

## A DIVINE JOURNEY

Every year, thousands of devotees from across India and around the world undertake the sacred Amarnath Yatra, braving rugged terrains and unpredictable weather conditions for one divine purpose - the darshan of Baba Barfani, the naturally formed ice Shiva Lingam at the holy Amarnath Cave in the Himalayas.

Known as one of the holiest shrines in Hinduism, the Amarnath cave is located at an altitude of around 12,756 feet in the Lidder Valley of Jammu and Kashmir. The annual pilgrimage holds immense spiritual significance and symbolizes devotion, perseverance, and the eternal presence of Lord Shiva. The centerpiece of this pilgrimage is the ice stalagmite formation, revered as Baba Barfani or Amarnath Shrivling, which waxes and wanes with the lunar cycle.

The Amarnath Yatra 2025 began on 29th June and will continue till 19th August, coinciding with the holy month of Shravan. Devotees can take two main routes to the cave shrine - the traditional Pahalgam route (approximately 45 km, spread over 3-5 days) and the shorter but steeper Baltal route (14 km, doable in a day). Helicopter services are also available from Baltal and Pahalgam for those unable to trek.

Pilgrims begin their journey with rigorous registration and health checks. The yatra is not just a test of physical endurance but also of unwavering devotion. Traversing glaciers, rocky paths, and chilly winds, yatriss chant "Har Har Mahadev" and "Bam Bam Bhole" to keep their spirits high. On reaching the cave, devotees feel overwhelmed by the spiritual aura and the sight of Baba Barfani's ice Shrivling, a natural miracle believed to manifest Lord Shiva himself.

According to legend, Lord Shiva chose this remote cave to reveal the secret of immortality - the Amar Katha - to Goddess Parvati. To ensure that no living being could overhear this divine narrative, he left behind all companions - Nandi the bull, the moon, the snake around his neck, and even the five elements. It is said that he created Rudra, or Kalagni, to destroy all traces of life near the cave. Only a pair of pigeons, who overheard the story and became immortal, are believed to still inhabit the area and are sometimes seen by pilgrims.

The yatra is coordinated by the Shri Amarnathji Shrine Board (SASB) with support from the Jammu and Kashmir administration, Indian Army, CRPF, NDRE, and local volunteers. In 2025, enhanced safety measures and smart tracking systems have been implemented to ensure pilgrim safety. Medical facilities, oxygen points, community kitchens (langars), and sanitation services have been set up en route.

The shrine board has also emphasized sustainable and eco-friendly practices this year, encouraging pilgrims to avoid single-use plastics and maintain the sanctity of the environment.

For many devotees, Baba Barfani's darshan is the spiritual climax of their lives. Pilgrims describe the experience as emotionally overwhelming - a moment where fatigue dissolves and the soul feels renewed. Whether it is the treacherous climb, the chants echoing in the valleys, or the surreal sight of the Shrivling standing tall inside the cave, the Amarnath Yatra represents a union of faith, nature, and divinity.

As one devotee put it, "The moment I stood before Baba Barfani, tears rolled down. It was as if Shiva himself was blessing us. All the pain and hardship of the journey melted away."

# Effects and Management of Parthenium Weed

■ DR BANARSI LAL

Parthenium hysterophorus a noxious plant, inhabits many parts of the world in addition to its native range in North and South America and the West Indies. This noxious invasive weed is considered to be one of the world's worst weeds currently known. It is also called as gajar ghas, ragweed, white cap or top, gajari, chatak candani, nakshtra gida, safed topi etc. It is most commonly called as 'gajar ghas' as it appears like carrot plant. It is herbaceous, an annual plant belonging to subfamily Heliantheae and family Asteraceae (Compositae). This weed has attained the status of "Worst Weed". It is a deadly weed infesting cropped and non-cropped areas. It has been observed that its infestation causes yield losses up to 40 per cent in several crops and reduces forage production up to 90 per cent. It is an aggressive annual herbaceous plant which has been widely dispersed in both the tropical and sub-tropical areas. This weed rapidly covers the new surroundings and poses a serious threat to our environment and biodiversity. This weed has been rapidly spreading from the last two decades. Parthenium weed has been categorised as "Cosmopolitan weed", "National culprit" and "National health hazard" due to its serious environmental threats. Earlier it was considered as a weed of wasteland but now it has invaded almost every crop. Initially it was considered a problem in the crops of rain-fed areas only but with the increase in irrigation facilities, it germinates throughout the season. Parthenium causes inhibition of nodulation in legumes. Pulses have little impact in terms of smothering effect on parthenium as the crops are slow growing and short-statured in nature.

