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From the Editor's

Dear Readers,

In the April issue of our Newsletter, we received several popular articles from diverse fields. All the authors deserve great appreciation for sharing articles in huge numbers. Please continue sending articles to our Publication team and share published newsletter with your friends also.

I would like to thank the Editorial team including Print, Designer and Publication committee for their efforts throughout the edition.

Your suggestions are always welcomed for improvement.

Dr. R. S. Tomar
Editor-in-Chief

CARDIOPROTECTIVE POTENTIAL OF ARJUNA IN HYPERTENSION MANAGEMENT

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Introduction

Hypertension, or high blood pressure, is a widespread and serious health condition which is a leading contributor to cardio vascular diseases (CVD's), affecting millions globally. Often termed a "silent killer," it may progress without noticeable symptoms while gradually damaging vital organs. Persistent elevation of blood pressure increases the risk of severe cardiovascular complications, making early diagnosis and effective management essential.

Understanding Hypertension and Its Complications

Uncontrolled hypertension can lead to life-threatening conditions such as heart attack, heart failure, and stroke due to impaired blood flow to the brain. It also contributes to kidney damage, resulting in chronic kidney disease, and affects vision by damaging retinal blood vessels. These complications emphasize the need for continuous monitoring and timely intervention.

Ayurvedic Perspective and Holistic Management

In Ayurveda, hypertension is associated with an imbalance of *Vata* and *Pitta doshas*, which disrupts normal blood circulation and vascular function. Management focuses on restoring this balance through herbal remedies, dietary regulation, and lifestyle modifications including yoga, meditation, and stress management.

Arjuna: A Natural Cardioprotective Agent

A cornerstone herb in Ayurvedic cardiology is *Terminalia arjuna* (Arjuna). Traditionally used for heart health, Arjuna is known to strengthen cardiac muscles, improve

myocardial function, and support healthy blood circulation.

Mechanism and Therapeutic Benefits
Arjuna exhibits multiple cardioprotective mechanisms:

- **Antihypertensive action:** Promotes vasodilation and reduces vascular resistance, aiding blood pressure control
- **Antioxidant activity:** Rich in flavonoids and polyphenols that reduce oxidative stress and protect heart tissues
- **Lipid-lowering effect:** Helps decrease LDL and increase HDL, preventing plaque formation and atherosclerosis
- **Anti-inflammatory properties:** Protects blood vessels and reduces chronic inflammation
- **Anti-ischemic effect:** Improves coronary blood flow and oxygen supply, beneficial in angina and ischemic conditions

Bioactive Composition
The therapeutic efficacy of Arjuna is attributed to its rich composition of bioactive compounds such as triterpenoids (Arjunolic acid, Arjunic acid), flavonoids (Arjunone, luteolin), tannins, and glycosides (Arjunetin, Arjunosides). These compounds work synergistically to enhance cardiac efficiency, maintain vascular integrity, and regulate blood pressure.

Ayurvedic Formulations and Lifestyle Measures
Arjuna is commonly used in formulations such as Arjunarishta, Arjuna churna, and standardized extracts in tablet or capsule form. These are often combined with other supportive herbs for enhanced effects. Alongside herbal therapy, Ayurveda emphasizes a balanced low-salt diet, regular physical activity, adequate sleep, and stress reduction techniques for optimal cardiovascular health.

Conclusion
Hypertension requires consistent and long-term management to prevent serious complications. Integrating Ayurvedic approaches, particularly Arjuna-based formulations, offers a natural and holistic strategy for blood pressure regulation and cardiovascular protection. When combined with healthy lifestyle practices, Arjuna serves as a powerful ally in promoting heart health and overall well-being.

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ETHNOMEDICINAL RICHNESS OF THE ANDAMAN ISLANDS: OPPORTUNITIES AND THE NEED FOR CONSERVATION

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Introduction
Ethnomedicine refers to the study of traditional medicinal practices developed by indigenous communities using local biological resources. Tropical islands often harbor unique plant diversity and indigenous healing traditions due to geographical isolation and ecological variation.

The Andaman and Nicobar Islands, located in the Bay of Bengal, represent one of India's most ecologically diverse regions. The islands support tropical evergreen forests and harbor numerous endemic plant species. These ecosystems have nurtured diverse tribal communities such as the Great Andamanese, Jarawa, Onge, Sentinelese, Nicobarese, and Karen settlers who maintain traditional plant-based healthcare systems.

