Whispering Wings®

Newsletter of the Chandigarh Bird Club®

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What's Inside

1	From the Editor's Desk	Rima Dhillon	1
2	Secretary's Report	Amandeep Singh Channa	3
3	Putting Nature First	Subhash Sapru	4
4	Story of the Great Barbet	Divya Goswami	6
5	Why does a Great Barbet Wail? - A Folktale from Kangra	Mitinderpal Singh Sekhon	8
6	Monsoon Birding	Lalit Mohan Bansal	9
7	How Avian Biomimicry Redefined Modern Engineering	Mitinderpal Singh Sekhon	21
8	Eurasian Wryneck	Rima Dhillon	31
9	Pelagic Birding Trip to Mangaluru: September 2026	Sarbjeet Kaur	35
10	CBC Field Trip: Siswan, Punjab		41

Front Cover - Indian Grey Hornbill *(Ocyceros birostris)*

From the Editor's Desk

Rima Dhillon



"Every Bird Counts - Your Observations Matter!"

in the theme of World Migratory Bird Day 2026

Every autumn, an extraordinary journey unfolds across the skies. Tens of thousands of birds leave their breeding grounds in the far north, travelling thousands of kilometres to reach their wintering grounds guided by instincts honed over millennia. Year after year they return to familiar wetlands that have sustained generations before them. Yet, increasingly, these journeys are ending in disappointment. The waters that once welcomed them are disappearing, their feeding grounds are shrinking, and the habitats upon which their survival depends are being steadily lost.

According to a recent report by BirdLife International, an alarming 45 per cent of migratory bird species worldwide are experiencing population declines. It highlights habitat destruction, agricultural intensification, climate change and widespread hunting among the principal threats. Conserving migratory birds requires protecting the entire network of habitats that sustains them along their journeys.

During migration, wetlands are the main source of food, shelter and opportunities, helping birds to replenish energy reserves. Each one forms a vital link in a chain stretching across continents. Any break in these links can make the migratory journey extremely precarious.

Closer to home, Mote Majra Wetland near Mohali, once a vibrant gathering place for hundreds of resident and migratory birds, is facing a crisis as its waters have virtually disappeared.

Shallow waters of the village pond and its surrounding vegetation have supported an extraordinary diversity of birdlife, with more than 180 species recorded over the years. In 2024 the sighting of three Barnacle Geese was subsequently published in ***Indian Birds,*** highlighting the ecological significance of this relatively small village wetland.

Inadequate rainfall, construction activity in the surrounding catchment, and disruption of natural drainage may have contributed to the crisis. With the winter migration season approaching, there is a real possibility that birds returning to this familiar refuge will find it unable to sustain them.

Such small water bodies collectively form an indispensable network of feeding, resting and breeding habitats. Restoring Mote Majra would not reverse the global decline of migratory birds, but it would preserve one valuable link in the vast network of habitats along the Central Asian Flyway. These birds have already overcome extraordinary challenges to reach our shores. Surely, we can ensure that the places they depend upon are still there to welcome them.

When the birds return this winter will Mote Majra be another lost refuge along their ancient journey**?**

Secretary's Report

Amandeep Singh Channa



This edition marks the beginning of the eleventh year of continuous publication of the Whispering Wings®, the Newsletter of the Chandigarh Bird Club. I want to thank all members of the Club who have contributed generously towards the content of the newsletter. Their articles have made it possible for us to bring out edition after edition over the years.

This quarter brings sad news for the club. The drying up of Motemajra lake has disheartened many people, the locals and birders included. CBC has initiated a movement to rectify the situation. Already, the local administration has been informed and they have visited the village.

In this quarter, CBC continued its work on community awareness and conservation. CBC members visited schools and raised the loss of habitat, particularly wetlands, with the students. CBC members conducted field trips to Jawaharpur and Siswan.

This quarter acts as a transition from the hot and humid weather to the cold weather. The summer migrants give way to the altitudinal and winter migrants. This is the time when CBC members delight in the big highlights of this region.

In the next quarter, CBC looks forward to celebrate the birth anniversary of Dr Salim Ali with its annual waterfowl census. We also look forward to the various social awareness activities planned for the coming months. And we look forward to the release of our official app for iOS and Android.

Putting Nature First

Subhash Sapru

Nature photography is enjoying a surge in popularity, attracting both emerging and seasoned photographers. Camera and lens manufacturers are racing to keep pace, equipping their gear with advanced features that make capturing birds in flight or fleeting natural moments easier than ever. Yet amid this technological progress, one truth remains: nature, which sustains our lives and inspires our art, deserves our care and respect.