Union Territory of Jammu and Kashmir is in the northernmost territory of India and its major part is situated in the Himalayan Mountains. It is also considered as the heaven on Earth. J&K is blessed with immense natural beauty and most of its land is under orchards, pastures, grasslands, forests and wasteland ecosystems. As most of these lands are not used for frequent cultivation, the obnoxious weed like Parthenium hysterophorus (Congress grass) has invaded most of these areas. This is regarded as the worst weed because of its invasiveness, potential for spread and economic and environmental hazards. It is noxious because it is highly adaptable to almost all types of environmental conditions and can invade all types of lands, causes high losses in the yield of crops. This weed forms dense, impenetrable thickets and reduces the productivity of crops, pastures, orchards and forestry plantations by its competition for resources and allelopathic effects. The low productivity of these ecosystems leads to scarcity of food, fuel wood, fodder, fruits, monkey menace and migration of rural people to urban areas in search of jobs after leaving the land fallow. However, the majority of people of J&K depend upon their subsistence needs on such cultivated, uncultivated and degraded lands. Productivity of such lands can be restored by managing this obnoxious weed with the available technologies. I have made some efforts to discuss the biology of this obnoxious weed, its ecological impacts and management techniques. This troublesome weed has a high rate of dispersal and adaptation to adverse conditions. Consequently, this weed has led to shrinkage of grazing area for animals, reduction in productivity of crops and grasslands, threat to plant biodiversity, reduced growth of newly planted trees in man-made forests and interference in succession of natural forests which act as hiding places for wild animals and threat to ecology of J&K. This weed is now spreading rapidly into agricultural lands, forests and

pastures. It is spreading at an alarming rate across J&K and is found in almost all the districts of J&K. This weed is inversely affecting the biodiversity and ecological system of J&K.

Its origin is considered to be Mexico. In India, its occurrence was first noticed in Pune (Maharashtra) in 1955 and now it has spread throughout India. It is supposed to be introduced in India from the United States of America along with wheat and other cereals import. By 1972, it is dispersed into the majority of the western states from Kashmir in the North to Kerala in the South. It has widely spread in India from Kargil region of Jammu and Kashmir to Port Blair in Andaman and Nicobar. It is said that it was introduced in Jammu and Kashmir in 1963 from Madhopur in Punjab across the Ravi River all along the national highway. After that it has been spread all over Jammu and Kashmir. Presently its infestation is alarming as it has covered a large area in J&K. It has been observed that this weed has reduced crop yields and has also affected biodiversity in J&K. It can be seen on roadside, railway tracks, vacant lands, wastelands, agricultural, horticultural and plantation crops, industrial areas, irrigation canals etc. Presently it is considered as one of the most problematic weeds. Its invasion in India has been estimated to be about 35 million hectares. It has wide adaptability to climate and soil conditions. It grows luxuriantly and does not allow any other vegetation nearby or underneath. It grows even in the Central Himalayan Mountains at an elevation of about 2000m above MSL. It has also been found to occupy a large area of pasture land and hence reducing the fodder availability to animals. The average height of parthenium plant is 60cm-1.5m and the average plant population is 112-828 per square meter. It is deep-rooted, much branched and dicotyledonous weed plant. A single healthy plant can produce about 15000-25000 seeds. The seeds are very light in weight and are easily carried by wind, water or through various human activities. Its seed viability has been observed up to six years or even longer than in the soil and more than 50 per cent seeds remain viable more than two years after their shedding in the soil. It has a shorter life cycle of 3-4 months depending upon climatic conditions and it has the ability to grow throughout the year in one or other vegetative or reproductive phases but maximum growth occurs during monsoon season. It is photoperiod and thermo-period insensitive. Presently it is considered as the worst weed because of its allelopathic effects on different crops and harmful effects on human beings and animals.

