

Record temperatures in Great Barrier Reef seen in last decade

The Hindu Bureau

Water temperatures in and around the Great Barrier Reef, Australia, in the past decade have been the warmest in the past 400 years. The results were published recently in *Nature*. These periods of warming increase the risk of mass coral bleaching and mortality and are likely driven by human-induced climate change. The Great Barrier

Reef has undergone a sequence of mass bleaching events in recent years, with the events increasing in frequency since some of the first recorded episodes occurred in the 1980s. Mass coral bleaching can be spurred by warming water temperatures linked to global warming. Analysis of sea surface temperatures in the Coral Sea, which contains the Great Barrier Reef, has until now

mainly been limited to recent instrumental observations.

Researchers now reconstructed sea surface temperature data from 1618 to 1995 using coral skeleton samples from within and surrounding the Coral Sea and coupled this dataset with recorded sea surface temperature data from 1900 to 2024. They identified relatively stable temperatures prior to 1900.

From 1960-2024, however, they observed an average annual warming for January to March of 0.12 degree C per decade. The average sea surface temperatures for January and March in the mass coral bleaching years of 2016, 2017, 2020, 2022, and 2024 were considerably warmer than in any year in the reconstruction prior to 1900 and were five of the six warmest the region has experienced in

the past four centuries. Further modelling suggests that this rate of heating post-1900 can be attributed to human influence.

The authors note there are remaining uncertainties in reconstructed sea surface temperature data due to some of the chemical proportions in the coral that are used to model temperatures being influenced by other variables such as salinity. However, these

uncertainties could be reduced with additional sampling of coral cores from the region. The researchers note that even if global warming is kept under the Paris Agreement's goal of 1.5 degree C above pre-industrial levels, 70% to 90% of corals across the globe could be lost, and future coral reefs will likely feature a different community structure with less diversity in coral species.

SNAPSHOTS



Saliva indicates severity of respiratory infections

A study involving one hundred children with recurrent respiratory infections shows that saliva measurements better indicate the severity of the disease than blood measurements. While there was no relationship between antibodies in the blood and disease burden, broadly protective antibodies that work against various pathogens were observed in the case of saliva. Children with lower levels of these antibodies had more severe infections. These antibodies in saliva served as a good indicator of disease burden.



A deep drill core unveils new insights into Earth's mantle

A record-breaking 1,268-metre drill core into Earth's mantle, collected from the Mid-Atlantic Ridge in the North Atlantic, has provided a detailed mineralogical glimpse of the oceanic mantle. The findings reveal new insights into mantle composition and earth's deep geology. Contrary to common models, melt migration was found to be oblique to mantle upwelling. The researchers observed hydrothermal fluid-rock interaction throughout the core, with oxidative weathering down to 200 metres.



Gene responsible for prickles in eggplants discovered

Scientists have discovered the gene responsible for prickles in eggplants, a trait that complicates farming. They identified the Prickly Eggplant gene on chromosome 6 and pinpointed SmLOG1 gene as the key factor. CRISPR-Cas9 gene editing confirmed that disabling the gene SmLOG1 eliminates prickles, paving the way for prickle-free eggplant varieties. This not only sheds light on prickle development but promises to streamline cultivation and harvesting.

Hidden dangers of irrational use of antibiotics on microbiome

Antibiotics, especially the broad-spectrum ones, can wipe out a large portion of the gut bacteria; this disruption, known as dysbiosis, can have severe and long-lasting effects. Even a single course of antibiotics can produce dysbiosis

Abdul Ghafur

Antibiotics are often hailed as miracle drugs, capable of curing once-deadly infections and saving countless lives. However, the overuse and misuse of antibiotics in humans, animals, and agriculture have severe and often overlooked consequences. While the world is acutely aware that such practices drive antimicrobial resistance (AMR), a more insidious danger lies beneath the surface. The true peril is the profound disruption antibiotics cause to the microbiome — a disruption that ripples out to affect every organ and function of our bodies.

Various roles

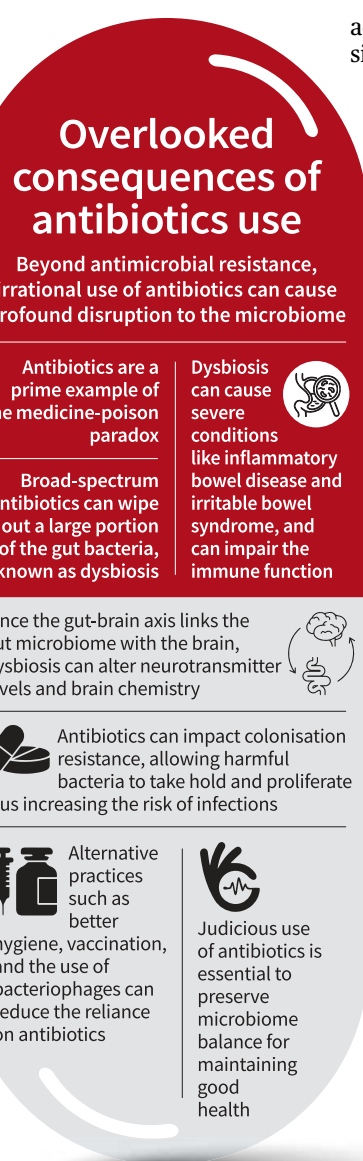
The human body is home to a vast, intricate community of microorganisms collectively known as the microbiome. This includes bacteria, fungi, and viruses. Astonishingly, our bodies host approximately 38 trillion microbial cells, outnumbering our cells, which total around 30 trillion. This means we are more microbial than humans. The gut microbiome, in particular, plays a crucial role in maintaining our health. It aids in digestion, supports the immune system, produces essential nutrients like vitamin K and certain B vitamins, and protects against pathogens. The diversity and balance of these microbial communities are vital for our well-being.

