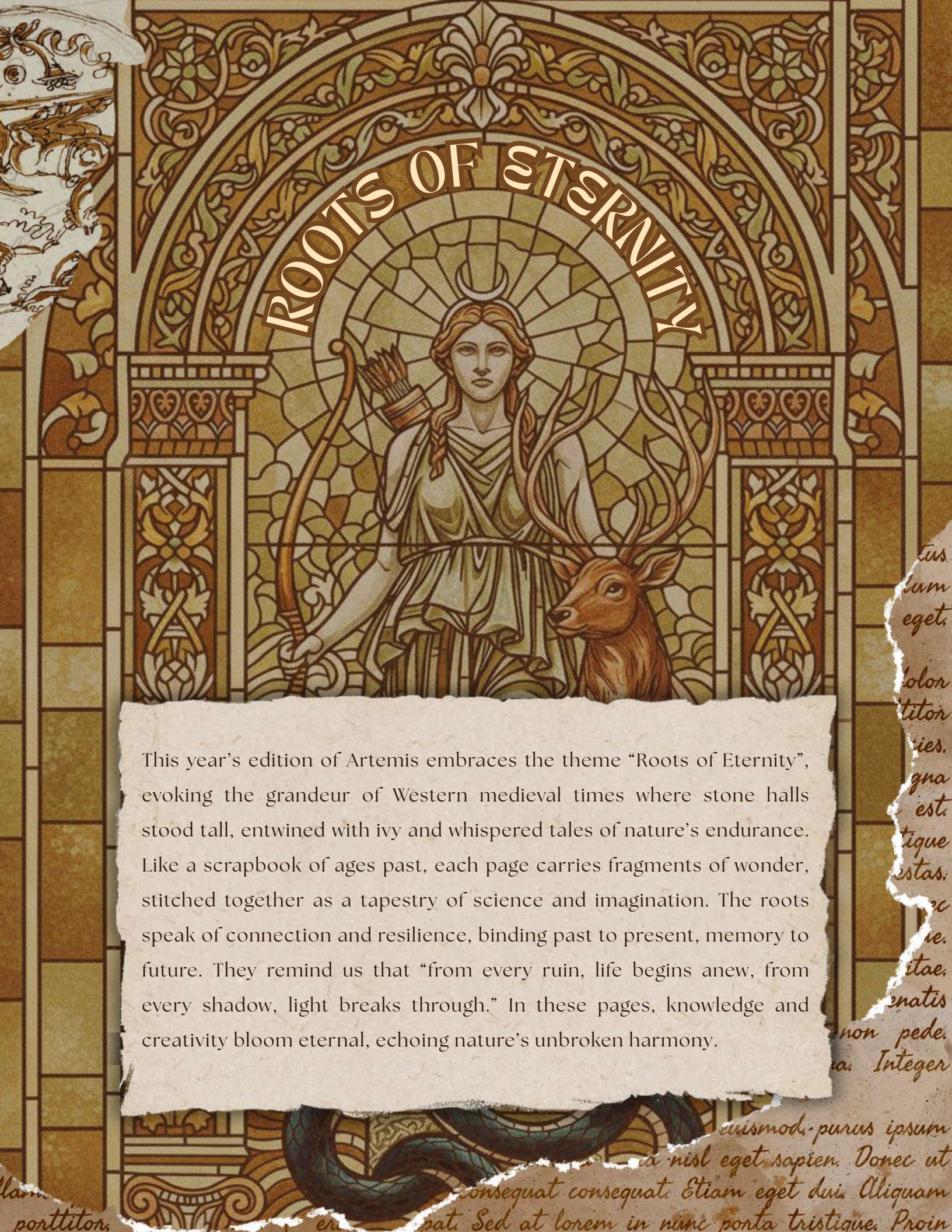
ARTEMIS

2025



DEPARTMENT OF ZOOLOGY

DYAL SINGH COLLEGE | UNIVERSITY OF DELHI



This year's edition of Artemis embraces the theme "Roots of Eternity", evoking the grandeur of Western medieval times where stone halls stood tall, entwined with ivy and whispered tales of nature's endurance. Like a scrapbook of ages past, each page carries fragments of wonder, stitched together as a tapestry of science and imagination. The roots speak of connection and resilience, binding past to present, memory to future. They remind us that "from every ruin, life begins anew, from every shadow, light breaks through." In these pages, knowledge and creativity bloom eternal, echoing nature's unbroken harmony.

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FROM PRINCIPAL'S DESK

Dear Readers,

It gives me immense pleasure to pen this note for the second edition of our annual zoological magazine, Artemis. I am delighted that the Department of Zoology has once again taken this wonderful initiative. Such efforts provide students with a platform to express their creativity beyond the classroom and to celebrate their discipline in their own unique way.

At Dyal Singh College, we have always valued curiosity, innovation, and collaboration— and this magazine beautifully embodies those ideals. The Department of Zoology continues to excel in creating diverse opportunities academic, cultural, and research-oriented, that enable students to showcase their talents both within and beyond the classroom. I encourage all students to keep nurturing their curiosity and to use this platform as a step toward personal and academic growth.

My heartfelt congratulations to the faculty members and the editorial team for bringing Artemis to life and helping it take deeper roots with every edition. May this magazine continue to inspire future batches and reflect the vibrant spirit of Department of Zoology. I wish everyone the very best in all their present and future endeavours.

PROF. VINOD KR. PALIWAL
PRINCIPAL, DYAL SINGH COLLEGE, UNIVERSITY OF DELHI

FROM TEACHER IN CHARGE

Dear Readers,

It gives me immense pleasure to present to you the second edition of our annual departmental magazine, Artemis. This magazine provides our students with a valuable platform to express their artistic, creative, and professional interests beyond the walls of the classroom.

The Department of Zoology has always worked to foster a sense of scientific spirit and temperament among its students. Each article, artwork, and photograph featured in this edition reflects not only the essence of the department but also the dedication of the staff and students who have contributed their time and effort to bring this magazine to life.

I sincerely congratulate the editorial team, faculty advisors, and all contributors for their commitment and hard work. I hope this initiative continues to inspire students to express their creativity, allowing arts and culture to harmoniously cohabit with science.

BEST WISHES TO ALL OUR READERS!

PROF. P.V ARYA
TEACHER IN CHARGE, DEPARTMENT OF ZOOLOGY,
DYAL SINGH COLLEGE, UNIVERSITY OF DELHI

Editorial Board

TISHA ARORA

STUDENT EDITOR 3RD YEAR

Being an editor this year has been such an honor. Working with my amazing team on Roots of Eternity, a theme close to my heart, has been truly inspiring and fulfilling. The entries this year were remarkable, each adding its own spark, creativity, and depth to this memorable journey. I'm genuinely grateful for the unwavering guidance of our teachers and the enthusiasm and talent of our students that made this edition possible.

PRIYANSHU DUTTA

CO EDITOR 3RD YEAR

It has been an absolute pleasure working with such a dedicated and enthusiastic team. Artemis has truly provided a wonderful platform for students to showcase their creativity, talent, and passion. I am deeply grateful to our entire editorial team and our teachers for their constant support and guidance in making this magazine possible. Being a part of Artemis as Co-Editor has been an enriching and inspiring experience, and I am genuinely excited to see our collective efforts come to life through this edition!

SHRESHTH KOHLI

ADVISORY 4TH YEAR

I'm delighted to serve as this year's Advisor to the Editors of Artemis. Having once been an Intermediate Editor myself, it feels special to pass on the beacon of creativity and dedication to my juniors. Though my role was mainly advisory, I still felt deeply connected to the magazine. I congratulate the editors and team for this masterpiece—Roots of Eternity, a theme that beautifully celebrates nature's indomitable and eternal spirit.

SHREYA SINGH

ADVISORY 4TH YEAR

Being part of this year's magazine as a member of the student advisory has been a truly meaningful journey. It made me reflect on how our roots- the people who guide us, the dreams that drive us, and the small, quiet moments that shape us and are what give us strength, even when we don't notice. I hope that as you turn these pages, you feel a spark of curiosity, a touch of grace, and a warmth of love. May this magazine encourage you to explore, to grow, and above all, to always cherish the roots that make you who you are.

Editorial Board

AYAAN MUDGAL

DESIGN HEAD 2ND YEAR

Designing Artemis was like curating a vibe—colors, chaos, and whispers of stories all tangled together. Every page roots itself in imagination, where medieval echoes meet modern energy. I wanted details that make you pause, smile, or just wonder. This magazine isn't just ink on paper it's a little world to explore, scroll-free. To all readers: dive in, get lost, find your favorite corner, and let Artemis stick in your mind like that song you can't stop humming. Creativity, curiosity, and a bit of mischief welcome to our universe, one page at a time.

SAIKA

CONTENT TEAM 2ND YEAR

I'm delighted to be a part of the Artemis team, where every thought takes root and blooms into something timeless. This journey has been a blend of many shades like scientific insights, heartfelt poems, creative artworks, and emotions woven together into one soulful expression. I hope these pages whisper of that connection between nature, knowledge, and the human spirit, reminding us that everything beautiful begins from the roots that never fade.

