



A Call to Protect Our Planet

Greenpeace Day is observed every year on September 15 to mark the founding of Greenpeace in 1971, when a small group of activists set sail from Vancouver to protest nuclear testing. The day honours the global organization's decades-long fight for environmental protection, climate action, and ecological justice. It serves as a reminder of the power of grassroots movements in bringing about change. Campaigns, awareness drives, and educational programs encourage people to reduce pollution, conserve resources, and stand against practices harmful to the planet. Greenpeace Day is ultimately a call to safeguard Earth for future generations.

#JHUMKA

Jhumka That Fell... and Rose Again

Fast forward 54 years, and Bareilly decided to 'return' that missing earring - by building it



In 1966, *Mera Saaya* hit the silver screen, a film remembered not only for its mystery and drama, but for one song that would echo across decades:

"Jhumka Gira Re Bareilly Ke Bazaar Mein..." In the film, the heroine laments losing her earring in the bustling market of Bareilly. A playful piece of cinema magic, nothing more. Or so it seemed.

Fast forward 54 years, and Bareilly decided to 'return' that missing earring- by building it.

Bareilly, a city in Uttar Pradesh, had gained nationwide fame back in 1966 purely because of that one song. In 2020, the Bareilly Development Authority unveiled a grand memorial: a 14-foot-tall, 200-kilogram jhumka, crafted from brass and copper by a Gurgaon artisan, costing 18 lakh. Installed at Zero Point on NH-24, the spot is now proudly called 'Jhumka Tiraha', and it has quickly become a tourist landmark.

The song itself was the work of a dream team, lyricist Raja Mehdi Ali Khan, singer Asha Bhosle, composer Madan Mohan, and the graceful on-screen performance by the late Sadhana Shivdasani. Curiously, neither the film's plot nor its Marathi original (*Pathlaag*, 1964) had anything to do with Bareilly. The city appeared in the lyrics alone.

And yet, the story of a 'jhumka' in Bareilly has roots in real life, and in the history



Battles of Tomorrow Will Begin in the Skies

At the same time, modern, high-tech air defence systems have closed almost every gap in the defensive shield, making the skies even more dangerous. Today, with a trigger-happy soldier handling a state-of-the-art weapon, a pilot can be shot out of the sky in the blink of an eye. This has necessitated further distancing of adversaries in combat and also heightened the need for getting the pilot out of the cockpit (read drone warfare). Also, AI has found its way into all systems to reduce the decision-making time in combat conditions. (OODA Loop)



Air Cmdr Nitin Sathe Veteran

War is changing faster than ever before. Drones, hypersonic missiles, and satellites are rewriting how nations fight and win. For India, strengthening airpower is not just about building military strength. It is about

national security, diplomacy, and even humanitarian reach in a volatile world.

What is Airpower?

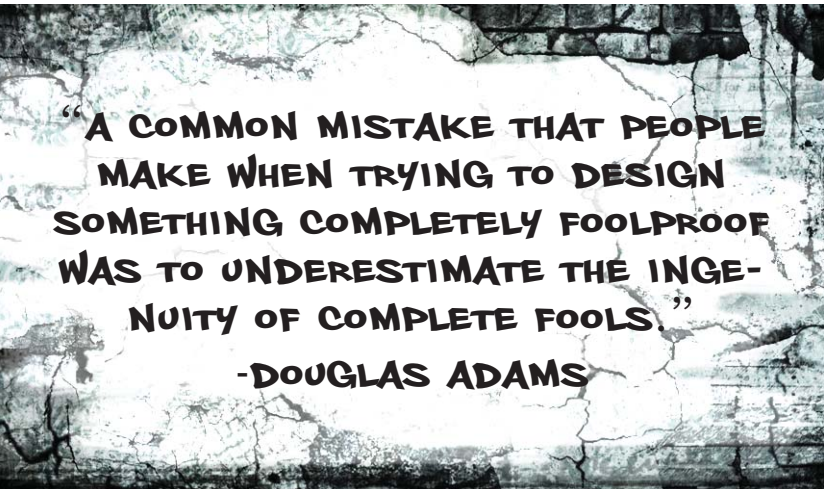
Airpower is more than just fighter jets roaring across the skies. It is the ability of a nation to use air and space, through aircraft, drones, missiles, satellites, and cyber systems, to influence battles on land, sea, and in the air. The term airpower, therefore, has metamorphosed into what is now called Aerospace Power.