Ethnomedicinal practices of these communities involve the use of wild herbs, shrubs, trees, climbers, and even marine resources for treating a wide range of ailments. Documentation of these practices is essential not only for preserving cultural heritage but also for exploring new pharmacological compounds.

The Andaman Islands represent one of the most significant biodiversity hotspots in India, characterized by rich floristic diversity and unique indigenous knowledge systems. The islands host several indigenous tribal communities whose traditional healthcare practices rely heavily on local medicinal plants. Ethnomedicinal

knowledge accumulated through generations forms an important component of indigenous healthcare and offers promising opportunities for modern pharmacological research.

However, rapid socio-economic transformation, habitat degradation, and erosion of traditional knowledge threaten this valuable biocultural heritage. This research report reviews the ethnomedicinal richness of the Andaman Islands, highlights potential opportunities for drug discovery and sustainable livelihoods, and emphasizes the urgent need for conservation of both biodiversity and traditional knowledge systems.

Biodiversity and ethnomedicinal wealth of the Andaman Island

Floristic diversity

The islands possess rich tropical vegetation with high levels of endemism. Studies have documented hundreds of medicinal plant species across the archipelago. Approximately 536 ethnomedicinal plant species belonging to 382 genera and 138 families have been recorded from the Andaman and Nicobar Islands. These plants belong to different taxonomic groups including angiosperms, gymnosperms, pteridophytes, and algae, reflecting the wide ecological diversity of the region.

Medicinal plants used by Ilindigenous communities

Indigenous communities possess extensive knowledge of the therapeutic uses of plants. For example, surveys among Karen communities of Middle Andaman documented 78 medicinal plant species belonging to 48 families used to treat 38 ailments.

Similarly, ethnobotanical studies among the Onge and Nicobarese tribes recorded 42 medicinal plant species belonging to 26 families used for treating about 25 diseases. Common ailments treated using traditional herbal medicine include:

Fever and infections
Digestive disorders
Skin diseases
Respiratory problems
Wounds and injuries
Joint pain and inflammation

Leaves are the most commonly used plant part, followed by roots, bark, fruits, and seeds.

Important ethnomedicinal plant species

Several medicinal plants widely used in the islands include:

Aegle marmelos – digestive disorders and fever
Curcuma longa – antiseptic and wound healing
Andrographis paniculata – fever and infections
Centella asiatica – memory enhancement and skin diseases
Ocimum tenuiflorum – respiratory ailments
Morinda citrifolia – gastrointestinal disorders and wound care
Piper betle – cough and antiseptic uses

These plants are often prepared as decoctions, pastes, infusions, or poultices depending on the ailment.

Ethnomedicinal knowledge of tribal communities
Indigenous Healthcare Systems

Tribal communities in the Andaman Islands rely on plant-based remedies as their primary healthcare system. Traditional healers or knowledge practitioners possess specialized knowledge regarding plant identification, harvesting, and preparation of medicines. Knowledge transmission occurs orally through generations, often restricted within families or specific healer groups.




Cultural significance
Ethnomedicinal practices are closely linked with cultural beliefs, spiritual rituals, and ecological understanding. Many communities maintain sustainable harvesting practices and respect sacred forest areas that indirectly contribute to biodiversity conservation.

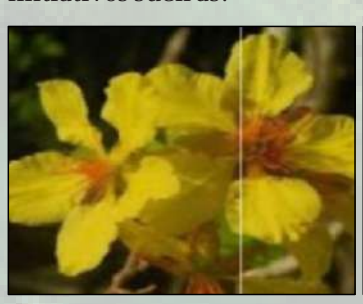
Opportunities from ethnomedicinal resources

Drug discovery and pharmacological research
Traditional knowledge provides valuable leads for modern drug discovery. Plants used by indigenous communities may contain bioactive compounds useful in pharmaceutical development.

Systematic phytochemical and pharmacological studies of these plants can lead to:
Discovery of new antimicrobial agents
Anti-inflammatory drugs
Anticancer compounds
Herbal therapeutic formulations
Ethnobotanical documentation thus acts as a foundation for ethnopharmacological research.

Development of herbal industries
The rich medicinal plant resources of the islands offer opportunities for:
Herbal medicine production
Functional food and nutraceutical development
Phytochemical industries
Ayurvedic and traditional medicine integration
Properly managed cultivation and processing of medicinal plants can create livelihood opportunities for local communities.