ASHMIT KUMAR

CONTENT TEAM , 2ND YEAR

इस वर्ष हमारी वार्षिक पत्रिका आर्टिमिस के संपादक के रूप में कार्य करना मेरे लिए अत्यंत हर्ष और प्रसन्नता का विषय रहा।
यह अनुभव केवल एक ज़िम्मेदारी नहीं, बल्कि सिख और सृजन की सुंदर यात्रा रही। इस दौरान मैंने यह सिखा कि एक पत्रिका के निर्माण में अनेक विचारों, सृजन और अनुभवों का योगदान होता है। संपादन की प्रक्रिया में जो जो लेख मैंने पढ़े, आज उन सभी लेखों की छाप मेरे मस्तिष्क पर अंकित है। हर रचना ने मुझे किसी नए दृष्टिकोण, नई भावना और नई संवेदनाओं से परिचित कराया।

इस पत्रिका को हम सब ने बड़ी परिश्रम और उत्साह से बनाया है, मुझे विश्वास है कि यह पत्रिका पाठकों के मन को छूएगी और उन्हें नए विचारों के लिए प्रेरित करेगी।

GAURAV KARKI

CONTENT TEAM , 2ND YEAR

I feel my heart pumping joy into my veins as I sit down and write this note for Artemis' second edition. From the magazine's first edition until now- we all have grown- learned new things- but one thing remains constant. Our curiosity and unfathomable hunger for creativity. That's what keeps driving the department in its true spirit. I hope the readers find themselves and they frisk through these pages of infinite creativity- in stories that are similar to theirs- in photographs that stir in their heads a distant memory- in articles that resonates with their scientific temperament.
Happy reading!

ADVISORY BOARD

Prof. RITA RATH

With great enthusiasm, the Zoology Department presents the second edition of Artemis, our annual magazine, celebrating the theme "Roots of Eternity" - dedicated to exploring the timeless connections between life and nature, exploring the deep roots that sustain ecosystems and species through ages. This edition highlights the creativity and scientific spirit of our students and teachers, featuring articles, research snippets, field insights, and artistic expressions inspired by zoology. Artemis continues to serve as a platform for knowledge exchange, critical thought, and innovation, fostering a deeper connection with life sciences. We extend gratitude to contributors, mentors, and readers for their support and invite everyone to engage with the pages of this collective endeavour. Enjoy the journey through nature's eternal roots, and remember—your passion can help shape the next Artemis!

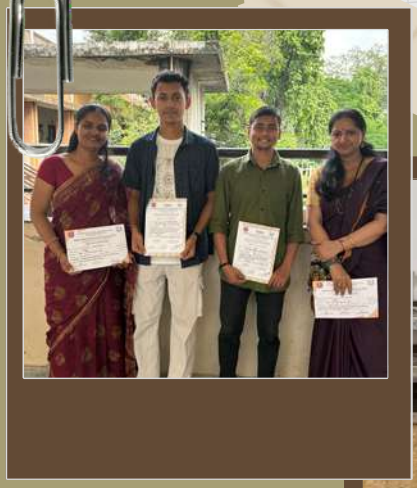
Dr. RITU RAI

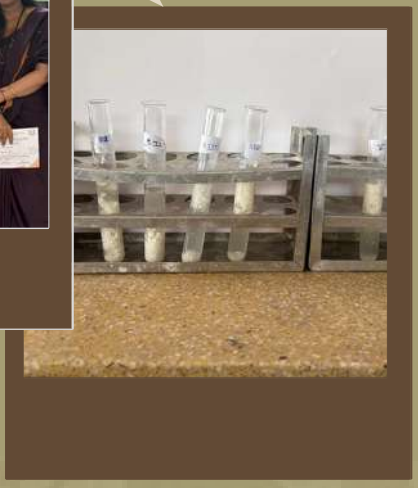
We are proud to present the second edition of our departmental magazine, "ARTEMIS 2025." This magazine provides a wonderful platform for both students and teachers to express their creativity, ideas, and knowledge. It brings together a diverse collection of articles, poems, scientific notes, and innovative thoughts that the readers would truly enjoy reading. The pages of this edition also capture memorable moments and highlights of various departmental activities held over the past year, showcasing the enthusiasm and active participation of our students. Heartfelt congratulations to everyone who contributed to this edition and sincere appreciation to the team members for their dedication, teamwork and hard work. I am confident that readers will find ARTEMIS 2025 engaging, inspiring, and enjoyable. The journey that began last year continues with greater energy, and ARTEMIS will keep growing as an impactful platform to inspire and reflect the aspirations of our talented students in years to come.

Dr. ROOPA R SAMAL

We are delighted to present the second edition of our departmental magazine "Artemis". Building on the success of our inaugural issue, this edition continues to celebrate the spirit of inquiry, creativity, and collaboration that defines our department. Artemis reflects not only the scientific curiosity of zoology but also the artistic expression that enriches our understanding of the natural world. In these pages, you will find thoughtful articles, research insights, poems, and artwork—each piece a testament to the enthusiasm and talent of our contributors. This edition stands as a symbol of our department's collective growth and our ongoing commitment to blending science with imagination. We invite you to explore the diverse perspectives within Artemis and join us in celebrating the passion, dedication, and accomplishments of our community. May this issue inspire curiosity, spark creativity, and strengthen our shared love for zoology.

INTERNSHIP





Development of in vitro infusoria monoculture (Paramecium and Vorticella) and learning some in silico tools for reference management, bibliometric, phylogenetic and ADMET analysis

Teachers: Prof P.V Arya

Students: Tisha Arora, Megha Sharma , Ameen Yasha

The present study integrates experimental and computational approaches to explore ciliates Paramecium and Vorticella. Using a simple milk powder infusion inoculated with soil, cultures were maintained for 15–20 days to assess morphology, growth, and population dynamics. Phylogenetic analysis using MEGA and ClustalW supported established subgroup classifications, while ADMET profiling predicted pharmacokinetic and toxicity properties of selected compounds. A bibliometric study further mapped global research trends and collaboration networks in protozoology. The findings demonstrate that simplified culturing methods and computational tools together provide comprehensive insights into ciliate biology and research directions.

COMPARATIVE ANALYSIS OF MILK ADULTRATION IN COMMERCIAL BRANDS USING PHYSICOCHEMICAL AND RAPID DETECTION METHOD

Teachers: Dr. Seema Bora Roy and Dr. Deepmala Mishra

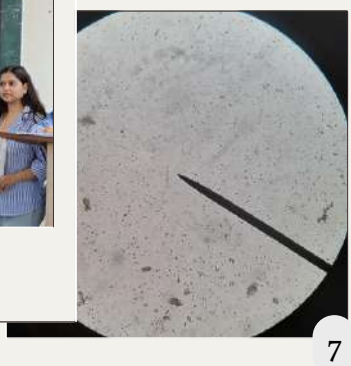
Studens: Ritik Maurya and Md Farhanul Haque

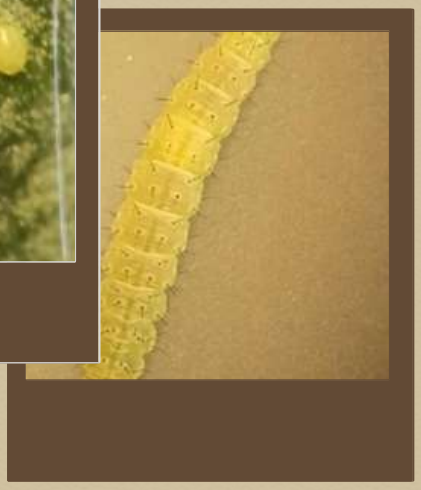
A Staple, Yet Vulnerable Food Essential part of the Indian diet, consumed across all age groups. Rich in lipids, proteins, lactose, minerals, and vitamins.

Food adulteration is a worldwide issue, particularly in developing nations like India due to insufficient monitoring

Up to 68% of milk samples in India fail safety standards (recent studies).

FSSAI (2018) survey: 12 out of 6432 milk samples unfit for consumption due to wate and chemical adulteration





Behavioural responses of the diamondback moth, Plutella xylostella to cruciferous crops

Teachers: Dr. Sanjeev Mullick and Prof. Neeraja Sood

Students: Aditya Prakash

This internship project focused on reviewing the effects of essential oils on the oviposition behavior of the diamondback moth (Plutella xylostella), a major pest of cruciferous crops. Alongside analyzing natural deterrent strategies, valuable skills were gained in laboratory rearing techniques for this pest, including preparation of artificial diets to sustain its lifecycle under controlled conditions. Together, these experiences support eco-friendly pest management approaches.

Urban Air and Vanishing Life: How Air Pollution is Impacting Biodiversity of Delhi

Teachers: Dr. Seema Bora Roy and Dr. Deepmala Mishra

Studens: Khusboo Rawat and Sonia

This study explored the impact of rising air pollution on urban biodiversity across eight green sites of Delhi. Field surveys of trees, shrubs, and birds were conducted using ecological methods and analyzed through Shannon–Wiener and Simpson diversity indices. The results revealed a strong negative correlation between AQI and species richness, showing that even Delhi's green spaces are under ecological stress. The project highlights the urgent need to integrate air quality management with biodiversity conservation.