While antibiotics are essential for treating bacterial infections, their irra-

tional use can wreak havoc on the microbiome. Antibiotics do not discriminate between harmful pathogens and beneficial bacteria. When we take antibiotics, especially the broad-spectrum ones, they wipe out a large portion of the gut bacteria. This disruption, known as dysbiosis, can have severe and long-lasting effects. Even a single course of antibiotics can produce dysbiosis that lasts for months or even years.

Dysbiosis can cause more severe conditions like inflammatory bowel disease and irritable bowel syndrome. A healthy microbiome is essential for a robust immune system. Dysbiosis can impair immune function, making the body more susceptible to infections and autoimmune diseases. The gut microbiome also plays a crucial role in regulating metabolism.

The gut microbiome interacts with various organs through complex networks known as gut-organ axes. These interactions influence the overall health and functioning of the body. The gut-brain axis links the gut microbiome with the brain, where dysbiosis can alter neurotransmitter levels and brain chemistry, affecting mood, cognition, and mental health conditions like anxiety and depression. The gut-liver axis involves the transport of bacterial metabolites and



toxins from the gut to the liver. Dysbiosis can increase gut permeability ('leaky gut'), allowing more toxins to reach the liver and exacerbating liver conditions such as non-alcoholic fatty liver disease. The gut-skin axis involves the influence of the gut microbiome on skin health, where dysbiosis can exacerbate conditions like

acne, eczema, and psoriasis by altering systemic immune responses and skin barrier function. The gut microbiome influences metabolic processes, including energy harvesting from food and the regulation of glucose and lipid metabolism. Dysbiosis can disrupt these processes, contributing to conditions like obesity, diabetes, and metabolic syndrome.

Beyond the gut, the microbiome also plays crucial roles in other parts of the body. The skin microbiome protects against harmful microorganisms and supports skin health. The respiratory tract microbiome helps defend against respiratory infections and maintains respiratory health. Antibiotic use can potentially lead to respiratory conditions such as asthma and chronic obstructive pulmonary disease. The genitourinary microbiome, which includes the vaginal and urinary microbiomes, protects against infections and maintains urinary and reproductive health.

Dysbiosis in these areas can result in conditions like bacterial vaginosis and urinary tract infections.

Concerning aspects

One particularly concerning aspect of antibiotic use is its impact on colonisation resistance. This is the ability of the native gut microbiome to protect against colonisation by

pathogenic microorganisms. Beneficial bacteria consume available nutrients, limiting resources for pathogens. By occupying adhesion sites on the gut epithelium, commensal bacteria prevent pathogens from attaching and establishing themselves. Antibiotic use can reduce colonisation resistance, allowing harmful bacteria to take hold and proliferate, increasing the risk of infections.

Given the profound impact of antibiotics on the microbiome and the long-term health consequences of dysbiosis, it is crucial to use antibiotics judiciously. Implementing alternative practices, such as better hygiene, vaccination, and the use of bacteriophages, can reduce the reliance on antibiotics.

Antibiotics have revolutionised medicine, but their misuse poses serious threats. The concept of medicine being a poison when misused is particularly relevant here. In the right hands, these miracle molecules cure infections and save lives. However, if misused, they disrupt the microbiome and contribute to a host of health problems, essentially becoming poisons. Antibiotics are a prime example of the medicine-poison paradox. Preserving the balance of our microbiome is essential for maintaining our health. We must carefully consider our use of antibiotics before taking them.

(Abdul Ghafur, Consultant in Infectious Diseases, Apollo Hospital, Chennai and Coordinator of Chennai Declaration on AMR)

New mpox clade Ib disproportionately affects children

Bani Jolly
Vinod Scaria

The ongoing multinational mpox (formerly known as monkeypox) outbreaks continue to be a significant threat to public health systems across the world. The outbreak that gained global attention in 2022 has persisted, and as of mid-2024, the WHO reports that over 97,000 laboratory-confirmed cases and 203 deaths have been recorded across 116 countries, including the recent one in South Africa, which affected over 20 patients, suggesting that the global outbreak which started in 2022 is continuing unabated.

It is concerning that new massive outbreaks emerged last year in the Democratic Republic of the Congo (DRC), with significant human-to-human transmission. Over 14,000 cases and 500 deaths have been documented this year. Given

the country's ongoing struggle with internal conflict and health infrastructure challenges, this is a cause of global concern with cases now being reported from almost 10 African nations. The WHO has recently called an emergency meeting with experts in this context, to assess the situation and evaluate whether to declare it as a public health emergency of international concern.