Sustainable ecotourism and bio-cultural heritage
Ethnomedicinal traditions can contribute to eco-tourism initiatives such as:




Herbal gardens
Ethnobotanical interpretation centers
Community-based conservation programs
Such initiatives can promote awareness of indigenous knowledge and biodiversity conservation.

Threats to ethnomedicinal resources
Despite their immense value, ethnomedicinal resources of the Andaman Islands face several threats.

Habitat loss: Deforestation, infrastructure development, and agricultural expansion have resulted in habitat degradation.

Over-exploitation of medicinal plants: Unsustainable harvesting practices may lead to depletion of rare species.

Loss of Traditional Knowledge: Modernization and cultural assimilation are causing rapid erosion of indigenous knowledge systems.

Climate Change: Changing climatic conditions may alter forest ecosystems and affect the distribution of medicinal plant species.

Need for conservation
***In-situ* Conservation:** Protection of natural habitats such as biosphere reserves, national parks, and community forests is essential for conserving medicinal plant diversity.

***Ex-situ* Conservation:** Botanical gardens, seed banks, and medicinal plant nurseries can help preserve rare species.

Documentation of Traditional Knowledge: Systematic ethnobotanical surveys and digital databases are needed to record indigenous knowledge before it disappears.

Community participation: Conservation strategies should actively involve tribal communities, recognizing their rights and traditional ecological knowledge.

Policy and legal framework: Implementation of biodiversity conservation laws, benefit-sharing mechanisms, and intellectual property protection is crucial for safeguarding traditional knowledge.

Conclusion
The Andaman Islands possess remarkable ethnomedicinal

richness shaped by diverse ecosystems and centuries of indigenous knowledge. Hundreds of medicinal plant species are used by tribal communities to treat a wide range of ailments. These plants represent valuable resources for pharmacological research, herbal medicine development, and sustainable livelihood opportunities.

However, increasing environmental pressures and loss of traditional knowledge threaten this bio-cultural heritage. Therefore, urgent conservation measures, comprehensive documentation, and community-based management strategies are necessary to preserve the ethnomedicinal wealth of the Andaman Islands. Protecting these resources will not only safeguard biodiversity but also contribute to future healthcare innovations and sustainable development.

WHEN DNA MEETS INFRARED: DECODING THE RELATIVE AGE OF BURIED BLOODSTAINS

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Introduction

Buried bloodstains hide a lot of information within, they hold clues to when the crime has happened especially if the body is not present. As the samples are buried, the stains on the fabric are deeply embraced by the moisture and microbes wanting to be seen and accepted by those who are an integral part of delivering justice. As investigators dive deep from the preliminary examinations to the confirmations in molecular biology igniting positive assumptions, the real mystery of estimating the relative age of the buried sample unfolds with FTIR spectroscopy.

FTIR's Molecular Clock

FTIR spectroscopy has been one of the most efficient techniques to study and understand the surface chemistry of a complex compound. The instrument relies on the principle of how infrared light is absorbed by the molecular bonds of different samples especially body fluids to give a unique fingerprint. Here they use molecular vibrations to track the oxidation clock of the buried blood stain even if the stains are days older. FTIR is non-destructive and ideal for pre-screening analysis of the samples.

The Power of STR Profiling

The STR profiles gives unique information on the chromosomal markers for genetic identification pointing on who has left the blood at the scene of crime. DNA analysis is universally accepted; revealing information in terms of sample nature, species and most significantly the identity of the individuals who were involved in the act. Here the STR profile gives peculiar information on the age of buried blood stain which further entangles the complexity of crime scene reconstruction

Integrating STR and FTIR

STR profiling and FTIR spectra can be bridged to make the idea of evidence examination more meaningful and relevant to give a final word in crime scene reconstruction. To start with let's decode the story where STR gives information on the individual genetic profile and has a great sense of acceptance in forensic burial studies. Though STR analysis is