Parthenium causes health problems in humans and animals. It has been observed that any part of the plant (even root) can cause the subsequent risk of allergic reactions. In humans it causes health hazards like skin allergy (dermatitis), hay fever, asthma and bronchitis with flowers, seeds and even hair on leaves. Allergic papules are observed in school boys when they volunteered for uprooting parthenium. Animals are equally prone to the harmful effect of the weed. In dry season, when the animals do not get palatable species in grazing lands, they are forced to feed on parthenium. As a result, milk taste becomes bitter and they suffer with ulcers in mouth and intestine. Whenever animals walk or graze through parthenium, their udders are inflamed and they suffer with fever and rashes. Histopathology of the kidney and liver revealed degenerative changes and necrosis. The milk consumption of the animals grazing around parthenium invaded fields is hazardous to man. Some animals feeding on parthenium are died due to acute dysentery, itching, erythematous, development of oedema around eyelids, dorsum of tongue, loss of hair etc.

# Serene and Scenic the wonder of beauty

■ GL KHAJURIA

Amidst lush green forest of deodar and other pines around 125 kms from Jammu and 19 kms from Patnitop is located Sanasar a wonder of wonders. This picturesque spot is akin to Gulmarg of Kashmir for its enchanting beauty, grandeur and glory where tourists in thousands throng in during peak summer spells for having a sigh of relief away from soaring temperature as well as to enjoy the dazzling natural beauty of this resort. Though the road lifeline from Patnitop to Sanasar is rugged and rough and is having serpentine twists and turns, yet the tourist inflow is ever-increasing year after year. The road link calls for improvement for the convenience of tourists' influx. Even during winter, the tourists' influx is undoubtedly unbridled and the visitors throng in heavy numbers to enjoy and cherish snowfall, when Kud, Patnitop, Batote and the areas in and around the vicinity are heavily snow-capped so much so that the National Highway oft-repeatedly gets blocked.

'Sanasar' is situated around 9500 feet from sea level and is termed as mini-Gulmarg of Kashmir. The picturesque spot is lapped all round with mystique of mystiques, bountiful engrossing lush greenery of pines, herbs, shrubs and abundant medicinal plants ranging from micro to macro flora coupled with the rich heritage of other flora and fauna. The natural springs yielding nectar-pious water are roundheads at multithued places. Apart from scenic beauty, the place is a sanc-

tum sanctorum from time immemorial as the land of 'Nag Rajas' in and around the vicinity of Sanasar itself et al 'Nag Raja' of Kasal is of immense 'Shakti' where the visitors as well go for paying obeisance and obtain divine blessing. It is believed with oozing confidence that wishes made before 'Nag Raja' are fulfilled, though the photography of the temple and that of inside is strictly prohibited. These are miracles of 'Divine Shakties' in the modern age of most advanced Science and Technology (the writer has had his own experience, though not narrate able). At the peak of Patnitop enroute Batote, there is another 'Devsthan' (Shank Paul Shakti Devta) temple and is having equisling 'Shakti'.

Much water has flowed down Chenab; but ironically this picturesque spot has been least bothered for its developments. A short stretch of 19 kms that links Sanasar with Patnitop is in a very dilapidated condition. You cannot call it a pacea or a kaccha road. The locals are deprived of the basic amenities, particularly when it is a heavy snowfall when the road remains cut off for days together and the electric supply creates the same sort of situation. This ever-green cushioned spot is really a piece of heaven, the more you praise the less it is!! Sanasar meadow is a green carpet like ground and cushioned by silky soft grasses that glorify the resort. Add to it the small brilliant, refreshing fragrant flowers which add to the beauty of the spot. To lay to rest on this green meadow carpet is too comfortable and

enchanting then that of confining oneself in the adjoining rooms constructed by various departments.