The emergence of mpox in the DRC is caused by a new clade of the virus, clade Ib, which emerged late last year and is characterised by severe disease and higher mortality. Broadly, the monkeypox virus has two clades. Clade I has been present in the DRC for several years causing sporadic outbreaks, while clade II (previously the West African clade) and specifically IIb emerged during the global mpox outbreak that attracted global



Widespread: Over 14,000 mpox cases and 500 deaths have been reported this year from 10 African countries. AP

attention in 2022. The clades are also characterised by distinct disease severity, with clade I known to be associated with severe disease and mortality compared to clade II, which has a mortality rate of less than 4%.

The outbreak in the DRC is unique in many aspects. The unprecedented human-to-human transmission in a short period is in stark contrast with previous clade I infections, which were largely sporad-

ic and potentially zoonotic in origin. While the initial spread was seemingly through sexual contact, the epidemiology of the disease rapidly shifted to affect children under 15 years who constitute over 60% of all cases and 80% of all deaths, with the largest case fatality rate in children aged less than one year. The rapid availability of whole genome sequencing of the virus from the outbreak could provide immense insights into the ori-

gin and spread of the outbreak.

A preprint has dated the emergence of the outbreak using a molecular clock to September 2023, apart from suggesting mutations in the binding site of primers used in diagnostics for clade I mpox. A recent preprint analysing 58 genome sequences of mpox suggests three potential clusters, driving the spread of infection in the DRC. Both analyses suggest a significant number of APOBEC3-induced mutations, confirming a significant human-to-human transmission.

The emerging situation in the DRC specifically and in Africa, in general, would potentially result in the declaration of a Public Health Emergency of Continental Security by Africa CDC with mpox spread across 16 countries in the continent. While there are many unanswered questions, includ-

ing what drives the rapid spread and unprecedented emergence of clade I, the urgent need would be to enable the rollout of vaccines.

With only two major vaccine producers for the smallpox vaccine which was repurposed for mpox, and with little emphatic support from global organisations to enable diagnosis and prevention, the world might be awaiting another global outbreak in the immediate future. Molecular surveillance could be the best effort for countries like India, apart from international cooperation and developing indigenous capacity for vaccine manufacturing before it becomes too late. (Bani Jolly is a senior scientist at Karkinos Healthcare. Vinod Scaria is a senior consultant at Vishwanath Cancer Care Foundation and adjunct professor at IIT Kanpur)



Question Corner

Directional swimming

Are jellyfish randomly moving organisms?

Despite there being some evidence that jellyfish may actively affect their position, the role of active swimming in controlling jellyfish movement and the characteristics of jellyfish swimming behaviour, have not been fully understood. As a result, jellyfish are often considered as passively drifting or randomly moving organisms. A study using drone videos helped track multiple adjacent jellyfish. The analysis showed that the movement of jellyfish is modulated by distinctly directional swimming patterns that are oriented away from the coast and

against the direction of surface gravity waves. The behaviour of individual jellyfish translates into synchronised directional swimming of the aggregation as a whole. The researchers undertook numerical simulations, which showed that the counter-wave swimming results in biased correlated random-walk movement patterns that reduce the risk of stranding. This provides the jellyfish with an advantage critical to their survival.

Readers may send their questions / answers to questioncorner@thehindu.co.in

"There are so many roads you can take that will lead you the wrong way, that nobody will hear your name"
— Maria Sharapova



DELHI-DEHRADUN EXPRESSWAY DEVELOPMENT ALONG WITH DAMAGE?

The Delhi-Dehradun Expressway project, nearing completion, is expected to be an example for the world with the longest wildlife corridor in Asia. It will cut the travel time between the two cities to 2.5 hours but apprehensions remain about its impact, writes **PARITOSH KIMOTHI**

Uttarakhand has for long been a popular destination for pilgrims and tourists. While Haridwar is a major pilgrimage centre in the plains, the provisional State capital Dehradun hosts a number of prominent national-level institutions including the Survey of India and Indian Military Academy along with famous educational institutions, apart from being the gateway to the popular hill station of Mussoorie and other tourism activities especially in the mountainous regions of Garhwal in the State. Apart from long weekends and special occasions, the summer months frequently witness a large number of people arriving here especially from Delhi-NCR. Similarly, snowfall in the nearby hills also attracts a number of tourists from neighbouring regions. At present, people travel between Delhi and Dehradun/Haridwar by road, train or by air. The time taken to travel between Doon and the national Capital by road ranges from five to seven hours depending on the time when one travels and the location one is going to. Similarly, it takes about five to six hours by train and though the flight takes 40 minutes to one hour, one may spend more than an additional hour to get to the destination from the airport. This scenario is expected to be changed drastically in the near future with the completion of the Delhi-Dehradun Expressway project of the National Highways Authority of India. The completion of this 212-kilometre six-lane access controlled expressway with a project cost of Rs 14,000 crore, which is in its final stage of construction, will drastically cut down the travel time between Delhi and Dehradun/Haridwar to 2.5 hours. This expressway is also expected to be an example for the world as it also features a 13.8 kilometre elevated road, making it Asia's longest wildlife corridor. The authorities involved in the project state that the