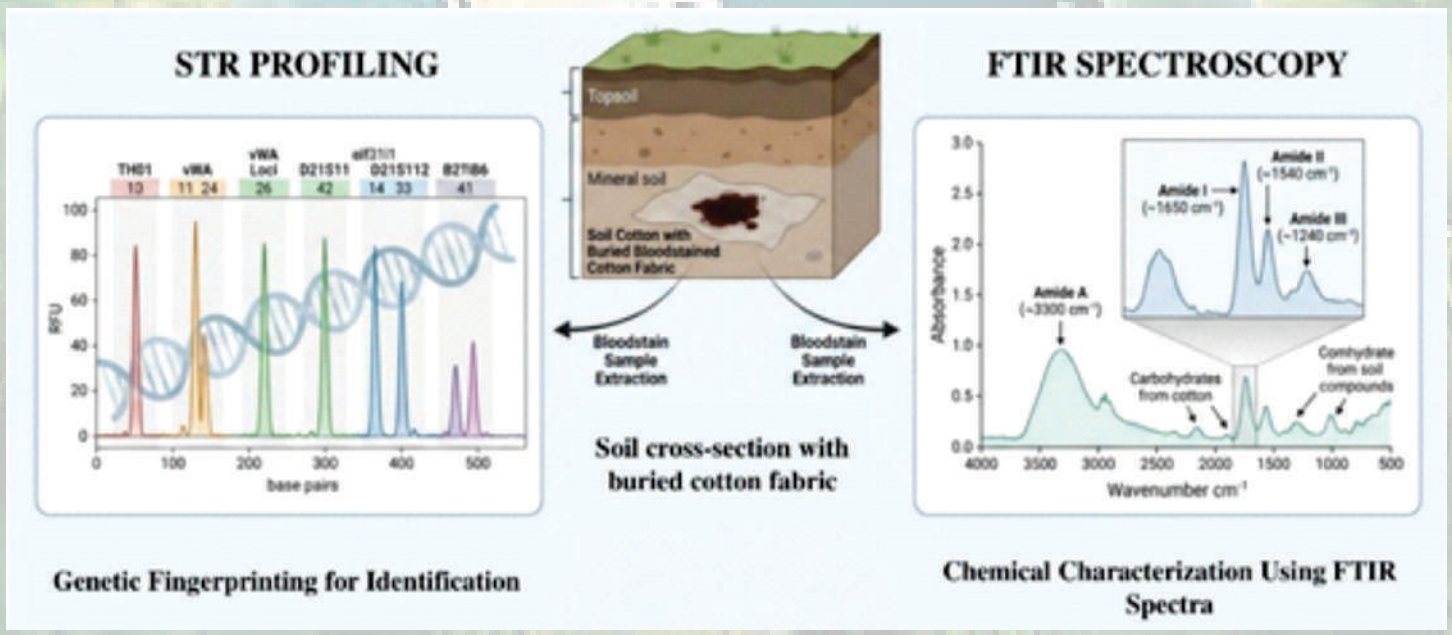

Fig 1: Combined analysis of buried blood stains using STR and FTIR.

widely preferred in estimating the age of degraded samples, there are multiple factors affecting sample degradation in soil which interfere with DNA downstream analysis. The brutal foe in outdoor burials can be the microbes, the moisture, the temperature, the burial depth, UV, entomological evidence and so on. They interfere with the sample in causing allele dropouts and missing alleles becauseof fragmented DNA. This situation brings in the limit of detection where it becomes almost impossible to get the profile thus delaying the process of crime scene reconstruction. In addition, there is another significant concern in terms of the nature of the sample, as blood is a complex mixture with an amalgamation of different components like serum and proteins apart from molecular markers. FTIR spectral scans give the molecular fingerprints especially peaks related to amide A, I, II and III, which are considered diagnostic features of human blood. FTIR spectra also predicts the STR success with a vibrant spectrum where the degraded samples flag low odds for downstream analysis.

Conclusion

Together they conquer limitations on burial evidence examination and helps in reconstructing crime scenes more accurately. In clandestine burials and in graveside chaos, this duo unmasks unique timelines where all the information locked in a forensic tango against time and soil are revealed where no stain remains neglected from people's gaze.

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THE ORIENTAL OR INDIAN RAT SNAKE

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The Indian Rat Snake (Ptyas mucosa), also known as the Oriental Rat Snake, is one of the most common and widely distributed non-venomous snakes of South and Southeast Asia. It belongs to the family Colubridae and plays an important ecological role by controlling populations of rodents and other pests.

Taxonomy and distribution:

The Indian Rat Snake is scientifically known as Ptyas mucosa. It is widely distributed across the Indian subcontinent and neighbouring regions including India, Bangladesh, Sri Lanka, Nepal, Pakistan, Myanmar, Thailand, and parts of Indonesia. In India it is found in forests, grasslands, agricultural fields, wetlands, and even urban areas.