When we first trained at the Air Force Academy four decades ago, our joy came from the thrill of aerial combat (read dogfights) meant pilots firing at each other from just a few meters away. Then came guns and missiles expanding this envelope to beyond-visual-range (BVR) engagements. Today, we have the ability to strike any target, aerial or otherwise, hundreds of miles away, sometimes before the enemy even gets airborne.

With modern air defence systems providing multi-tiered security of the skies above, every gap in the sky is covered. However, these skies have become perilous for flying objects. Today, a trigger-happy soldier with a high-tech weapon and good command and control (decision matrix) can shoot down an aircraft in seconds. This has pushed warfare into new domains, drones, artificial intelligence (AI), cyber, and use of rapid decision-making loops.



THE WALL



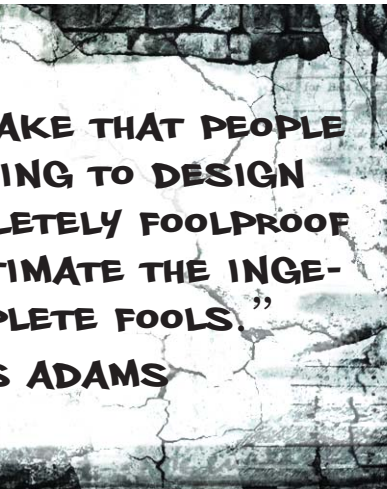
flight: the kick of takeoff, the manoeuvres, and the relief of a safe landing. We were too young (and naive) to realise that we would soon be part of India's hard power projection. And after 35 years in uniform while we greyed gradually, airpower, as we knew it, transformed rapidly. In fact, this change was so phenomenal that it was difficult to even fathom where we had started from just three and a half decades ago.

One thing was certain, however, airpower was destined to remain a decisive factor in the wars of tomorrow.

In the early days of aviation, aerial combat (read dogfights) meant pilots firing at each other from just a few meters away. Then came guns and missiles expanding this envelope to beyond-visual-range (BVR) engagements. Today, we have the ability to strike any target, aerial or otherwise, hundreds of miles away, sometimes before the enemy even gets airborne.



THE WALL



#SWOOPING THE ENEMY

History's Lesson: He, Who Owns the Skies, Wins



Airpower has always been a game-changer.

In World War I, fragile biplanes scouted battlefields; in World War II, bombers reshaped campaigns. The Israeli Air Force rewrote history in 1967 when it destroyed most of the Arab air forces on the ground within hours of the Six-Day War. There are so

many examples of successful air campaigns the world over.

Closer home, the Indian Air Force played a decisive role in 1971 by crippling enemy communications and logistics, paving the way for a swift ground victory. The lesson remains the same today: control the skies, and you control the war below.

The Drone Revolution



Recent conflicts, from Ukraine to Gaza, have underlined the growing role of drones. Once seen as peripheral and low-cost tool, they are now at the core of warfighting. Drones are used for surveillance, logistics, precision strikes, and even overwhelming enemy defences. In Ukraine,

they contested Russia's air superiority. In Gaza, inexpensive rockets and drones tested the limits of Israel's famed Iron Dome. In our region too, swarms of mini drones have been used to expose weaknesses in even the most advanced systems, something that we saw during Op Sindoor.

India's Recent Lessons



During Operation Sindoor, the IAF reportedly penetrated Pakistan's most heavily guarded Nur Khan Air Base (besides other bases) using air-launched missiles, fired from nearly 400 to 600 km away. These strikes, finding their way through nothing more than a ventilation shaft, proved that tomorrow's wars will be about surgical precision, not carpet bombing. The Balakot strikes were also another turning point. They showed India's readiness to use airpower proactively and send a clear strategic message across borders. Today, India has a growing missile capability, a rapidly expanding UAV fleet, and an indigenous research ecosystem. But complacency is dangerous.

With foreign powers ready to support our adversaries, things could change overnight, and therefore, staying one step ahead is vital for our national security.

Beyond Combat: Airpower as a Lifeline



Airpower is not only about destruction. The IAF has shown its unmatched humanitarian reach time and again, be it relief operations after the 2004 tsunami, or evacuations of Indians from Ukraine (Operation Ganga) and Sudan (Operation Kaveri). Tomorrow's conflicts will test this dual ability, destruction and humanitarian response. Both will, without doubt, define India's global image.

Building the Future Arsenal

TO PREPARE FOR TOMORROW, INDIA MUST STRENGTHEN MULTIPLE PILLARS OF AIRPOWER WHICH INCLUDE:



Unmanned Systems

To get the 'human' out of the loop, indigenous swarm drones, autonomous strike UAVs, and 'loyal wingmen' drones to support manned fighters.