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THE DEHRADUN-BASED WILDLIFE INSTITUTE OF INDIA (WII) SET UP 80 CAMERA TRAPS ON THIS STRETCH AND STUDIED WILDLIFE MOVEMENT HERE FOR THREE MONTHS. THE MOVEMENT OF ABOUT 40 TO 50 DIFFERENT WILDLIFE SPECIES RANGING FROM DEER AND WILD BOAR TO LEOPARDS AND ELEPHANTS WAS ASCERTAINED HERE IN THIS DURATION. AS PART OF THE EXPRESSWAY PROJECT, THE AUTHORITIES WILL ALSO WORK ON AN ECO-RESTORATION PLAN.”



stretch where the elevated road has been built has Rajaji National Park on the one side and the Shivalik Wildlife Reserve on the other. An average of 35,000 vehicles pass daily through this stretch. Widening the existing stretch of the highway between Ganeshpur in the Saharanpur district of Uttar Pradesh and Asharodi in Dehradun would have been cheaper but might have ended causing more environmental damage and exacerbating human-wildlife conflict. Widening the existing highway would have entailed the cutting of about 1.5 lakh trees while about 11,000 trees had to be cut for building the elevated road. The Dehradun-based Wildlife Institute of India (WII) set up 80 camera traps on this stretch and studied wildlife movement here for three months. The movement of about 40 to 50 different wildlife species ranging from deer and wild boar to leopards and elephants was ascertained here in this duration. As part of the expressway project, the authorities will also work on an eco-restoration plan. Further, budget

has been allocated for the WII to place cameras on the 550 pillars to study wildlife movement on this corridor for a period of five years. Similarly, the Forest Research Institute (FRI) in Dehradun will undertake a three-year Sal tree regeneration project in this area to enhance the environment. According to officials involved in the project, the elevated stretch is expected to mitigate human-wildlife conflict and also prove beneficial for the wildlife and environment. At present, the longest such wildlife corridor in India is about eight kilometres long and is located in Pench, connecting Madhya Pradesh with Maharashtra. While this project promises to bring about drastic changes not just in Dehradun and Haridwar but also in Delhi, there are many who have apprehensions about the impacts of this major development. Dehradun-based anthropologist and heritage expert Lokesh Ohri says that the project will certainly have benefits but questioned whether Dehradun and Mussoorie are prepared for what is to come. "The opening of

this expressway will practically turn Dehradun into a part of the NCR like Ghaziabad or Faridabad. The flood of visitors has already converted Rishikesh into a trap for the locals who struggle to move around the city through traffic congestion resulting from the rush of tourists, who in turn also face the problem. The pressure on the forest wealth of this region and real estate will also increase after the expressway becomes functional. Though such projects do benefit all, the focus should also have been on ensuring that the locals benefit more. Apart from this, the authorities here do not seem to have taken any measures to prevent the negative impacts the project will have on Dehradun and Mussoorie," he said.

Human rights lawyer Reenu Paul who had also challenged the Ganeshpur-Asharodi stretch of the project in the Uttarakhand High Court for conservation of the Shivalik ecosystem, opined that damage to the Shivalik range will cause considerable damage to the

environment and climate of the Doon Valley. She points out, "The Shivaliks play a vital role in insulating the Doon Valley against high winds, heat, dust and pollutants from the plains on the south western side of the valley. In the Gazetteers of Dehradun published in 1910, HG Walton had remarked that the climate of Dehradun differs from the plains owing to its elevation, while the wooded range of the Shivalik partly suppress and partly moisten the scorching winds that blow during the hot weather in the plains. Apart from this, the project doesn't appear to be sustainable as the hillocks of the Shivalik are highly eroding. The tributaries of the Ganga river including Mohan Rao, Sukh Rao, Saloni and Chilla Rao have also been disturbed and obstructed, disturbing the hydrology of the area. The wildlife corridor has also been fragmented," she opined. The authorities are confident that the opening of the Delhi-Dehradun expressway will not only enhance public convenience by drastically cutting down the travel time, but also boost economic activities further in the region. Infrastructural development is a major focus of the Union government and is a vital requirement for achieving the desired level of economic progress and public welfare. On the other hand, many in Dehradun remain sceptical about the impacts this project will have. The once green and serene Doon Valley has witnessed a considerable drop in greenery and rise in congestion and pollution in recent years. The city's existing infrastructure struggles to meet the requirements of the locals and visitors as factors like congestion and inadequate parking space have impacted the very character of Doon and life here. Expected to be completed in the next couple of months, the opening of the expressway for traffic is sure to bring about drastic changes. However, only time will tell the real cost of this major development.

CHARMING COONNOOR

PROMISES A TRANQUIL RETREAT!