At a recent webinar on *Putting Nature First*, Alyce Bender, Tamron Ambassador and Texas Region Nature First Ambassador, underscored the importance of responsible photography. She reminded participants that the seven principles of "Nature First" apply equally to wildlife and landscape photography. "These guidelines are not there to limit us," she said, "they are there to keep the landscapes we love safe for the next photographer who stands in our footsteps."

Her warning was vivid: vegetation grows by the inch, but dies by the foot. Human trampling destroys fragile ecosystems, and careless behaviour can harm wildlife. To counter this, the Nature First principles urge photographers to:

- Prioritise nature's well-being over photography
- Learn about the places they photograph
- Consider the impact of their actions
- Use discretion when sharing locations
- Follow rules and regulations
- Practice *Leave No Trace* and leave places better than found
- Promote and educate others about these principles

Quoting Mother Teresa: "I alone cannot change the world, but I can cast a stone across the waters to create many ripples." Bender highlighted the ripple effect of responsible choices.

The call for responsibility extends beyond individual photographers. Conservation organisations worldwide are educating communities about protecting birds, animals, and ecosystems. When we enter the wild, we are not just photographers, we are guardians. Every footprint , every tripod mark leaves a trace. Our goal as photographers is to make sure that our images outlast our impact.

What hurts most is improper disposal of waste at public lands, parks and natural ecosystems. Bender aptly drew the attention of people by saying that with the internet at our fingertips and in the palm of our hand, practically 24/7, ignorance of rules and regulations is not a viable excuse for breaking them. Remember, a photograph must never come at the expense of the subject. Yet nature faces threats far greater than careless photography. Public lands are increasingly opened to extraction and development, protections for endangered species are being weakened, and climate policies reversed. The result is shrinking habitats, rising temperatures, and biodiversity loss at alarming rates. While some leaders advocate for conservation, too often short-term economic gains outweigh long-term ecological stability.

Bird clubs and conservation groups are stepping in, reminding members that they are not passive observers, but witnesses and interpreters of nature. Through images and words, photographers can show what is at stake, inspire awareness, and encourage action.

The reality is sobering: we may never again see Earth as it was just a few decades ago. But we are not powerless. Each camera is more than a tool - it is a means to preserve memory, stir emotion, and spark change. To truly honour the landscapes and wildlife we cherish, photographers must embrace a deeper commitment: to always put nature first.



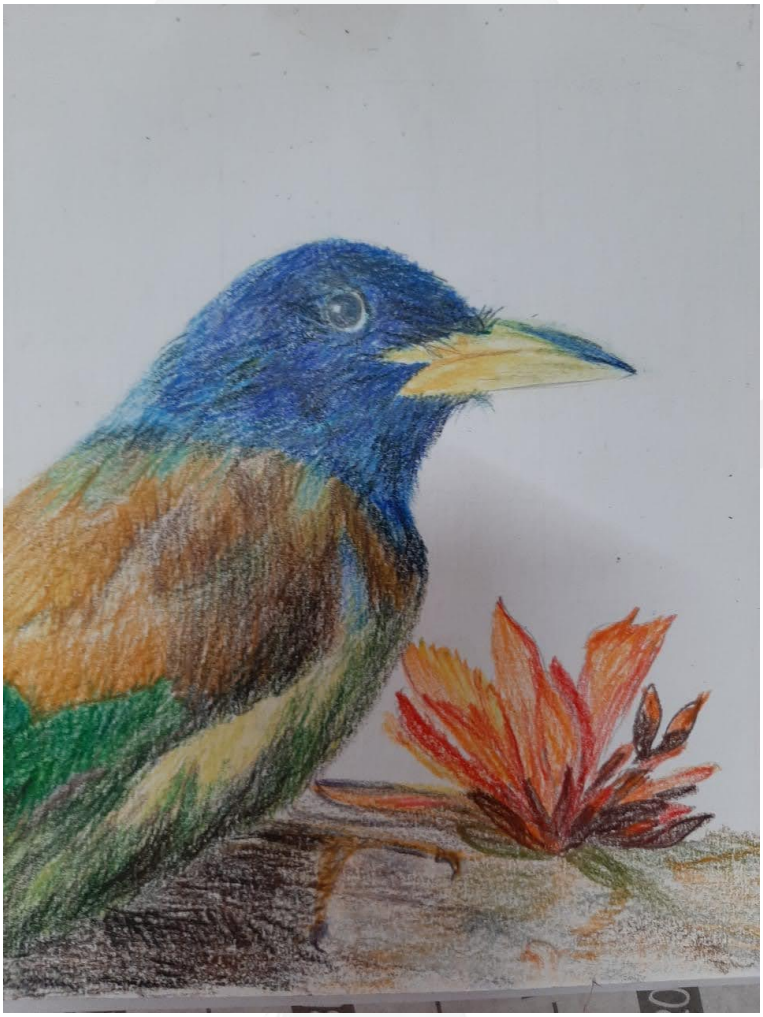
Such warnings are not commonly seen in India
(Photographed by the author near Mt. St Helens, USA)