Hypersonic Missiles

These are weapons flying at over five times the speed of sound, that can penetrate any defence shield and destroy pin-point targets.

Space Assets

Satellites for navigation, communication, targeting, and anti-satellite systems to counter our adversary's advances in that domain.

Cyber and Electronic Warfare

Tools to jam, hack, and dominate the digital spectrum of battle. This today can prove decisive without a shot being fired.

Perception Warfare

Shaping global opinion, an arena where India lags but has immense cyber talent to leverage.

Secure Networks

Future wars will be fought through data networks. Robust, jam-proof communication systems will become deciding factors in conflicts.

The Human Factor

Despite machines taking over, people will continue to remain central to warfighting; or for that matter, any business. Tomorrow's warriors need to be multi-skilled-pilots, cyber experts, strategists, capable of quick thinking and being adaptable and

responsive to changing situations. Selecting the right talent and training them is as important as acquiring technology. To this end, means and methods need to be developed to ensure that top brains are retained within and not lost to the outside world.

The Challenges Ahead

India faces a worrying drop in fighter squadron strength. With legacy aircraft retiring, the numbers available are well below safe levels. This shortage threatens deterrence and needs an all of government approach. Interim solutions to bridge this void are the need of the hour; as of now, indigenous production is incapable of making good this deficiency. We have a long way to go before we attain atmanirbharta in the defence sector, especially in the field of aviation.

Alongside inducting additional Rafales, Su-30MKIs, Tejas, and

Prachand, the IAF urgently needs more UAVs, AWACS (airborne early warning aircraft), mid-air refuellers, and other force multipliers. In the long run, we also need to curtail and finally stop dependency on foreign systems and technologies. We need to pump more money into research and development through public and private participation. Without political backing and speedy action, India risks falling behind in what could be a 2.5-front conflict scenario involving its neighbours as well as the internal security threats.

The Final Word

As I look back at my flying days and ahead to the skies of tomorrow, one truth stands out: Airpower is no longer just a supporting arm, it is the spearhead. Future wars will be intelligent, unmanned, high-speed, and multi-domain with air assets leading the way. For a fast-developing nation with global ambitions, investing in

airpower is not a luxury but a necessity. The battles of tomorrow will begin and end in the skies, and India must be ready not just to defend, but to dominate the aerospace spectrum.

The future, after all, belongs to those who can rise above.

rajeshsharma1049@gmail.com



#WONDERS

Nature's Giants

A Look at the Largest Flowers on Earth

From the depths of the rainforest to the peaks of the Andes and even beneath the sea, some of the world's largest and most fascinating flowers are putting on nature's most spectacular displays.

These floral behemoths aren't your typical backyard blooms. Instead, they're evolutionary marvels, often with unusual adaptations, impressive sizes, and fleeting lifespans. Here are eight of the world's biggest and most extraordinary flowering plants.



1. Rafflesia arnoldii - The Monster Flower

Dubbed the world's largest single flower, *Rafflesia arnoldii* can reach three feet in diameter and weigh up to 15 pounds. Found in the rainforests of Malaysia and Indonesia, it's infamous not only for its size but also for its foul odour, akin to rotting meat, used to attract pollinating flies. The rare bloom relies on the *Tetrastigma* vine to grow,



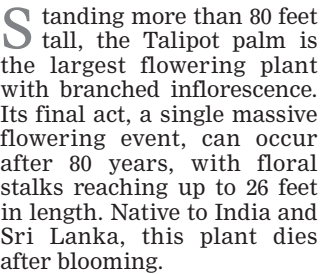
making it highly vulnerable to habitat destruction.

2. Amorphophallus titanum - The Corpse Flower



Often competing with *Rafflesia* for the title of 'largest flower,' the *Amorphophallus titanum* doesn't produce a single bloom but a towering inflorescence that can reach over 10 feet tall. Native to Sumatra but cultivated worldwide, it also emits a stench of decay to lure pollinators. Despite its fame, sightings in both the wild and greenhouses remain rare.

3. Talipot Palm (Corypha umbraculifera)



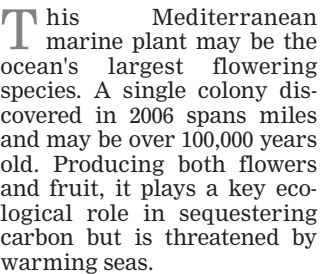
Standing more than 80 feet tall, the Talipot palm is the largest flowering plant with branched inflorescence. Its final act, a single massive flowering event, can occur after 80 years, with floral stalks reaching up to 26 feet in length. Native to India and Sri Lanka, this plant dies after blooming.