Inhaling the scents of fresh blooms, sipping freshly brewed tea, I witnessed sunrise magic from the folds of Nilgiris, sitting in the garden of the charming villa, The Xanadu in Coonnoor. Here I sealed every moment as the celebration of Nature

BY SHARMILA CHAND

Tucked at the edge of a cliff, the villa is my home for three days with a magnificent view of the rolling Nilgiri hills, tea plantations and the plains below. I tell my friend, Aparna Bharathan, the humble owner of this pretty home, that I have 'checked in and breathing out'. She bursts into laughter as that exactly is the tagline she has chosen for her Xanadu chain of premium, fully serviced vacation rental villas.

For me, a trip to Coonnoor is essentially to relish slow travel without ticking off 'must do' list. Hence, a game of Jenga or Monopoly in the plush living room while watching the pitter patter of raindrops, is luxury. There is a whiff of pleasant aroma in the room, I can't resist and peep into the kitchen where Ganga Ram is busy making rasam and lemon rice. He is little more generous in using curry leaves in tadka, and that makes me impatient to have the meal. By now, Ganga has spoilt me thoroughly with several glasses of cutting chai and delicious food.

MAGICAL NIGHT

I wait for the spectacular night view when the sky is full of pretty stars in coherence with the lights of the



plains shimmering below. This is luxury for me. The weather throughout the day plays its own hide and seek, the clouds enveloping the hills in a stroke of misty white and next moment letting the hills magically appear in the famous 'Nilgiri' blue haze.

NILGIRIS ENDOWED WITH UNIQUE BIODIVERSITY

The Nilgiri mountains stretch over the states of Karnataka, Tamil Nadu and Kerala, connecting Western Ghats with the Eastern Ghats. Located at the convergence of both Ghats, lends Nilgiris vibrant flora and fauna. From Evergreen forests

and lowland Savannas to lush Shola grassland, enchanting flora encompasses the region. Various endangered species including Nilgiri Langur thrive here. What I love is the heady fragrance of cypress, eucalyptus and pine. The soft purple haze of my favourite jacaranda trees keeps my eyes longing for more. I can't get over seeing magnificent trees of Pont Setia, the same festive plant with bold red leaves we have in small pots during Christmas time. And then the lush mosanda in white and pink, another favourite of mine that seems to be calling me back soon!

INDIGENOUS COMMUNITY - THE TODAS

It is said that Toda community settled here around 3500 years ago, thus the oldest inhabitants of the region. Known for their pastoral way of life and vegetarian lifestyle, the Todas have a distinct identity. Every aspect of their life, including their artistic skills, are inspired by nature. The traditions they follow further prove how nature is significant in their lifestyle. I was told by locals that during an infant's naming ceremony, the grandfather uncovers the child's face out in the open air for the first time, showing various elements of nature - the rising sun, the birds, the cows, buffaloes etc. I visited one Toda

village and saw women busy at their art work. Their embroidery represents an ancient art form and has been granted a GI patent by The Government.

A CUP THAT CHEERS!

Visiting Nilgiris and not taking a trip to a tea plantation, is unfair. Though you see the sweeping vistas of carpets of tea all around, blooming on the slopes as far as eye can see, but experiencing a walk through the plantation and completing it with tea tasting, is a beautiful outstanding experience. And who can do this better than Sandeep Subramani, a fourth generation tea planter and founder of Tranquillitea which runs a chain of experiential boutique holidays in the Nilgiris and conducts a highly acclaimed gourmet tea tasting experience in their estate in Coonnoor called the 'Cups That Cheer'.

Sandeep takes one and half hour glorious session on tea which is full of stories, facts and secrets. One secret he tells with great pride and a smile - "The Nilgiris has the world's highest tea estates. At around 8000 feet there is simply no other place on earth that grows tea as a plantation crop as high as in the Nilgiris. Darjeeling, the region that makes the other famous Indian tea has its highest tea estates at just over



6000 feet. Let me explain why tea doesn't grow at such heights anywhere else. The weather is generally too cold for tea to grow at these elevations. However, the geographical location of the Nilgiris provides the perfect temperature band through the winter months, for tea to grow even at these heights. Talking about temperature, tea thrives between 13° C and 30° C and we are always within that range. Though night-time temperatures in winter can drop below 13° C, day temperatures are always within the optimum range. This results in a tea that is intensely flavourful and typically floral in nature," he concludes.

INTERESTING ATTRACTIONS TO VISIT

Though I am contented to luxuriate in the comfort of home Xanadu, but for those discerning travelers who might like to have a sightseeing plan, here are few top things to do in Coonnoor.

Dolphin's Nose Point — Located at an altitude of 1,500, it is set amidst the rolling hills, the tip of the peak of the enormous rock resembles the nose of a dolphin hence the name Dolphin's Nose. Gigantic ravines are on both sides of the place offering a view of inspiring Catherine Falls.

Lamb's Rock - enjoy fascinating



views of the valley at this vantage point with jagged rock that drops down several hundred feet to bury itself in the luxuriant jungle below. The place got its name after Captain Lamb who attempted to open a path to this place.