The Story of the Great Barbet

Divya Goswami

In the Himalayan valleys, there is often heard a haunting cry —"Juhoo… Juhoo… Juhoo…"Those who have shared even a few breaths with the mountain breeze, recognise it instantly. The valleys, with filled with the Oak, fig and wild cherry tress echo with a certain grief, as though someone, somewhere, is calling out in endless sorrow.

Birders know this mournful voice belongs to the magnificent Great Barbet — a bird of striking beauty, yet gifted with a cry that sounds like lamentation itself. Its plumage glows with splendour, yet the voice is heavy with pain. Its body belongs to the forest with leafy green and mossy shades, but the call resembles a void.



Sketch by Geeta Goswami

Long ago, in the Himalayas, there lived a young girl. She was radiant and fair like fresh snow upon the mountains.She moved to the rhythm of the gurgling streams and carried the fragrance of the fresh pine. Youth shimmered through her presence playing hide and seek like the mist in the forest. She spoke to birds, wandered freely

along narrow mountain paths, and spent her days among waterfalls. The mountains were not merely her home; she belonged to the mountains.

When time came, as per the custom, her father found a match for the young daughter. Her husband's family lived in the plains — a world she had never seen, one she probably didn't even imagine. A land utterly foreign to her mountain soul. And so she left her beloved Himalayas and descended into the plains to live with her husband and in-laws.

At first, she survived through the winter, sheltered by the affection of her husband. But slowly the seasons changed.Summer arrived. The air grew heavy, hot, and dry. The city began to be chaotic, noisy and bright. This mountain girl began to wilt like a delicate flower scorched by harsh sun. She could not sleep, eat or smile. Her heart yearned only for her mountains, for the cool winds and the familiar silence of home.

One day she gathered courage and asked her mother-in-law if she could return to her parents for some time. The reply came gently but firmly: "Bhor jala…" — Tomorrow morning. The innocent girl believed her. Packed her few belongings and waited for dawn. At sunrise she asked softly,"Juhoo?"— May I go, for it is the first light of the day? The answer came again:"Bhor jala…" - Tomorrow morning for sure. Disappointed, she just sat in a corner, quiet tears rolling down her cheeks.

Days turned into weeks. The answer did not change and neither the yearning, the question, the request from the girl. Slowly the Himalayan beauty faded. Her skin darkened under the burning heat of the plains. Her body grew thin and weak. The sparkle in her eyes disappeared. The rivers, forests, and snows she longed for existed now only in memory. Yet hope kept her alive.

Every day: "Juhoo?" Every day: "Bhor jala…" Tomorrow…Tomorrow…Tomorrow. One evening, with the last remnants of hope in her voice, she asked once again: "Juhoo…". And again came the reply: "Bhor jala…". That night she could not even bring herself to enter the home and be next to her husband.

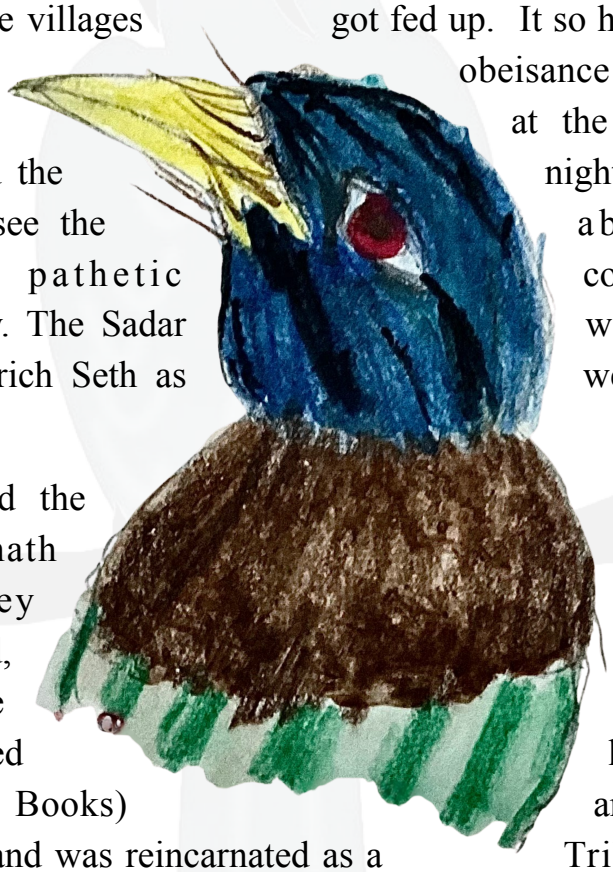
Beneath a small tree in the courtyard, she sat and stared. Her eyes wandering into nothingness, towards the mountains. By morning, all that remained were her eyes still searching, without breath and life. On the branch above her sat a bird, nodding its head, crying endlessly: "Juhoo… Juhoo… Juhoo…". Then it flew toward the mountains without waiting for an answer. And even today, in the Himalayan valleys, the Great Barbet continues to call: "Juhoo… Juhoo…Juhoo". And from afar, the mountains seem to echo back: "Bhor jala…".