ANTICANCANCER POTENTIAL OF NANOEMULSION OF BEGONIA LORENTZONI AND BERGENIA PASHMINA PLANT EXTRACTS

Teachers: Dr. Neetu bhattacharya and Prof. Alka Gupta

Students: Shubhra Khanna and Himanshi Singh

The present study evaluates the anticancer potential of nanoemulsions prepared from *Begonia lorentzonii* and *Bergenia pashmina* plant extracts. Comparative analysis of crude extracts and nanoemulsions was carried out using absorbance-based cell viability assays at varying concentrations. Results revealed that Bergenia pashmina nanoemulsion exhibited enhanced cytotoxicity, with decreasing absorbance indicating reduced cell viability and stronger anticancer activity. Conversely, Begonia lorentzonii nanoemulsion showed increased absorbance at higher concentrations, suggesting reduced cytotoxicity and possible protective effects. These findings highlight the differential behavior of plant nanoemulsions and suggest Bergenia pashmina as a promising candidate for anticancer nanoformulation development.

Other Notable Mentions

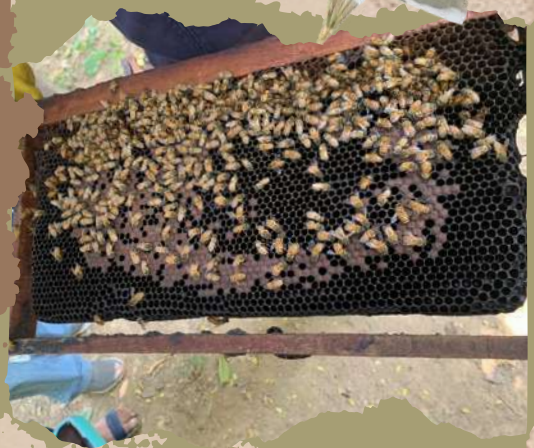
- **Internship at Dr. B. R. Ambedkar Centre for Biomedical Research : Shreshth Kohli, 4th yr and Shreya Singh, Bsc (H) Zoology 4th year .**
- **Internship at ICMR- National Institute of Malaria Research : Shreshth Kohli, 4th yr**
- **Internship at ICMR- RMRC - Bikramaditya Behera, Bsc (H) Zoology 4th year**
- **Internship at - IIT Madras for Edu tech life association with Mechanica : Priyani Sinha,Bsc (H) Zoology 3rd year**

BUTTERFLY WEEK

SEPTERMBER 13, 2025

IARI VISIT

EDUCATIONAL TRIPS

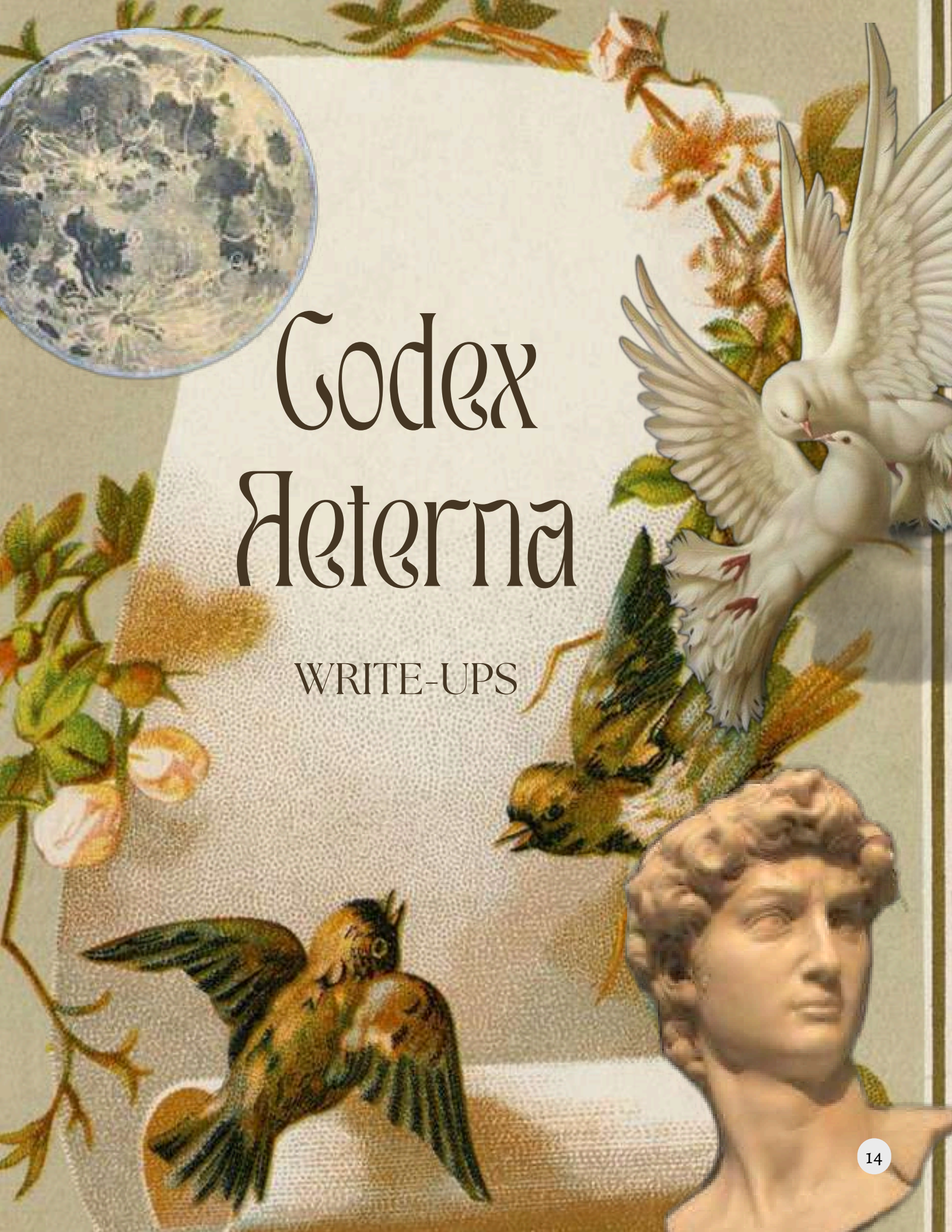


DHEERPUR PARK VISIT

EDUCATIONAL TRIPS

NIMR VISIT

EDUCATIONAL TRIPS



Codex Aeterna

WRITE-UPS

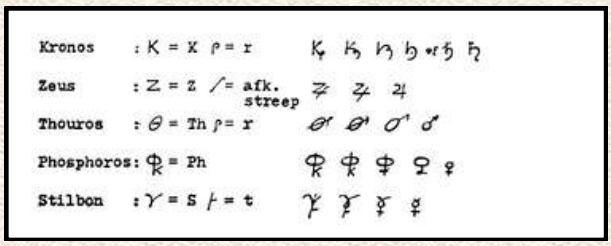
Linnaeus' Secret Code: How Male ♂ and Female ♀, Got Their Signs

By Dr. Roopa R Samal, Assistant Professor, Dyal Singh College, University of Delhi

The symbols ♂ and ♀, which we use today to show male and female, have an amazing history. Long ago, people noticed patterns between the Sun, Moon, and planets and life on Earth—like the Sun helping plants grow or the Moon moving the tides. They believed planets could influence humans, which led to astrology. Babylonians kept careful records of planets and even named them after gods. When Alexander the Great conquered Babylon, the Greeks learned this knowledge too. People also linked planets to metals: the Sun to gold, Mars to iron, Venus to copper. Alchemists used these connections in their symbolic codes, which later passed into chemistry and pharmacy. Young Carl Linnaeus learned these ideas at school in Sweden in 1725. Later, this influenced how scientists used the symbols ♂ and ♀ for male and female in biology.

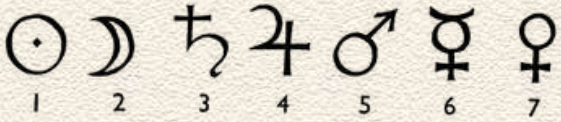
The male ♂ and female ♀ symbols we use today come from chemistry and astrology! Long ago, metals like iron, copper, and mercury were represented by planet symbols: ♂ for Mars and iron, ♀ for Venus and copper, ☿ for Mercury. Carl Linnaeus learned these symbols as a teenager and first used them in 1751 to mark male and female parent plants in hybrids. Later, in *Species Plantarum* (1753), he applied ♂ and ♀ to all plants. So, the signs for male and female in biology actually have roots in ancient alchemy and astrology.

Linnaeus grew up poor in war-torn Sweden, so he learned to be careful with time, effort, and resources. When he wrote Species Plantarum, he used symbols to save space—Saturn, Jupiter, Mars, and the Sun for different types of plants, and Mercury, Mars, and Venus for hermaphrodite, male, and female plants. Sometimes Mars even stood for both biennials and males. He also followed old traditions, using ♀ for Venus instead of writing the name. Later, he regularly used ♂, ♀, and ☿ for male, female, and hermaphrodite flowers. These simple, memorable symbols caught on, helping botanists and zoologists record information quickly.