Droog Fort — The historical Droog Fort at an altitude of about 6000 feet above the lush plains, is said to be used by Tipu Sultan as an outpost. To reach this place, one has to go up to Nonsuch Estate and trek down for about 4 kms. According to locals' tales, the fort is linked with the legend of a local demon, Bakasura. Due to this, it is also called Bakasura Malai by the natives.

Sim's Park — Spend sometime in the park which was developed around the natural contours of the land by JD Sims and Major Murray in the year of 1874. Spread over 30 acres of land, the park was started as a pleasure resort for the residents and visitors, and later developed into garden. It has wonderful landscaped gardens & walkways lined up with beautiful flowers spread across, also a lake inside the park that offers boating facility as well.

KETTI VALLEY

Embark on the toy train to enjoy this beautiful valley. It is also famous for bird watching and trekking. You can also visit the famous Shiva Lingam temple here.

GOURMET CHEESE

Coonnoor is now also famous for selling gourmet cheese. You can take a tour of cheese farms or simply visit a popular old store Nilgiris Store or 'Baker's Junction' just 100 m from Bedford circle.

SHOPPING

Shopping in Coonnoor is pretty good. From pretty embroidered shawls, apparels, Toda jewellery and handicrafts items to natural oils, fruit jams, homemade chocolates and of course, the huge variety of tea, shopping here is really good. Spend at least a week, soak in fresh crisp mountain air and come back rejuvenated till you return to the spectacular queen of hills.

Sharmila Chand is an author and journalist who writes on Travel, Food, Culture and Lifestyle.



EXPLORING PARADISE

A journey through the pristine beauty of the Andaman and Nicobar Islands

Nestled in the azure waters of the Bay of Bengal, the Andaman and Nicobar Islands are a tropical haven that offers a perfect blend of natural beauty, vibrant marine life, and rich cultural heritage, writes SANTANU GANGULY

Every Indian should visit the Andaman Islands at least once in their lifetime to complete their journey. The Andaman Islands offer an incredible blend of natural beauty, historical significance, wildlife, and adventure sports. The Andaman Islands are well-connected by regular flights from Delhi, Bengaluru, Chennai, and Kolkata, and one can also reach them by ship from Kolkata, Chennai, and Visakhapatnam. However, traveling by flight is recommended to witness breathtaking aerial views that resemble slices of heaven.

The Andaman and Nicobar Islands comprise a total of 836 islands, of which only 31 are inhabited. Visitors are not allowed on all the islands, and even the non-tribal Andamanese people cannot visit the restricted islands.

Only government officials from departments such as the Army, Navy, Air Force, Forest Department, and Police are permitted to access these islands for official purposes. As a general tourist, the only chance to see some of these islands is from the sky before landing or after takeoff at Veer Savarkar Airport in Port Blair, the capital of the union territory. While the Andaman Islands are open to tourists year-round, the best time to visit is from October to May. Monsoon tourism runs from June to October.

There are numerous hotels and guest houses available for online booking, and package tours are also offered to suit various budgets. The local businesses are known for their honesty, adhering to strict rules and regulations throughout the islands. For



example, if the local authority sets the price of coconut water at forty rupees, the rate will be consistent everywhere. In Port Blair, the major attractions include the Cellular Jail, Chatham Saw Mill, Forest Museum, Samudrika Naval Museum,

Anthropological Museum, Fisheries Aquarium, Science Center, and Corbyn's Cove. The historic Cellular Jail will not only enrich your knowledge of history but also evoke a deep emotional connection as you learn about the struggles of lesser-known

freedom fighters and the inhumane torture they endured under British rule. To reach Shaheed Dweep (formerly known as Neil Island) and Swaraj Dweep (formerly known as Havelock Island) from Port Blair, you must travel by small ships,



following a process similar to airport check-in. Plan to stay at least one night on each of these islands to explore them fully. Must-visit beaches on Shaheed Dweep include Bharatpur, Lakshmanpur, and Sitapur, while Elephant and Radhanagar beaches on Swaraj

Dweep are not to be missed. Scuba diving at Shaheed Dweep offers an unforgettable experience.

Other popular attractions include Hudi Tikri, Red, Bird and Bat islands, Amkunj Beach near Rangat; Dhaninallah Mangroves and Karmatang Beach near Mayabunder; limestone caves and mud volcanoes near Diglipur; Craggy Island; Ross & Smith Islands, and various national parks and protected sanctuaries.

The indigenous tribes of the Andaman and Nicobar Islands are divided into two groups: the Onge, Sentinelese, Jarawa, and Andamanese of Negroid descent living in the Andaman Islands, and the Shompen and Nicobarese of Mongoloid descent living in the Nicobar Islands. It is strictly prohibited by law to enter tribal reserves,

meet, or photograph these tribes. Respect their peaceful haven and adhere to the law.

During my visits to the Andaman Islands, I was fortunate enough to encounter the Jarwa people. However, last year, I had an incredible experience while traveling by local public bus from Diglipur to Port Blair. As we entered the Jarwa forest after crossing a river, four Jarwa boys waved at our bus driver for a lift. The bus stopped, and they quickly got on board. One of them sat beside me, admiring my bracelet made of beads, which they seem to have a fascination for. Though I wanted to give it to him, I had to refuse due to the law prohibiting the exchange of items with the tribes. Their innocent laughter, however, was priceless.