Physical characteristics:

The Indian Rat Snake is a long, slender snake that can grow

up to 2–3 metres in length. Its colour varies widely depending on habitat and age. Individuals may appear yellowish-brown, olive, grey, or black with faint crossbars along the body. The underside is usually pale or yellowish. The snake has large round eyes with a golden iris, which help it detect movement efficiently.

Behaviour and habitat:
The species is diurnal, meaning it is active during the day. It is extremely agile and a good climber, often seen in trees and shrubs. It is also a strong swimmer and can be found near water bodies such as ponds, rivers, and paddy fields. When threatened, the snake may inflate its neck slightly and produce a loud hissing sound, sometimes mimicking the posture of a cobra, although it is harmless.

Diet and ecological importance: As its name suggests, the Indian Rat Snake mainly feeds on rats and mice, making it highly beneficial for farmers. It also consumes frogs, birds, eggs, lizards, and occasionally small snakes. By controlling rodent populations, it plays a crucial role in protecting agricultural crops and maintaining ecological balance.

Reproduction: The Indian Rat Snake is oviparous (egg-laying). Females usually lay 6–20 eggs during the breeding season, which generally occurs in the warmer months. The eggs hatch after about 60–80 days, producing young snakes that are independent from birth.

Conservation status: Although the Indian Rat Snake is not currently considered endangered, it faces threats from habitat destruction, road mortality, and human persecution due to fear or misunderstanding. In India, the species is protected under the Wildlife Protection Act, which prohibits its capture or killing.

The Indian Rat Snake is an important component of the ecosystem and a valuable ally to farmers due to its role in controlling pests. Increasing public awareness and conservation efforts are essential to ensure that this harmless and beneficial reptile continues to thrive in its natural habitats.

Photo credit: **Laki Banik**

FIRST TIME REPORT OF OBLIGATE BROOD PARASITISM OF PIED CUCKOO (*CLAMATOR JACOBINUS*) AND YELLOW BILLED BABBLER (*ARGYA AFFINIS*) IN DAROJI SLOTH BEAR SANCTUARY, BALLARI, KARNATAKA

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Obligate Brood Parasitism is a specialized form of Brood Parasitism, where a bird species (parasite) relies entirely on the other species (host) to rise and nurture its eggs and jevenile. It is a rare breeding strategy used by less than 1 % of the total bird species [1]. The pied cuckoo tends to exhibits Obligate Brood Parasitism in babbler species such as Common Babbler, Jungle Babbler, Large Grey Babbler, Yellow-billed Babbler, Rufous Babbler [2]. These Birds exhibit brood parasitism for various reason such as to save energy and time, to increase reproductive output by laying in multiple nest in one breeding season. Pied Cuckoo eggs exhibit mimicry in color and texture, closely resembling the host's eggs—a phenomenon believed to be part of an evolutionary arms race [4]. Both Pied Cuckoos and Yellow-billed Babblers inhabit open scrublands and woody, dry forests, often avoiding dense vegetation. This observatory note describes the observation of obligate brood parasitism between a pack of 7 yellow billed babbler and 1 pied cuckoo. Similar observation was seen in Sri Lanka [3].

Observation of brood parasitism in Daroji Sloth bear Sanctuary

On 29 June 2025, between 18:00 and 18:39 hrs, while walking along the bird trail path, inside the Daroji Sloth Bear Sanctuary we observed brood parasitism of the pied cuckoo as the parasite and yellow billed babbler as the host. The area was

Fig 1: Juvenile Pied Cuckoo and Yellow-billed Babbler (Obligate Brood Parasitism).

surrounded by shrubby and thorny forest; it had a rocky terrain and very few puddles. We documented the interaction using a Samsung S24 Ultra smartphone.

The host group consisted of seven babblers, four of which were observed actively tending to a juvenile Pied Cuckoo, confirming cooperative care. No aggression or rejection behaviour was observed from the babblers. The chick was calling persistently, and the host birds responded with regular feeding and attention. Since babblers tends to move around a lot, the pied cuckoo was following the pack of babblers.

The Yellow-billed Babbler is a known host of the Pied Cuckoo, but records from Karnataka, particularly from Daroji Bear Sanctuary, are lacking in the published literature. To the best of our knowledge, this is the first documented observation of this behaviour from the region. Observatory notes like this tends to help researcher understand long term changes in the behavior if occurred, adding data to its conservation and adding spatial data. The Jungle Babbler may be an underreported host species, and more focused monitoring is needed to understand such ecological interactions in dry forest habitats.