Although some people once thought these signs came from ancient Mesopotamia, scholars now agree they actually evolved from Greek abbreviations of planet names. Thanks to Linnaeus, the Mars and Venus symbols are still widely used today—long after leaving their original chemistry and astrology roots!

(This article is an adaptation "Stearn, W.T., 1962. The origin of the male and female symbols of biology. Taxon, pp.109-113.")



Curiosity: The Heartbeat of Research

By Dr. Seema Bora Roy, Assistant Professor, Dyal Singh College, University of Delhi

"Why does this happen?" a simple question, yet the beginning of every great discovery. Curiosity is the quiet spark that turns an ordinary learner into an explorer and a classroom into a laboratory of ideas. In the world of science and in life it is curiosity that keeps knowledge alive, evolving, and relevant.

As a teacher and researcher, I have witnessed how small questions can open vast doors of understanding. During a recent student research internship on biodiversity and air pollution in Delhi, one student asked a seemingly simple question: "Why do we see fewer birds in some parks even though the number of trees seems the same?" That single question led the group to analyze air quality data, measure canopy cover, and study feeding patterns — revealing how subtle changes in pollution levels alter bird diversity. What began as curiosity became data, discovery, and finally, awareness.

This is what research truly is — not the pursuit of perfection, but the courage to question. Many students think research is something reserved for scholars in white coats, surrounded by instruments and complex equations. But in reality, research begins the moment you decide to ask why or how instead of simply accepting what is. Whether you are studying genetics, environment, or social behaviour, every observation holds a story waiting to be uncovered.

Marks, grades, and degrees are milestones — but curiosity is the compass.

It keeps you moving even when you face uncertainty or failure. In every experiment, there are moments of confusion, data that refuses to fit, and hours of waiting. Yet, it is curiosity that whispers, "Try once more. There's something here you haven't seen yet." That persistence transforms a student into a scientist.

In our classrooms and research labs, I have seen students bloom when given freedom to explore. "What if we compare commercial milk brands for adulteration?" Another group, curious about urban greenery, designed their own biodiversity index for Delhi parks. Their excitement was contagious — because they weren't just memorizing; they were discovering.

Dear students, research is not about having all the answers. It is about nurturing the habit of asking better questions. Every time you look at nature, society, or even your textbooks with a questioning mind, you are already participating in the spirit of research.

So, keep your curiosity alive. Let it guide you beyond the syllabus, beyond marks, and beyond fear of failure. For in the rhythm of every scientific journey, curiosity is — and will always remain — the heartbeat of research.

From Inspiration to Purpose Jane Goodall's Legacy

By Shreshth Kohli , IVth year , Bsc (H) Zoology

From the time I was a child, animals fascinated me. I would spend hours watching nature documentaries, imagining what it would be like to live in the wild, surrounded by creatures whose lives were so different yet somehow connected to ours. Books and films filled me with wonder, but it wasn't until I discovered Dr. Jane Goodall that I felt my dream take shape. Here was a woman who had done exactly what I had always longed for—she went into the forests of Tanzania and lived among chimpanzees, quietly observing them and learning their ways. To me, she wasn't just a scientist; she was living proof that one could dedicate a life to animals and to nature. Many people laughed at my dream of becoming like her, but her story gave me the courage to stay motivated. Because of Jane Goodall, I found my path in zoology and ethology, and for the first time, I believed that my childhood dreams could become a reality.

Jane Goodall's journey is as inspiring as her discoveries. Born on April 3, 1934, in London, she loved animals from the very beginning—watching birds in the garden, studying her pet dog, and reading endlessly about the natural world. With no scientific degree, but with fierce determination, she found her way to Africa, where she met the legendary anthropologist Louis Leakey. He recognized her potential and entrusted her with a daring task: to study chimpanzees in the Gombe forest of Tanzania.
n 1960, at only twenty-six, Jane began her research. Alone with her notebook and binoculars, she spent countless hours gaining the trust of the chimpanzees. What she witnessed forever changed science. She observed them making and using tools, hunting in groups, and showing deep emotions—behaviors once thought to be uniquely human. She did not reduce them to numbers but gave them names, recognizing their individuality and dignity. Her unconventional approach, combined with patience and compassion, revolutionized the way we see not just chimpanzees, but ourselves.

Her personal story was as extraordinary as her scientific work. Though she had no university degree, her research earned her admission to Cambridge's PhD program without even a bachelor's degree—a rare honor. She married wildlife photographer Hugo van Lawick, raised a son, and continued her fieldwork despite countless challenges. Over the years, her mission expanded beyond Gombe. In 1977, she founded the Jane Goodall Institute to protect wildlife and ecosystems, and later launched Roots & Shoots to empower young people to care for people, animals, and the planet.

Yet what makes Jane Goodall truly remarkable is not only her science but her spirit. She became a conservationist, humanitarian, and moral voice for the planet. She often said, "The least I can do is to speak for those who cannot speak for themselves." She spoke not just for chimpanzees, but for forests, ecosystems, and all living beings, urging us to live more gently on the Earth. Her message was simple yet profound: every single one of us matters, every one of us can make a difference.

The Glow of Death: The Radiance That Consumed Its Makers

By Tisha Arora , IIIrd year , Bsc (H) Zoology

It was the year 1917, and among the people, there was a new trend shimmering. For the men, it was luxurious watches that glowed in the dark, and for the women, the dazzling attires of those girls who painted them. The shine in both was blinding, until its true, devastating nature was brought forward.

The Radium Girls, a moniker given to them after this incident unfolded, were young girls who worked at the factory. They were specifically recruited for painting the dials and panels of the watches with a special paint made with radium. The women were chosen for this task, as the fine details of the designs required delicate and small hands, and women were believed to be naturally more precise. They worked patiently, painting tiny numbers and lines by hand, followed the instructions provided to them without any hesitation, and used their lips to shape the brush tips in a practice called lip-pointing. But each time they did, they were unknowingly ingesting poison.

Outside the factory, their shimmering glow earned them admiration. The radium dust clung to their hair, faces, and dresses, giving them a faint, ghostly sparkle. In a society obsessed with beauty and class, this accidental radiance made them minor celebrities. Some of the girls even planned their outfits so that traces of radium would brush onto their best party gowns, creating a glittering effect under the dim light of dance halls. They didn't know the glow that drew envy from others was slowly eating them away from within.

For the men, the luminous watches painted by these women were a mark of sophistication, especially among soldiers and businessmen, it was considered an scientific marvel. But the same glow that gave men pride on their wrists was the residue of death carried from the women's hands.

In the factories, the first signs of illness appeared slowly, women complained of toothaches, fatigue, and fragile bones But then then as the silence was broken by the storm, the symptoms grew horrifying: jaws crumbled, open sores which refused to heal, and some of the wounds even glowed faintly in the dark. When they sought medical help, the companies denied responsibility and rather blamed them for their own condition. The women were accused of immoral behavior, even of contracting syphilis, to silence them.

Grace Fryer, despite being gravely ill refused to back down and took the company to court. Along with four other women, she fought a public battle that exposed the corporation's negligence and the government's lack of protection for workers. Their 1928 case led to new safety laws and the foundation of workplace health regulations.

The glow that once was the symbol of beauty and growth of new future turned out to be fatal. The glow faded, but its lessons continue to shine through every safety law that protects workers today.

Songbirds in Kumaoni folklore

By Gaurav Karki , II year , Bsc (H) Zoology

My fondest memory of childhood is sitting next to my grandmother, lending her my ear as she narrated folklore in my native tongue, Kumaoni.

Almost half the species of birds in the world are songbirds. From Ghughuti to Kafal pako mi ni chakho and Juho, songbirds have an important place in the central Himalayan folklore, especially the folk traditions of Kumaon and Garhwal in Uttarakhand.

Ghughuti, or Spilopelia chinensis as zoologists call it, is a species of spotted dove that finds its place in the heart of Kumaoni folk music and folklore. Its call — "ghur ghur" — invokes an archaic pain one is oblivious of, from a soft childhood that sits placidly at the back of our mind to a newlywed bride that sheds tears as she becomes reminiscent of her mait, all because of a bird's call. Another bird that finds its place in Kumaoni folklore is Cuculus micropterus or the Indian cuckoo. As the red kafal blazes on the ridge at dusk, its distinct call in the Himalayan valley reminds the natives of a tale of loss, love, and the humbleness of the central Himalayan community — a fruit that was never tasted.

According to the legend, a poor mother and her little daughter used to gather kafal from the forest. The mother leaves to work in the fields and tells the child to wait for food and avoid eating the kafal until she returns. When she returns, she finds the fruit reduced. In anger, she strikes the child. With a single strike, the child falls to the floor, unconscious. Later, when she looks at the basket, she realizes the kafal had dried up due to being kept in the sun.

She rushes to wake her daughter up, but the child has died. The mother, too, dies out of guilt at the sight of her dead child. It is said that the spirit of the child transformed into a bird and still flies and sings the same song of her innocence: "Kafal pakyo, mi ni chakhyo" (i.e., the kafal fruit ripened, but I didn't taste it). The third bird, as tragic as the first two, is an unnamed songbird whose song our ancestors have been hearing for ages — the story of Juho.