Photos: Santanu Ganguly

As a dedicated disciple of Padma Bhushan Drs. Raja Radha Reddy and Kaushalya Reddy, Adiva Agarwal have beautifully embodied the spirit of Kuchipudi. Her recent performance was a heartfelt expression of her growth and the profound influence of her esteemed gurus, writes **SAKSHI PRIYA**



A DANCE OF DREAMS

EXPLORING THE BEAUTY OF KUCHIPUDI

In the vibrant world of classical dance, few traditions are as richly expressive and historically significant as Kuchipudi. Originating from the Andhra Pradesh region of India, this classical dance form is renowned for its intricate footwork, elaborate gestures and profound storytelling. It embodies a fusion of dance, drama and music, bringing ancient narratives to life with remarkable grace.

Adiva Agarwal's recent Kuchipudi performance, marking her Rangapravesham, was a stunning demonstration of this art form's enduring allure. From the moment she stepped onto the stage, it was clear that her recital was more than just a display of technical skill; it was a heartfelt journey into the essence of Kuchipudi. Under the guidance of her esteemed guru, Padma Bhushan Drs. Raja Radha Reddy and Kaushalya Reddy, Adiva has honed her craft with dedication and precision, resulting in a performance that both honoured tradition and showcased her personal artistry.

The evening commenced with "Ganapati Vandana," a customary invocation to Lord Ganesha, setting a tone of reverence and anticipation. This opening act seamlessly transitioned into "Dashavatara," where Adiva's portrayal of Lord Vishnu's ten avatars was nothing short of mesmerising. Each avatar was brought to life with a delicate balance of intricate footwork and expressive storytelling,



Photos: Pankaj Kumar

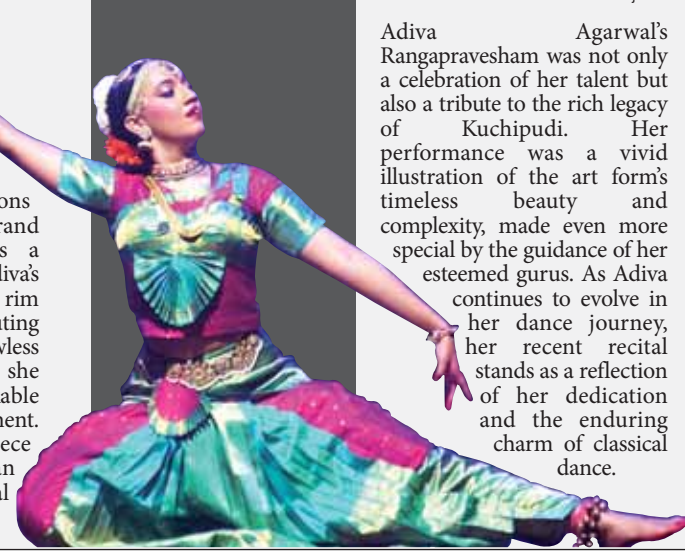
demonstrating Adiva's deep understanding of the form and its narratives.

The highlight of the performance was the "Tillana," a vibrant piece characterised by its rhythmic complexity and energetic movements. Adiva's ability to navigate the intricate patterns and maintain dynamic engagement with the audience was a showcase of her exceptional skill and stage presence. Her performance was a beautiful embodiment of Kuchipudi's essence, blending technical brilliance with artistic flair.

Adding emotional depth to the evening was "Chhaap Tilak Sab Cheeni," a devotional poem by

Amir Khusro.

Adiva's interpretation of this piece was imbued with spiritual reverence, showcasing her ability to convey profound emotions through dance. The grand finale, "Tarangam," was a breathtaking display of Adiva's virtuosity. Dancing on the rim of a brass plate while executing intricate footwork with flawless synchronisation, she demonstrated a remarkable level of skill and commitment. This climactic piece beautifully capped off an evening of exceptional performances.



Adiva Agarwal's Rangapravesham was not only a celebration of her talent but also a tribute to the rich legacy of Kuchipudi. Her performance was a vivid illustration of the art form's timeless beauty and complexity, made even more special by the guidance of her esteemed gurus. As Adiva continues to evolve in her dance journey, her recent recital stands as a reflection of her dedication and the enduring charm of classical dance.

Discovering Absence Through Visual Expression

Antra Srivastava's latest exhibition challenges us to delve into the unseen, revealing the hidden depths of absence in our lives, says **TEAM AGENDA**



The allure of absence is a peculiar paradox; it quietly demands attention, shaping our perceptions and provoking our thoughts. Artist Antra Srivastava's exhibition, *The Inescapable Presence of Absence*, invites viewers on a profound journey of reflection. This solo exhibition captivates audiences with its surreal yet deeply philosophical exploration of what lies beyond the visible.

Antra Srivastava, a Dehradun-based artist, her experiences as an avid traveler deeply influence her work, resulting in paintings that capture the vibrancy and diversity of the world. Through her art, she blends surrealism with poetic expression, drawing inspiration from the vitality of nature and the profound energy that flows through her creative process. She describes herself as both a participant and a witness in this artistic journey, immersing herself in the boundless realm of creative energy.