4. Pando - The Trembling Giant



While its flowers are barely visible, the *Populus tremuloides*, or quaking aspen, forms one of Earth's most enormous living organisms. A single male clonal colony, known as Pando, covers 107 acres in Utah and is thought to be over 80,000 years old. The organism weighs around 13 million pounds and includes more than 47,000 genetically identical trees.

5. Neptune Grass (Posidonia oceanica)



This Mediterranean marine plant may be the ocean's largest flowering species. A single colony discovered in 2006 spans miles and may be over 100,000 years old. Producing both flowers and fruit, it plays a key ecological role in sequestering carbon but is threatened by warming seas.

6. Sunflower (Helianthus annuus)



While common in gardens and farms, the sunflower earns a spot among giants. Native to the Americas, cultivated sunflowers can grow up to 30 feet tall with flower heads more than a foot across. Each head contains hundreds to thousands of small florets, making it an inflorescence in disguise.

7. Queen of the Andes (Puya raimondii)



The *Puya raimondii*, grows in the high Andes of Peru and Bolivia. Reaching heights of up to 30 feet, it can produce thousands of flowers and millions of seeds, once in a lifetime, after 80 to 100 years. Threatened by climate change and habitat disturbance, the species is listed as endangered.

8. Amazon Water Lily (Victoria amazonica)



With leaves spanning up to eight feet, the *Victoria amazonica* dominates the aquatic plant world. Native to South America, its giant pads can support the weight of a small child. The water lily's pineapple-scented flowers bloom only at night and for just a few days, making them a rare sight.

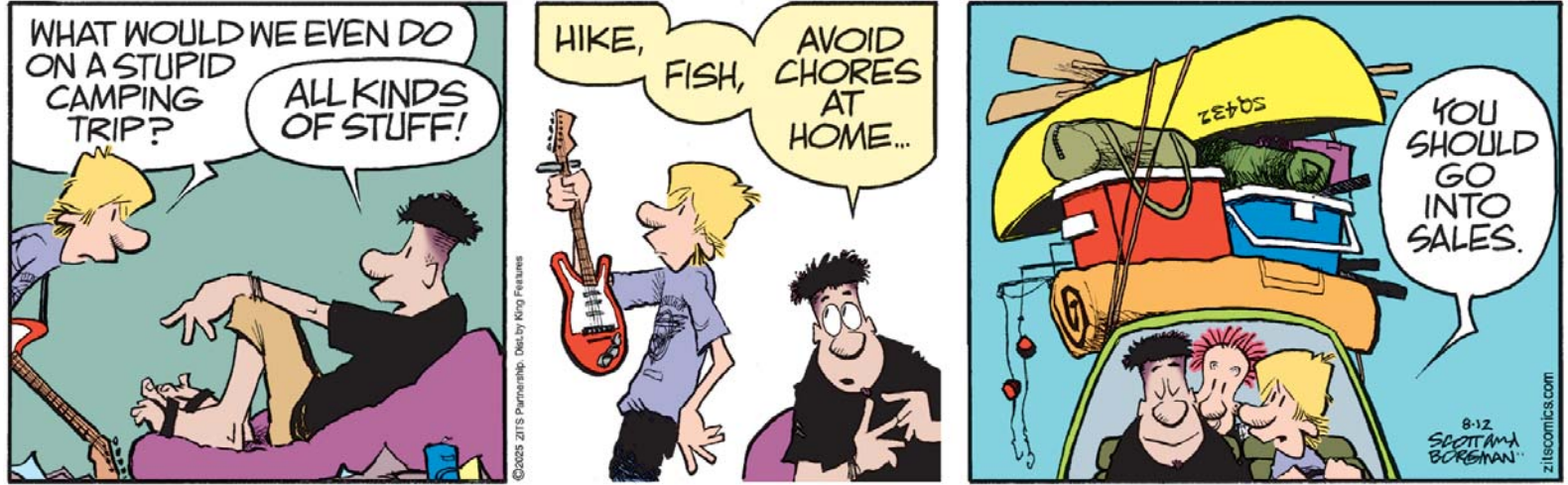
These floral titans are not just botanical curiosities, they are reminders of the incredible biodiversity that still thrives on Earth. Yet, many are endangered, highlighting the fragility of the ecosystems they call home.

BABY BLUES



By Rick Kirkman & Jerry Scott

ZITS



By Jerry Scott & Jim Borgman