Long ago, there was a woman from the hills who was married into the plains. One day, she longed to visit her paternal home and asked her mother-in-law for permission. The mother-in-law agreed, but only after she finished all her chores: cleaning the cowshed, gathering firewood, and cutting grass for the cattle.

The woman began her work, but the day was short. She prayed, "Please do not set until my work is done." The day waited patiently, allowing her to finish.

When her tasks were finally completed, she told her mother-in-law and left for her parents' home. In her excitement, she forgot to tell the day to end. As soon as she stepped onto the threshold of her paternal house, she died — for she had not told the day to go.

It is said that she became a bird whose cry still echoes through the Himalayan valleys: "Juho! Juho! Juho!" — meaning, "Go, go, go."

These poignant tales, woven into the calls of Kumaoni songbirds, remind us how folklore and nature are deeply intertwined, preserving the region's cultural heart and history.

The Psychophysiology Of Companionship

By Saika , IInd year , Bsc (H) Zoology

In our fast-paced & high pressure world, stress is a constant companion. Yet, a powerful antidote exists, the widespread belief that animals provide emotional support and it is strongly supported by an expanding body of scientific research. Interaction with pets can initiate a cascade of neurochemical and physiological responses in humans that directly mitigate the effect of dilute & chronic stress. This phenomenon is often referred to as the “Pet effect”.

EFFECTS ON ENDOCRINE AND HORMONAL MECHANISMS.

i) Suppression of cortisol and elevation of oxytocin:-
Cortisol- the primary glucocorticoid stress hormone is a reliable marker of stress & anxiety. Studies show that Human-Animal Interaction (HAI) such as petting, modulate the Hypothalamic-Pituitary-adrenal (HPA) axis. This modulation triggers the release of oxytocin, a neuropeptide that inhibits the stress pathway. Also oxytocin creates a sense of security and attachment that counteracts feelings of isolation and fear. The result is significant in reducing salivary cortisol levels and proves the effect of animals on bodies primary stress response.

ii) Monoamine Regulation :-
HAI also stimulates the release of monoamine neurotransmitters, specifically serotonin and dopamine. Serotonin is crucial for regulating mode and anxiety, while dopamine is integral to the brain’s reward and pleasure pathways . They both contribute to elevated mood states & reduced symptoms of emotional distress.

CARDIOVASCULAR AND PHYSIOLOGICAL STABILIZATION

i) Reduced Blood Pressure and Heart Rate:-
The decrease in cortisol and the release of oxytocin work together to engage the parasympathetic nervous system , which is responsible for the “rest and digest” state. This activation leads to an acute lowering of both systolic and diastolic blood pressure and a deceleration of heart rate. This effect is so pronounced that pet owners,in general, are found to have better cardiovascular health and lower risk of heart disease compared to non- owners.

ii) Non- Evaluative Social Support:-
Animals offer non-evaluative social support, which means that they are not subject to the performance pressure or social judgment that come with human interactions. This special characteristic provides a pure form of companionship that dramatically lowers baseline stress levels and cultivates a deep sense of psychological security and acceptance by reducing the neurobiological threat response linked to being evaluated.

PSYCHOLOGICAL AND BEHAVIORAL BENEFITS

Beyond immediate physiological changes, the presence of animals cultivates positive long-term coping mechanisms and structural improvements to daily life .Pet ownership necessitates a routine, fostering a strong sense of cohesion and purpose that stabilizes daily structure. This responsibility, particularly requiring activities like dog walking, serves as a catalyst for physical activity, which inherently improves mood and mental health markers.
Additionally, this relationship serves as the foundation for therapeutic applications in clinical settings. Structured interventions like Animal-Assisted Therapy (AAT) harness the power of animals. In clinical settings, such as hospitals, trauma centers, and schools, therapy animals are used to help people who are under a lot of stress, in excruciating pain, or suffering from symptoms of Post- Traumatic Stress Disorder (PTSD).The animals focus on the present moment helps orient the human toward the immediate safe environment and provides a powerful distraction from intrusive negative thoughts.

To conclude , the efficacy of "Pet Effect" is rooted in the measurable modulation of HPA, leading to acute cortisol suppression and reciprocal oxytocin elevation. This significant neuroendocrine change, along with the parasympathetic system's activation and monoamine upregulation, demonstrates that animal companionship is a reliable, non-pharmacological method of improving psychological and cardiovascular stability.

The Future of Fertility: AI as a Partner in Embryo Selection

By Priyani Sinha, IIIrd year , Bsc (H) Zoology

Artificial intelligence (AI) is increasingly transforming the image of modern medicine, and some of the most exciting work in this field is occurring in the context of in vitro fertilization (IVF). Currently, AI presents a means to make embryo selection more accurate and objective. This article explores how Al is transforming embryo selection while addressing key ethical concerns.

WHY EMBRYO SELECTION MATTERS?

IVF is usually an emotional and costly experience. Each cycle involves great hope, and each embryo holds the possibility of life. Selecting the "best" embryo the one with the greatest potential to implant and grow healthily has always been important. Historically, embryologists have evaluated embryos morphologically (shape, cell division quality, and general appearance). Embryos that appear good under the microscope, though, don't always have the greatest potential. Here, AI brings a paradigm shift by spotting patterns in embryo development that humans can't see. Instead of judging a single image, it studies the embryo's entire growth through time-lapse imaging, tracking its progress continuously.

HOW AI IS BEING USED IN EMBRYO SELECTION?

1. Time-Lapse Imaging + AI: Sciorio et al. (2025) showed how AI, when combined with time-lapse monitoring, improves embryo evaluation without interfering with natural growth. The system observes embryos around the clock, tracking subtle developmental milestones, and then applies deep learning to rank embryos by potential success.

2. Multi-Modal Data Models: Zhang et al. (2023) developed AI models that merge not only images but also patient data—such as age, medical history, and previous IVF outcomes. This holistic approach often performs better than conventional visual assessment alone, offering a fuller picture of embryo viability.

3. Explainable AI Tools: Kawakita et al. (2023) emphasised the value of AI models that don't just give predictions but also provide reasoning in a way that doctors and patients can understand. These interpretable systems improve clinical confidence and, importantly, patient trust

BENEFITS OF AI IN IVF

• Higher Success Rates: By identifying embryos with better potential, AI can increase the chances of successful pregnancies and live births.
• Consistency: Unlike human evaluation, which may vary, AI offers a standardised, reproducible approach.
• Efficiency: AI can analyse vast datasets within seconds, saving embryologists time while improving decision-making.
• Support for Clinicians: Rather than replacing experts, AI acts as a second pair of eyes, providing additional evidence for informed choices.

ETHICAL AND SOCIAL CHALLENGES

While AI's potential is exciting, many concerns must be addressed before widespread adoption:
• Transparency and the Black Box Problem : AI often gives results without showing how they're derived, raising concerns about its fairness.
• Privacy and Data Security: AI involves sensitive information such as medical histories, embryo pictures, and family background. Inadequate protection can result in information misuse and discrimination.
• Fairness and Accessibility: These technologies are expensive and are generally only found in advanced centres, restricting access for many and inflicting inequality in fertility treatment.
• Dependence on Technology: Over-reliance on AI can decrease physicians' judgement and the human, personal element of embryo selection.
• Social and Ethical Issues: AI can be used wrongly to choose embryos for characteristics other than health, such as appearance or intellect, which is a concern about "designer babies".

THE HUMAN ASPECT

IVF isn't just science — it's family aspiration. Each embryo represents hope, love, and perseverance. AI should act as a caring ally, reducing uncertainty and reassuring parents. Consider a couple discouraged after several IVF rounds: an AI-enabled system identifies one promising embryo with subtle, unseen features. Months later, they welcome a healthy baby. Here, AI proves not only its intelligence but its power to transform lives.

THE WAY FORWARD FOR AI TO REACH ITS PROMISE:

1. Transparency: Patients deserve explainable systems, not "black boxes."
2. Collaboration: Developers, clinicians, ethicists, and patients must shape ethical, equitable AI.
3. Education: Clear understanding of AI's capabilities and limits is vital.
4. Balanced Use: AI should assist, not dominate, in creating life.

CONCLUSION

AI in embryo selection empowers doctors and families with better tools. Using time-lapse imaging, deep learning, and patient data, it helps identify embryos healthiest in development and genetics. The future of fertility will flourish when technology and compassion work hand in hand—smart machines aiding caring doctors to help families bring new life into the world.

The Story in the Gaps: Investigating COVID-19 Data Missingness

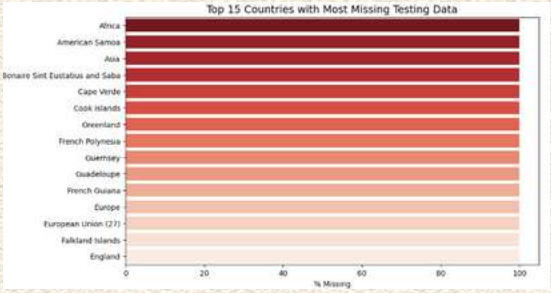
By Ameen yasha , IInd year , Bsc Life sciences

The "Our World in Data" (OWID) dataset is a vital resource for tracking the effects of the COVID-19 pandemic. However, while exploring this extensive database, it becomes apparent that the real story lies not within the numbers, but within the gaps, revealing how crisis reporting, public health, and data science intersect.