The theme of *The Inescapable Presence of Absence* delves into the paradox where absence becomes a palpable presence. This theme challenges viewers to rethink their perceptions, urging them to reflect on the significant impact of what is not present. It invites an exploration of the unseen and the unheard, asking profound



questions about the nature of existence. Srivastava's artistic journey is profoundly influenced by ancient Indian scriptures and the wisdom of sages, providing a foundation for her introspective quest. Her collection is a philosophical interpretation of the 18 chapters of the Gita, reflections on Sant Kabir's dohe and saakhees and a portrayal of six elements: air, water, earth, fire, space and consciousness. This unique

perspective allows her to seamlessly blend multiple layers of colours, creating harmony and rhythm, blurring the lines between abstraction and realism and evoking a surreal effect. In the Kabir series, Srivastava resonates with Kabir's ability to express complex ideas with simplicity. She emphasises that life's intricacies are self-created and that true knowledge emerges from inner silence rather than

external teachings. This series, inspired by Kabir's dohe and saakhees, underscores the experiential aspect of wisdom, offering a fresh perspective on life's fundamental truths. Srivastava's art invites a profound connection with the self, urging us to explore the deeper implications of absence alongside presence. Her work is a reflection of our existence, challenging us to look beyond what is visible and consider the unseen forces that shape our lives. The exhibition's title itself, *The Inescapable Presence of Absence* suggests a haunting elegance. It forces us to contemplate the spaces in between, the silence between words and the pauses in conversation that often carry more weight than the spoken. In these gaps, Srivastava finds beauty and complexity, offering her audience a mirror to their inner worlds. This exhibition stands as an attestation to art's power to transcend the ordinary, provoke thought and inspire change. Her exploration of absence is not merely an artistic endeavor; it is a call to acknowledge and embrace the unseen, the unheard and the unmet aspects of our existence. Through her work, Srivastava offers a profound reminder that art is not just a reflection of the world but a gateway to understanding the intricacies of our inner selves. By the time visitors exit,

A CANVAS OF WONDERS

Experience the magic of watercolor through a captivating exhibition that celebrates the beauty of nature, architecture and human expression, says **SAKSHI PRIYA**

At the Visual Arts Gallery, India Habitat Centre, a captivating solo exhibition showcases the evocative power of watercolor art. The exhibition "This Beautiful World," featuring the watercolor works of Dr. Sushma Mahajan and curated by Dr. Alka Pande, offers a captivating glimpse into the world through the eyes of a talented and passionate artist. The collection of 35 watercolor paintings is a vivid celebration of beauty, nature and the intricate details of everyday life.

The exhibition successfully highlights Mahajan's extraordinary skill with watercolors, showcasing her ability to create vibrant and realistic images that evoke emotion and wonder. Her unique perspective as both an artist and a medical professional adds depth to her work, and it is evident that she views the world with a keen sense of appreciation for its many facets.

One of the standout pieces is *Spotted Charm*, a painting of a leopard that captures the animal's grace and mystery with stunning accuracy. The richness of the colors and the attention to detail make this piece particularly memorable. Similarly, *Magic of Night Glow* is a beautiful depiction of vintage cars on cobblestone streets, bathed in soft, atmospheric light. This piece resonates with a sense of nostalgia and transports viewers to a timeless scene that feels both familiar and enchanting.

The Sun Chariot is a fascinating work that pays homage to the Nalinga temple art. Artist meticulous rendering of the astronomical sundial, with its eight spokes representing the "prahars" of the day, is both educational and visually captivating. The painting serves as a reminder of the rich cultural heritage and architectural marvels that continue to inspire artists today. Her ability to capture both natural and architectural beauty with precision invites



viewers to appreciate the power of art and the beauty that surrounds us.

In *Anchored in Serenity* the artist depicts a tranquil boat scene that encourages reflection and peace. The painting's serene composition invites viewers to pause and consider the importance of finding calm amid the chaos of modern life. *The Bridge* similarly highlights the significance of connections and relationships, celebrating the beauty of bridges as symbols of unity and continuity. *The Power of Music*, celebrates music as a universal language of the spirit, while *Sunflowers*, presents a spiritual perspective on these bright blooms. These



artworks reflect the artist's thoughtful approach and emotional depth, conveyed through vibrant colors and delicate detail. The curation of the exhibition by Dr. Alka Pande further enhances the experience, providing context and insight into the themes and techniques that define Mahajan's work. Pande's expertise in Indian arts and

aesthetics brings an added layer of understanding, making the exhibition not only visually engaging but also intellectually stimulating. *This Beautiful World* is an exhibition that beautifully captures the essence of the world around us. Mahajan's paintings are a tribute to her talent and dedication and the exhibition as a whole serves as a reminder of the power of art to inspire, uplift and connect us to the world. The blend of nature, culture and emotion in her work offers a refreshing perspective and an opportunity to appreciate the extraordinary beauty that exists in the ordinary moments of life.

Photos: Pankaj Kumar