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CHEETAH (*ACINONYX JUBATUS*) REINTRODUCTION IN INDIA: EVALUATING CURRENT SUCCESS AND CHALLENGES IN BREEDING UNDER PROJECT CHEETAH

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The reintroduction of the cheetah (*Acinonyx jubatus*) in India through Project Cheetah represents a landmark conservation initiative aimed at restoring a species declared extinct in the country in 1952. This study evaluates the current status of cheetah breeding in India, focusing on achievements, constraints, and future prospects. Since the translocation of African cheetahs from Namibia and South Africa to Kuno National Park, the population has shown encouraging growth, with multiple successful breeding events and the emergence of second-generation individuals. However, challenges such as high mortality rates, habitat limitations, genetic concerns, and management issues persist. The findings suggest that while early breeding success indicates ecological adaptability, long-term sustainability depends on habitat expansion, improved veterinary care, and strategic population management. This paper highlights the need for adaptive conservation strategies to ensure the establishment of a viable cheetah population in India.

The cheetah (*Acinonyx jubatus*), once widespread across India, was declared extinct in 1952 due to overhunting and habitat loss. In an ambitious effort to restore this apex predator, the Government of India launched Project Cheetah in 2022, marking the world's first intercontinental translocation of a large carnivore.

African cheetahs were introduced into Kuno National Park, selected for its suitable habitat, prey availability, and relatively low human disturbance. A critical indicator of the project's success is the ability of the introduced population to reproduce and establish a self-sustaining population. This short study examines the current success and challenges of cheetah breeding in India, providing a comprehensive evaluation of ecological, biological, and management dimensions.

This study is based on a qualitative synthesis of secondary data (references provided beliw) obtained from Government reports and press releases, scientific literature on cheetah ecology and conservation, and media reports and conservation analyses. The data were analyzed to assess breeding success, survival rates, and challenges associated with the reintroduced population.






Since their introduction, cheetahs in Kuno National Park have demonstrated notable population growth and breeding success. The population increased from initial translocated individuals to approximately 35–40 individuals by 2026. Multiple litters have been recorded since 2023. Emergence of second-generation (India-born) cheetahs are a milestone of this conservation initiative. These developments mark the first successful cheetah births in India in over seven decades.

The factors contributing to breeding success of cheetahs in Kunho hsbitat suitability. The Kuno National Park provides adequate prey base (*e.g.*, chital, antelopes), Open grassland and woodland ecosystems as well as limited anthropogenic disturbance. The continuous scientific monitoring and management through telemetry by radio-collaring the adults and satellite tracking has provided valuable data. Advanced veterinary supervision and health monitoring system have prevented death of the animals in a completely new ecosystem under widely different Indian environment.

The controlled breeding protocols through natural rearing also facilitates quick adaptability. Cubs are being raised by mothers in natural conditions, enhancing survival skills and reducing human dependency. Technical and logistical support from Namibia and South Africa has further strengthened project implementation and ensured genetic diversity.

A significant number of adult cheetahs and cubs have died due to incudences of various diseases and infections, injuries during mating or territorial conflicts as well as due to environmental stress. Limited spatial extent of Kuno National Park.

questions long-term Carrying Capacity and need for additional reintroduction sites. The prey composition may not fully align with the ecological preferences of African cheetahs, potentially affecting hunting efficiency and cub survival.

Introduction of African cheetahs instead of the extinct Asiatic subspecies raise concerns about ecological authenticity and genetic integrity. Gaps in timely veterinary intervention has been linked to the high mortality rates of cheetahs in Kunho. Furthermore, challenges in adapting management strategies to local conditions has been an important question to consider. Debate over allocation of conservation resources with competing priorities for native endangered species has been another hot area of conservation debate.

The long-term success of cheetah breeding in India depends on expansion to additional habitats (*e.g.*, Gandhi Sagar Wildlife Sanctuary), strengthening genetic diversity through planned introductions, improved veterinary and ecological management, as well as development of a metapopulation framework. The reintroduction of cheetahs in India has achieved notable early success in breeding, demonstrating the species' adaptability to Indian ecosystems. However, persistent challenges—particularly mortality rates, habitat limitations, and management complexities—pose significant risks to long-term sustainability. A science-driven, adaptive management

approach, combined with habitat expansion and continued monitoring, is essential to transform initial success into a stable, self-sustaining population.