WHY I LOOKED FOR WHAT WASN'T THERE?

The world felt the disruptions of COVID-19 in many ways; systems stopped functioning, data collection and streaming systems ground to a halt. However, during this relative stillness, some of us found the time and space to entertain new questions. Lately, with another COVID-19 wave in India, I wondered, "I've been learning Python, so can I use it to get an understanding of some of the COVID-19 data?"

1) VISUALIZING THE HIDDEN STORY: QUANTIFYING & MAPPING THE DATA GAPS



The bar chart highlighting the top 15 countries with missing testing data revealed a stark pattern. Several countries and territories, including Africa, American Samoa, and various island nations, missed nearly all test data. This suggested that testing data capacity was most fragile, in contrast to the more complete reporting of death and case numbers.

The OWID dataset contains hundreds of thousands of rows, covering various COVID-19 metrics over time for each country. Upon initial inspection, it was immediately clear that fields such as ICU patients, hospitalization counts, and total tests were frequently blank, especially in countries with fewer resources.

To quantify this, I computed the percentage of missing values for each metric across every country.

A review of the initial data table quickly set the tone: while most countries consistently logged cases and deaths, ICU, hospital, and testing/vaccination data were often missing.

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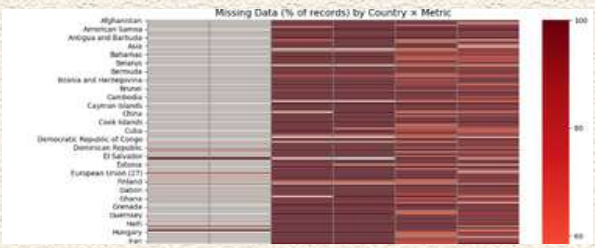


To "see" the pattern, I plotted a heatmap of missing value percentages (country vs. metric). Section of the Heatmap Observed

This chart displayed streaks of deep red wherever a country missed nearly all ICU, hospital, or test counts — a pattern less common in "new cases" or "deaths." The effect is immediate: it's not occasional gaps, but entire columns missing in many countries, especially for intensive metrics.

2) WHICH METRIC WAS MISSED, WHERE?

- ICU and hospital patient data were almost entirely absent for countries outside of Europe and North America.
- Certain territories like American Samoa, Enitera, and North Korea (found in the top missing metric data) showed 100% missingness for testing and vaccination data.
- Conversely, case counts and deaths had near-complete records, showing where reporting was prioritized.

3) WHAT DID THE MISSING DATA TEACH ME?

- Ignored and omitted data points, especially in the most stressed-out geographies, included those pertaining to ICU, hospitalization, testing, and vaccination.
- Dataset gaps reflect limits of systems and wider organizational issues, and not just a matter of technical oversight.
- The output of each code created new, better questions: why do certain gaps remain unfilled, while others get the most attention?

These findings lead to essential reflections for researchers and raise some critical questions like:

- Are these missingness patterns random, or do they peak during pandemic surges?
- What are we prevented from concluding due to these gaps, and how should this affect our scientific humility when communicating results?

4) SILENCE SPEAKS IN SCIENCE

While working with COVID-19 data, I realized it's easy to analyze only the visible portions. However, my experiences tell me the narrative is often in what is left out — the empty cells, the unquantified metrics.

The absence of data is not a failure; it is a signal indicating where systems have broken down or where resources have run out. Including the analysis of these absences allows scientists and students to discover the hidden patterns of pressure, burnout, or even apathy that the recorded metrics alone do not reveal. It compels us to interpret findings with care and compassion. As a student-researcher, I have learned that the gap in information is what contributes to the most significant gaps in science and can reveal truths that the data may not have captured.

Therefore, in all future analyses, we should let the visualization of these absences and the questioning of the reasons for them hold the same importance as the data itself.

MIDSUMMER EVENING

It's summer and the city lights are fading into oblivion.
The azure breaks into a vibrant violet and spectacular turquoise, brushed with a pink gradient,
just as I watch the deliquescent eve evanesce into night.

The colours are scattered along the bridge leaving their trails,
The sun fades, stars draw themselves on the sky's arch and the planets dangle from the eaves.
The great river flows in shades of lavender-cherry, the reflection of the sickle moon ripples through the twilit waters as I run my fingers in a playful fiddle, bespeckling me instinctively with the colours of the night.

The night deepens, I feel summer's warm embrace on my skin, in the city's concrete lap.
It envelopes all of me, till I've felt every breath of mine pass with time,

That's when I've felt alive, truly alive.

GAURAV KARKI
BSC (H) ZOOLOGY - 2ND YEAR

बंधन

मेरे बगीचे में एक फलता-फूलता पेड़ लगा हुआ था। संघर्ष और विफलता की तपती गर्मी में वह संतोष और सांत्वना की ठंडी हवा देता था। एक दिन उस पेड़ के पास एक बेल पनपने लगी, पेड़ जानता था कि यह बेल उसकी ऊर्जा छीनेगी, खुशियों में खलल पहुँचा देगी, उसकी डालियों की घेरा बंदी करेगी, आगे बढ़ने से रोकेगी, फल न लगने का कारण बनेगी। लेकिन पेड़ ने उस बेल को वो सब दिया, जो उसको चाहिए था, उसकी डालियों का सहारा, और अपने फलों का बलिदान भी। आदतन, बेल ने पेड़ के चारों ओर अपनी शाखाएँ फैला लीं, अब वह पेड़, पेड़ नहीं, बेल का ढांचा बन चुका था। बेल, एक बुरी आदत की तरह, पेड़ पर हावी हो गई। वक्त बीता, बेल लिपटती गई, उसकी हर साँस अब बेल की साँस बन गई। जब पेड़ की आंतरिक शक्तियों ने जवाब दे दिया,

जब उसने अपना सर्वस्व उस बेल पर न्योछावर कर दिया। तब, अंत में, आहिस्ता-आहिस्ता वह पेड़ सूख गया। लोग कहते हैं, बेल ने पेड़ को खा लिया। पर मैं कहता हूँ, पेड़ ही पेड़ को खा गया। आज बगीचे में न पेड़ है, न बेल बस एक खालीपन है, जो दोनों का शेष है।

MANASVI SHARMA
LIFE SCIENCES - 3RD YEAR

WHAT NEVER DOES

I was born on the stone — you named it Earth.
I created birth, death, and life.
I stretched my arms and turned into a sea,
stomped my feet to carve out valleys you seek,
sowed the seed on earth for food and breath.
You stood on two legs before me,
and chanted my name through the valleys.
You named my rivers holy,
you bowed to the sun and gave him stories.
You called me “Mother,” and that was my glory.
I fed the world, yet never stilled the greedy.
My gifts were plenty, but never freed the needy.
I forged the earth with gold and glitter,
but now I see loads of litter.
You split my mountains for your gain,
turn rivers black, let them carry your stain.
The air I breathed into your chest
you crowned with smoke and laid to rest.
I gave you shelter,
I gave you song,
yet you chose to wound me all along.
Yet I come when you need me most
perhaps as rain, a healing ghost;
a single drop, a spark of hope,
a tender thread to help you cope.
I bloom through cracks,
I sing through scars,
I shine within both sun and stars.
Giving life was always my prize,
though I remain — what never dies.

ADITYA BHUSHAN
BSC. ZOOLOGY HONS. 1 ST YEAR

NATURE'S EMBRACE

When life feels so heavy,
I crave the shade of a quiet tree,
Its branches holding me gently,
Its roots deep in patience and plea.

When my heart aches,
I step into the gentle rain,
Letting each drop carry away my pain,
And they whisper softly in my ears that "you are not alone".

When the world turns cold,
I search for the sun,
Feeling its warmth seep gently into my skin,
Reminding me that the light always returns.

When doubt clouds my path,
I watch rivers carve mountain,
Reminding me that persistence speaks louder than despair .

When I am broken,
When all I trusted falls apart,
I think of a forest after fire's token,
Where ash gives rise to a green heart.

When I lose something dear,
and the world feels dim and cold,
I think of a bee returning to its hive,
To the warmth it holds.
And when joy comes softly,
I need no crowd, no praise,
Only the quiet gaze of my velvet paws,
Who listens without words,
Who stays without condition,
Who loves without asking why.
In the hush of nature, in the grace of creatures,
In every leaf,every feather, every paw print
I find my healing,
A language of silence,
That mends what words cannot.

SAIKA
BSC. ZOOLOGY HONS. 2ND YEAR

ये काहे कि बेमानी है

जो शिव की जटा से थी
निकली थी,
वो गंगा नहीं अब पानी है,
किस्तों में लूटा कुदरत को
जिसने,
लुटेरे वो सब खानदानी हैं।

फटे हाल में जीते हैं,
जेबों में बस वीरानी है,
दोस्त भी हैं आम से,
कहीं कोई फलां-सा अडानी ।

तिल-तिल कर जो मर गए,
उनकी सुने भी कौन कहानी है,
दोष ना दो सरकार को अब,
इन्हें धर्म की नाव चलनी है।

दो-चार बाढ़ में बह गए,
कुछ के घर में आग लगी,
बड़ी आम-सी अब यह बात है,
किस बात की हैरानी है?