'Sanasar', over the years was a marvelous lake like that of 'Sruinsar' and 'Mansar' of Jammu district but ironically now stands dried almost due more to the seepage for the last around 60 years or so. However, as per estimates the lake had encompassed around 2500 kanals with its outer periphery circumference rounding some 6 kms or so. The area was and is subjected to encroachment but the forest Department associated with revenue Department and law enforcing agencies are on the high and active surveillance to thwart any attempt to have an evil eye over the picturesque spot. In the version of L.P. Rai (the then Addl. Dy. Commissioner, Ramban) that as far as in the year 1992, he chanced upon to interact with the then, Director, Geology and Mining Department along with GREF agencies to survey the area and evolve strategy workable to restore to its pristine grandeur and glory and to analyze the root cause of its shrinkage and desilting and in their ultimate analysis opined that the subtle cause being underground water flow down below Nashri Nallah, barely 8 kms on foot through the forest linking NH-1A. Further it was established that there are as many as nine springs underneath this Sanasar lake and at the same time, it was apprehended that lifting of silt to the extent of 20-25 feet may cause holocaustic consequences to the local inhabitants together with

their cultivated lands as well. The specialist further emphasized that the government should approach to the expert deptt. with enough expertise for the construction of a wall surrounding 20 feet in the length and 8 feet in width and only then the silt of the lake can be lifted to bring back this heritage to its pristine beauty and grandeur. The survey together with workable strategy remained as a hanging fire till date.

There is an astonishing legend that it that the farmers of the locality were once ploughing the field in the vicinity of Sanasar lake and they took a break for the lunch leaving the oxen aside. In the meanwhile, a Sadhu appeared on the scene and he advised the farmers to unyolk the oxen so that they may also graze and take rest. Instead, they aguishly said, "Who are you to advise us for unyoking oxen?" Within moments, the Sadhu eluded and it is said that a calamitous storm with whirlwind engulfed the sky coupled with whimper cloudburst which struck the area and everything swept away along with the farmers and oxen so yoked.

People of the locality and those of faraway places come to this temple for paying obeisance and obtain blessings from 'Chouncer Nag Devta' - a miracle of miracles. Manzoor Ahmed Forest Guard posted at Sanasar forest has had a holy Darshan- of 'Nag Devta' while being on its routine movement in the forest- A nine feet long "Nag" with hairy skin.

The sacred temple of Nag-Devta of

Sanasar is visited twice in a year in the form of Yatra and of which one is vegetarian and is celebrated with the offerings of sweet rice, whereas the other is non-vegetarian which is celebrated by the sacrificial of goat and is offered to the 'Nag Devta'. Two Bhandaras are also held every year. Though many may not believe, but truthfulness and sanctity exist on the hilly areas of Sub-Himalayan regions like Bhaderwah, Kishtwar, Dudu, Basantgarh, Kud, Patnitop, Billawar, Bani, Basohli and many of its pious areas adjoining the state of Himachal Pradesh. During Governor rule in 1990, a nine-point golf course plan was earmarked for Sanasar which too remained in the offing and till date there is no let up.

SOME SUGGESTIONS: \*Improvement of road: A short stretch of 19 kms linking the road with Patnitop warrants improvement. This is pertinent in view of the present scenario as the soil texture is good and metalting coupled with black topping of this rough road is the need inviting government attention and allied agencies coupled with maintenance of side drains for disciplined outflow of water during inclement weather conditions and even otherwise also this is the major bottleneck and once a healthy lifeline is established, this shall boost and ameliorate tourist influx.

\*Beautification of The Road Link (Patnitop-Sanasar) Plantation of ornamental trees, shrubs alongside road link on the either side at equidistance shall expurgate the beauty of

spot. \*De-silting of the lake area: This is necessary and demanding too, to restore back the lake area to its pristine grandeur and glory. This is no longer a single agency show but many departments - al Geological and survey forest, soil conservation and other allied agencies connected with the restoration and reclamation need to be associated with to chalk out workable strategy for the formation of lake which will not only enhance the beauty-spot for the preservation of the spot which is of a National Heritage.

\*Development of meadows and golf course: The half-way left over idea warrants proper shaping now onwards for years to come and heretoomany agencies shall be associated with to chalk out workable strategies so as to attract the golf enthusiasts not only from the state but from India and abroad.

\*Accommodation: The tourism, the forest and allied departments have magnificently raised hutments to accommodate visitors, which do not demand its further exaggeration, else it would disfigure the beauty of spot. However, 'view points' on isolated spots shall further add beauty and grandeur to the area which are warranted to be constructor for the children to have an overview picture of the spot and its surroundings so may feel fascinating.

\*Mini-Creation Park: A mini re-creation park shall provide enchanting spell to the children and little kids who live in their own world. It shall as well feast and boost their excitement and merry making.