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THE MEANING, IMPORTANCE AND SIGNIFICANCE OF EARTH DAY

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Earth Day, celebrated annually on April 22, represents a global movement dedicated to environmental awareness, ecological responsibility, and sustainable development. First observed in 1970, Earth Day emerged as a response to growing concerns over pollution, biodiversity loss, deforestation, climate change, and the unsustainable exploitation of natural resources. Over the decades, it has evolved into one of the largest civic observances in the world, uniting governments, scientists, educators, communities, and individuals in collective environmental action.

The meaning of Earth Day lies in recognizing the interconnected relationship between humans and nature. It emphasizes that the health of ecosystems directly determines human well-being, economic stability, and future survival. The day encourages reflection on humanity's ecological footprint and promotes responsible lifestyle choices such as conservation of energy, reduction of waste, protection of wildlife, and adoption of renewable resources.

The importance of Earth Day is particularly evident in the context of accelerating climate change, increasing environmental degradation, and global biodiversity crises. It serves as an educational platform that raises scientific awareness, inspires environmental stewardship among younger generations, and strengthens international cooperation toward achieving sustainability goals.

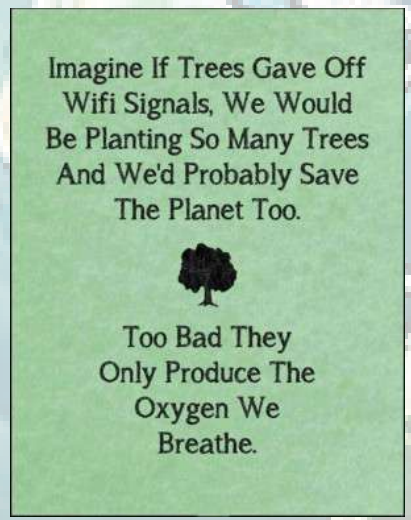
The significance of Earth Day extends beyond symbolic celebration; it acts as a catalyst for policy advocacy, grassroots movements, environmental education, and community participation. By fostering environmental ethics and collective responsibility, Earth Day reinforces the urgent need for sustainable practices to safeguard the planet for present and future generations. Ultimately, Earth Day reminds humanity that protecting Earth is not a one-day commitment but a continuous global responsibility essential for maintaining ecological balance and ensuring long-term planetary health.

Earth Day, celebrated annually on April 22, serves as a powerful global platform for promoting environmental awareness and encouraging collective action toward nature conservation and sustainable development. It brings together governments, educational institutions, environmental organizations, and citizens to reflect on the health of the planet and the urgent need to protect natural ecosystems. Through educational campaigns, community participation, environmental movements, and policy advocacy, Earth Day increases public understanding of critical issues such as climate change, biodiversity loss, pollution, deforestation, and unsustainable resource consumption.

By engaging people through tree-planting programs, clean-up drives, environmental workshops, and sustainability initiatives, Earth Day fosters responsible environmental behavior and strengthens the connection between humans and nature. It emphasizes the importance of sustainable lifestyles, renewable energy adoption, waste reduction, conservation of biodiversity, and protection of natural resources for future generations. Importantly, Earth Day

empowers individuals—especially young learners—to become environmental stewards and advocates for ecological balance.

Overall, Earth Day acts as a catalyst for long-term environmental consciousness, inspiring global cooperation and local action toward building a sustainable and resilient future where economic development coexists harmoniously with nature conservation.



"Pollution is stealing the breath of Future generations."

"The first step to a healthy society is a smoke-free environment."

"Choose walking over driving—it helps the planet and your health."

"Stop burning waste, start saving lives."

NESA Members are requested to please send / share a short article on ***Agriculture / Environment and other related fields*** for the NESA Newsletter which is published monthly to circulate among the ***NESA Members and scientific / academic community***.

Chief Editor

Plant Tree **Save Environment**

Planting trees is essential for a healthier planet, as they clean the air by absorbing and pollutants while releasing oxygen. A single mature tree can provide oxygen for two people annually. They also cool cities, combat climate change, prevent soil erosion, and support biodiversity.

"Plant a tree and keep the flood at bay".

"Save the forests and change the climate".

"It is our collective and individual responsibility to protect and nurture the global family, to support its weaker members, and to preserve and tend to the environment in which we all live."

— Dalai Lama

Let's clear the air for Earth's future.

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