हमारी जेबों से कटा जो धन,
वो आखिर किस ठिकाने है?
सड़क जो कल बननी थी,
आज भी अधूरी कहानी है।
मत पूछो नेता जी से हाल,
यह सब तो उनकी मेहरबानी
है।

बस्ती-बस्ती दहक उठी,
अब सीने की आग बुझानी है,
लूटो जी भर कर, लूटो हमें,
जनता तो अब भी अंजानी है।

ASHMIT
BSC (H) ZOOLOGY - 2ND YEAR

खत

दो व्यंजनो से मिलकर बना है यह 'खत',
पर हजारो जज़्बात खुद में समाये बैठा है।
कुछ अपने मुकाम पर पहुँचे,
और कुछ राहों में ही कहीं खो गए।
कुछ सही से लिखे नहीं गए,
और कुछ सही से समझे नहीं गए।

खत, वक़्त मांगता है,
लिखने में भी, और पढ़ने में भी।
पर अंत मैं, संतुष्टि तो जरूर देकर जाता है।

चाहे ये दुनिया कितनी भी आगे क्यों ना चली जाए,
यह खत कभी "आउट ऑफ़ फ़ैशन" नहीं होंगे।

खत हाथ से लिखने में वक़्त तो ज़रूर लगता है।
पर फिर वही सियाही जब-जब नज़रों के सामने आती है।
आँखों को नम ज़रूर करती है।

आखिर खत ख़ास हों भी क्यों न?
एक खत लिखने में ये नन्हा सा दिल तक खिल उठता है।
कभी डर लगता है कि कहीं यह दिल लिखते-लिखते रुक ना जाएं,
और कभी लगता है कि यह लिखते-लिखते रुक क्यों नहीं रहा।

ABHINAY
BSC (H) ZOOLOGY - 3RD YEAR

यादें!

कुछ वक्त बाद, अपने शहर लौटा,
फिर क्यों न जाने, धड़कनें तेज़ थीं।
जैसे किसी को देखना चाहती थीं,
कोई शक्स जो इस दिल के करीब है,
या शायद नहीं।
हाँ... पता नहीं।

उन जाने-पहचाने रास्तों पर निकला,
पर अकेले जाने की इच्छा न थी।
साथ लेकर कुछ यादें उसकी,
और मैं संग उसके चल पड़ा।

वहाँ, जहाँ साथ उसके,
कुल्हड़ वाली चाय पीता था,
फिर वही ठहर गया।
मँगायी आज वही चाय,
हाँ, मगर आज कप भी अकेला था,
और यादें तो चाय पीती नहीं।
दुकान वही, अदरक वही,
कुल्हड़ वही, बस वो स्वाद नहीं।
शायद भैया भी अब चाय में,
थोड़ी मिलावट करने लगे हैं,
या शायद नहीं।
हाँ... पता नहीं।

ख़ैर, छोड़ो, अब गंगा घाट चलते हैं,
उस कोने को इस कोने से निहारते हैं।
गुनगुनाती पक्षियों को उड़ते देखते हैं,
चलती हुई हवाओं को महसूस करते हैं
बहती लहरों की आवाज़ सुनते हैं,
और ढलती शाम में सुकून ढूँढ़ते हैं।
तट पर उनका टकराना सुनते हैं,
फिर ढलती हुई शाम देखते हैं,
और एक सुकून का एहसास करते हैं।
किसने कहा, "शाम में ये घाट आनंद नहीं देता?"
वो गंगा आरती का वक्त, वो बजती हुई घंटियाँ,
वो सुगंधित हवाएँ, वो लोगों की चहल-पहल,
वो बच्चों का हँसी, वो मुस्कुराते चेहरे,
और तेरे साथ बिताए वो वक़्त।

हाँ, वो वक़्त जो चला गया,
वो लौटकर आता नहीं।
आती है तो बस वो यादें
यादें जो महज़ यादें हैं।
न पास तुम मेरे हो,
न साथ हम तुम्हारे हैं,
मगर यादें तो महज़ यादें हैं,
ये बातें तो महज़ बातें हैं।

लौटते वक्त गुज़रा उन्हीं राहों से,
जिन राहों पर वो गलियाँ पड़ती हैं,
जिन गलियों में तेरा मकान था,
देखकर वो मकान, फिर मुस्कुराया मैं।
वैसे ज़्यादा कुछ बदला हुआ लगा नहीं
वही पान की दुकान, वही सब्ज़ी बाज़ार,
वही हलवाई, और वही बगल का पार्क,
जहाँ साथ बैठकर लाखों बातें किया करते थे,
तुम अपना, मैं अपना दिन सुनाया करते था।

घर पहुँचते ही पूछा माँ ने,
"कहाँ गए थे अकेले?"
मन ने कहा "अकेला कहाँ था?"
वो थी ना, अरे हाँ, वही यादें उसकी,
मगर जुबां ने कहा, "कहीं नहीं।
बस अपना बदला शहर देखने।"

फिर उन यादों को याद करने,
फिर कुछ यादों को साथ लेने,
चल तो पड़ा हूँ, मैं फिर यहाँ से,
कुछ यादों को फिर बटोर के,
मगर कहते है ना,
ये यादें तो महज़ यादें हैं,
ये बातें तो अब महज़ बातें हैं।

NISHANT
LIFE SCIENCE 3RD YEAR

Achievements

KAMYA BHARDWAJ ,2ND YEAR

With immense pride, we celebrate the extraordinary achievement of Kamya Bhardwaj, a second-year Zoology (Hons.) student, who showcased exceptional endurance at the 79th World's Longest Open Water Swimming Championship. Kamya completed an incredible 81 km swim in the Bhagirathi-Hooghly river in 12 hours and 45 minutes, securing second place, and became the first female swimmer from Haryana to accomplish this feat—an achievement that stands as a testament to her unwavering spirit.

PAPERS PUBLISHED

IECE 2025 Conference

The 2nd International Electronic Conference on Entomology

19–21 May 2025 | Online

Evaluating the Effect of African Basil, Garlic Vine, Lemongrass, and Moringa Extracts on *Aedes aegypti* Larval Stage: A Sustainable and Natural Method

Ansh Rai1, Bikramaditya Behera1, Shreya Singh1, Shubham Kumar1, Rita Rath1, Roopa Rani Samal1*
1Department of Zoology, Dyal Singh College, University of Delhi, India
Corresponding Author: roopasamal.zoology@dsc.du.ac.in

Archives of Microbiology (2025) 207:281
https://doi.org/10.1007/s00203-025-04464-3

REVIEW

A comprehensive review of advanced strategies to combat antimicrobial resistance

Bikramaditya Behera[1] · Rajrattan Singh[1] · Komal Sharma[2] · Ansh Rai[1] · Shreya Singh[1] · Biji Balan[1]

Received: 4 July 2025 / Revised: 30 August 2025 / Accepted: 1 September 2025

POSITIONS

PRIYANSHU DUTTA

B.Sc. Zoology (Hons.), 3rd Year Placement Coordinator, Project Head at NSS, and Coordinator at Sankalp NGO.

ABHINAY

B.Sc. Zoology (Hons.), 3rd Year – Joint Secretary of Rudra, the Dance Society of Dyal Singh College.

ARYAN SINGH

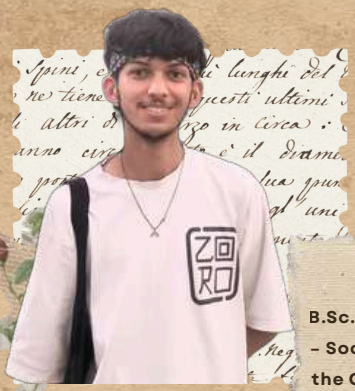
B.Sc. Zoology (Hons.), 3rd Year – Vice President of Glamoratti, the Fashion Society of Dyal Singh College.

YASH KUMAR

2nd Year – Tech Coordinator at ADVEKA, The Environment Club of Dyal Singh College.