# Human health demands urgent focus and action due to carcinogens-chemicals cells

■ SURJIT SINGH FLORA

In the past few years, the emergence of carcinogens-chemicals that can cause cancer cells to form has raised concerns among health students and researchers. As the world's population is increasingly exposed to these harmful substances through various environmental and industrial processes, it is essential to understand their impact on human health.

The onset of cancer begins with the abnormal behavior of a single cell within your body. The cell ceases to fulfill its function within the community and begins to proliferate inappropriately. The progeny of this cell develops into a tumor that frequently metastasizes to various regions of your body. The onset of misbehavior typically begins with exposure to a carcinogen or radiation. Numerous substances can act as carcinogens. Carcinogens can be classified into two main categories: those that directly inflict damage on your DNA, known as genotoxic carcinogens, which are considered the most hazardous, and those that operate through alternative mechanisms, such as promoting cell proliferation.

Damage to DNA caused by carcinogens can interfere with the regulation of cell growth by harming genes responsible for cell proliferation and other vital cellular functions that safeguard against cancer. It could potentially eliminate the compromised cell. On rare occasions, a change in DNA can prove advantage-

ous; this is the mechanism through which species evolve when the alteration occurs in the sperm or egg cells. In numerous instances, the DNA damage exhibits no observable effect on the behaviors of the cell. The outcome is contingent upon the specific location of the DNA damage.

Not every interaction with carcinogens results in cancer. The process typically spans numerous years, occasionally extending into decades, and may include additional exposure to other carcinogens prior to the detection of cancer. In the interim, a cancerous cell must endure the challenges of aging, shedding (such as skin and intestinal lining), and the vigilant oversight of the immune system, which is perpetually on the lookout for cancerous cells to eliminate.

Nongenotoxic carcinogens operate by stimulating cell proliferation beyond the typical levels. Whenever cells undergo division, there exists a possibility of encountering an error during the process of DNA replication. Consequently, when a tissue is persistently irritated or when the body is compelled to produce additional cells to replace those that are being destroyed, there exists a potential risk for a mutation to occur that could result in cancer. In general, genotoxic carcinogens are regarded as more dangerous than nongenotoxic carcinogens. Actually, everyday products, including tobacco smoke, some industrial chemicals, and certain foods undergoing special cooking processes, contain cryogenic agents. The

International Agency for Research on Cancer (IARC) has classified several carcinogens as having the potential to cause cancer in humans. Common examples include benzene, formaldehyde, and polycyclic aromatic hydrocarbons (PAHs), which are commonly released during the incomplete combustion of living matter.

Recent studies have shown a worrying link between exposure to cryogenic substances and higher rates of various cancers. A systematic review published in the Journal of Environmental Health found that individuals who work with high exposure to these substances have significantly higher rates of lung cancer, bowel cancer, and leukemia than the general population. This finding points to the need for stricter regulations and safety measures to protect performance in industries. Furthermore, the impact of cryogenic substances is not limited to occupational exposure. Industrial activities, vehicle emissions, and environmental pollution from household products expose the entire society to cryogenic substances. A report by the World Health Organization (WHO) shows that air pollution, which is a significant source of cryogenic substances, causes millions of premature deaths each year. People, such as children and the elderly, are particularly at risk because of their developing or weakened immune systems. In light of these findings, public health officials are recommending more information and education about the dangers

of cryogenics. "Prevention is key," says Dr. Amy Chan, an environmental health expert. "By understanding the sources and risks of these substances, we can take proactive measures to reduce exposure and ultimately save lives."

In addition, industries that rely on cryogenics continue to strive to develop safer alternatives. New thinking and stricter emission standards are being planned for manufacturing processes so that harmful chemicals are not released into the environment. Advocacy groups are also calling for legislative changes to improve regulations related to hazardous materials and encourage the development of cleaner technologies. As research continues to uncover the effects of cryogenic substances and their effects on human health, it is imperative that people remain informed and take steps to reduce their exposure. Some simple actions, such as avoiding tobacco products, using natural cleaning products, and being proactive advocates for clean air, can contribute to a healthier future.

In conclusion, the impact of cryogenic substances on human health is a serious issue that requires immediate attention from policymakers and the public. By spreading the word and implementing effective strategies, we can move toward a world where the risk of cancer caused by these harmful agents is significantly reduced.

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