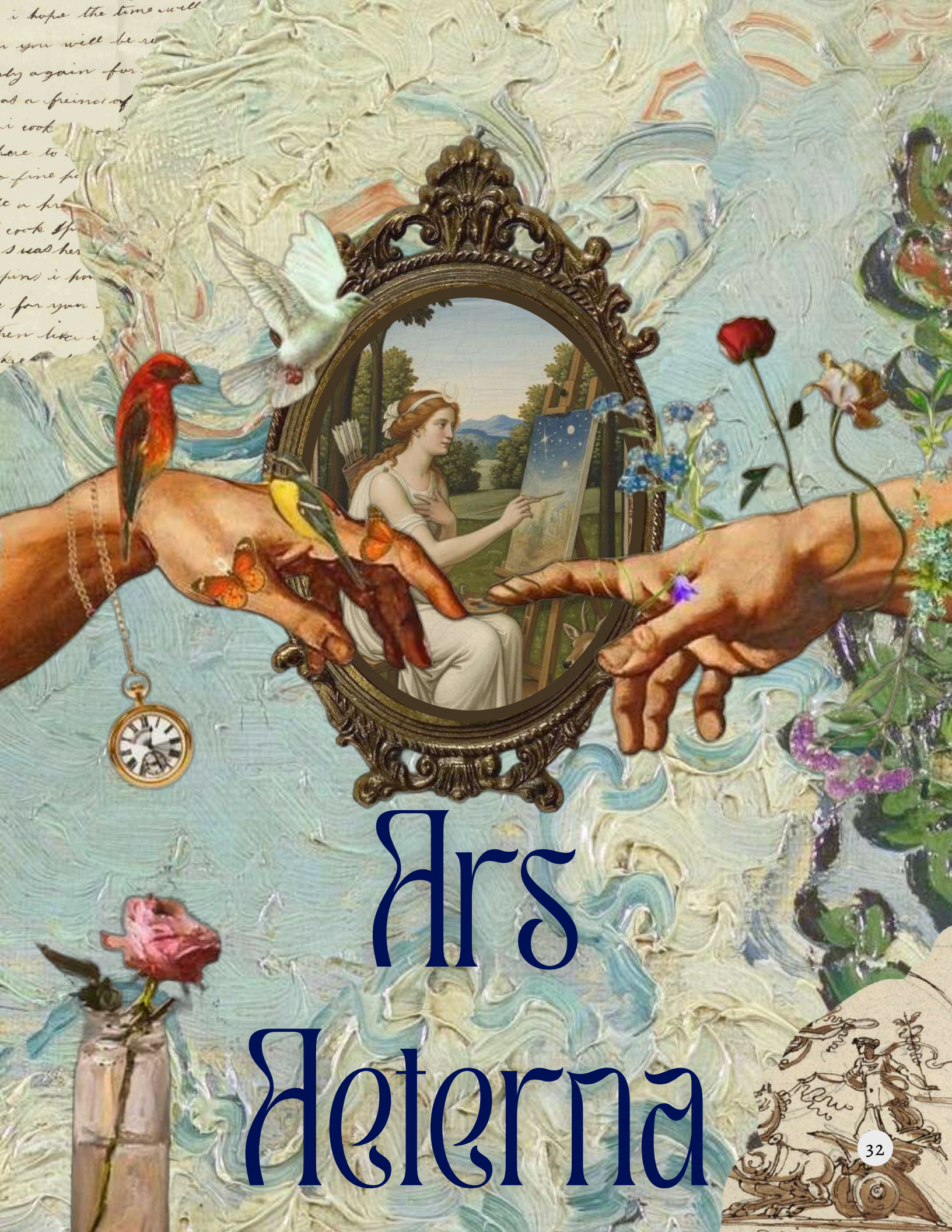
ASHMIT KUMAR

2nd Year - General Secretary , Spilled Ink , the Creative Writing Society of Dyal Singh College.



GAURAV KARKI

B.Sc. Zoology (Hons.), 2nd Year – Social Media Head at Vikirya, the Gender Champions of Dyal Singh College.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BIKRAMADITYA BEHERA 4TH YEAR

CHHAVI 4TH YEAR

SAIKA 2ND YEAR

SHRESHTH KOHLI 4TH YEAR

TISHA ARORA 3RD YEAR

SAMAD ANJUM 3RD YEAR

SAIKA 2ND YEAR

SAYAN SIL 2ND YEAR

SAMAD ANJUM 3RD YEAR

SHRESHTH KOHLI 4TH YEAR

SAYAN SIL 2ND YEAR

SAYAN SIL 2ND YEAR

SAYAN SIL 2ND YEAR

BISWARUPA SWAIN 4TH YEAR

SAYAN SIL 2ND YEAR

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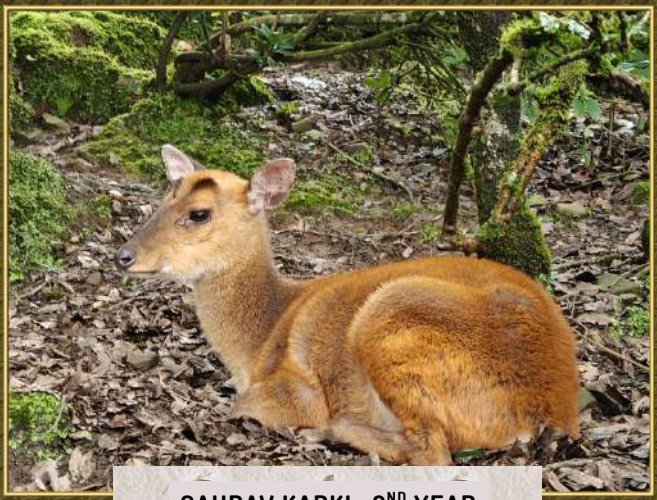
SAURABH KUMAR 2ND YEAR



GAURAV KARKI 2ND YEAR

GAURAV KARKI 2ND YEAR

AYAAN MUDGAL 2ND YEAR

SAURABH KUMAR 2ND YEAR

TISHA ARORA 3RD YEAR

ARTWORK

AYAAN MUDGAL 2ND YEAR

AYAAN MUDGAL 2ND YEAR

GAURAV KARKI 2ND YEAR

AYAAN MUDGAL 2ND YEAR

NITU KUMARI 3RD YEAR

HIMESH 1ST YEAR

DR.SEEMA BORA ROY

AKASH KUMAR GUPTA 1ST YEAR

DR.SEEMA BORA ROY

AKASH 1ST YEAR

KHUSHI 2ND YEAR

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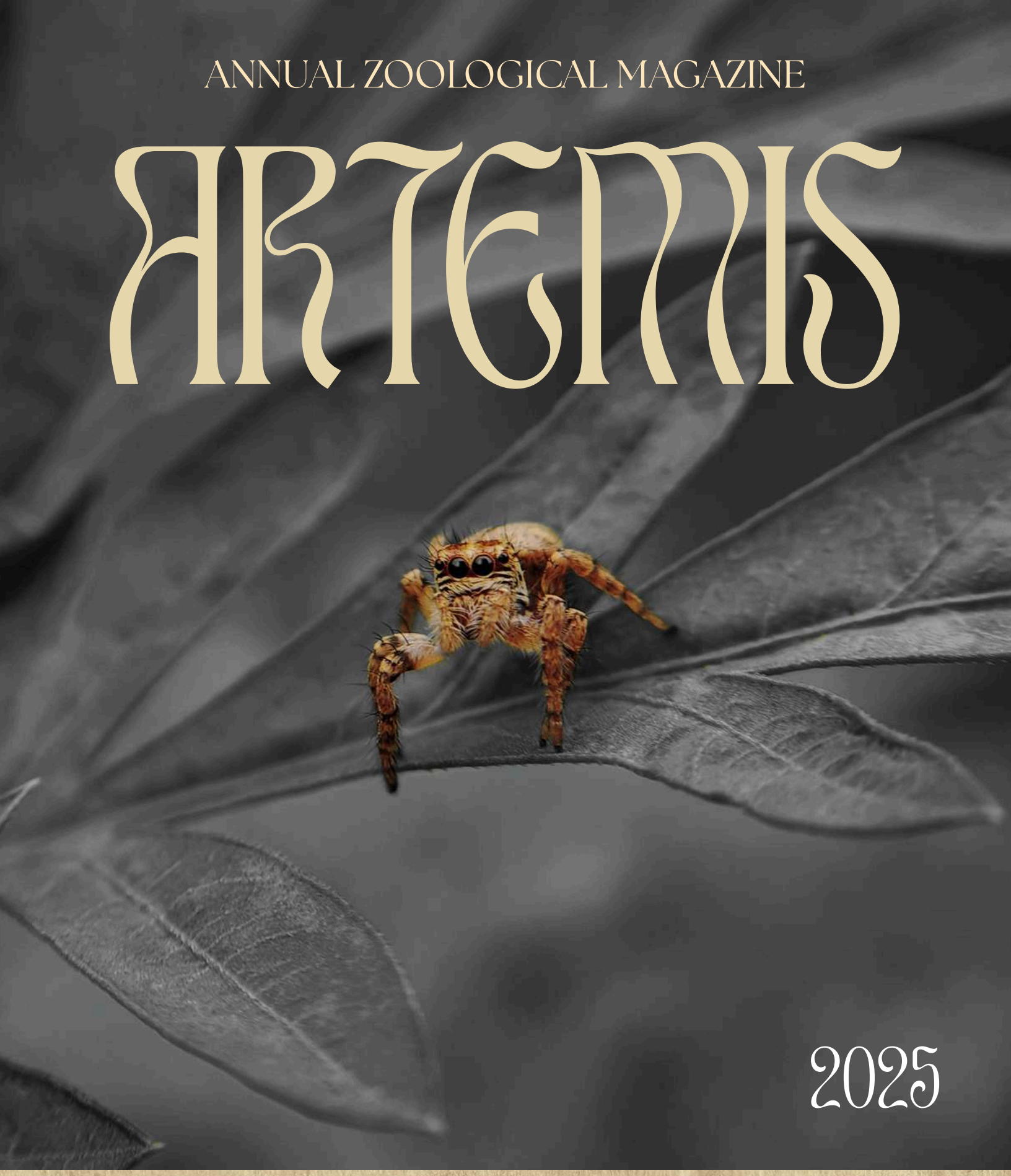

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