Why Does a Great Barbet Wail?

A Folk tale from Kangra

Mitinderpal Singh Sekhon

The vernacular name of Great Barbet in Kangra region is "Triho", the one who always wails! According to the legend, there was a Seth, a cruel moneylender of Patti, a village near Baijnath. He was very wealthy and lent money to the simple folks at usurers rates. It took generations to only pay the interest, while the principle always remained unpaid. In planting and harvest season, all his poor loanees had to first work in his fields and then their own. If someone was unable to pay the interest or not work in his fields, the Seth bribed the local Daroga and had the person whipped. This continued for a long time till the people of the villages got fed up. It so happened that a gang of dacoits came to pay obeisance at Chamunda Devi Temple. After praying at the temple, they headed into the village to spend the night. The Sardar of the gang was horrified to see the abject poverty and inquired about the pathetic conditions. The villagers narrated the whole story. The Sadar was intrigued by the prospects of robbing a rich Seth as well as helping the poor villagers.



The dacoits surveyed the Seth's house in Patti, on way to Baijnath Temple and hatched a plan. That night they robbed the Seth and took all his money, gold, silver and expensive items. As they were leaving, the Sardar called the Seth and asked him to fetch all his Bahi-Khatas (Account Books) and set them on fire. The Seth died of shock and was reincarnated as a Triho - Great Barbet, which wails all the time calling - "Chorrrr, Chorrrr —-Lay gayo, Lay gayo…" (Thieves, Thieves, —- They have take away, they have taken away)!

Monsoon Birding

When the Rains Bring More than Water

Lalit Mohan Bansal



Pied/Jacobin Cuckoo *(Clamator Jacobinus)*



Scaly-breasted Munia *(Lonchura punctulata)*

For many birders around Chandigarh, the arrival of Winter signals the beginning of an eagerly awaited season. The winter migrants start arriving, wetlands become

crowded with ducks and waders, and familiar birding locations suddenly acquire a new character.

But what happens before the winter visitors arrive? For me, the monsoon of 2026 provided a wonderful answer. The first monsoon rainfall arrived on 1 July 2026, and by 24 September, the monsoon season was officially over. Almost three months of rain, greenery, changing light and humid mornings provided a very different birding experience.

As I look back at the photographs from these months, I realise that monsoon birding was far more rewarding than I had expected. In fact, the monsoon brings with it a completely different world of birds - a world of lush greenery, breeding activity, nesting, courtship, fresh arrivals and a chorus of bird calls that can make even an ordinary morning memorable.

The Francolins of the Grasslands



Black Francolin *(Francolinus francolinus)*

The monsoon greenery provides excellent habitat for these ground-dwelling birds, although photographing them can require considerable patience. Francolins are often heard before they are seen. Their calls can reveal their presence while the birds themselves remain hidden in grass or vegetation. The Grey Francolin *(Francolinus pondicerianus)* and Black Francolin *(Francolinus francolinus)* are among the birds that featured in my monsoon photography.



Grey Francolin *(Francolinus pondicerianus)*

Their calls can reveal their presence while the birds themselves remain hidden in grass or vegetation. A sudden movement in the grass, followed by a brief appearance, can be all the opportunity a photographer gets.

GREATER PAINTED-SNIPE - THE WETLAND SURPRISE



Greater Painted Snipe *(Rostratula benghalensis)*

The Greater Painted-Snipe *(Rostratula benghalensis)* was another memorable species and a lifer for me. Wetlands take on a different character during and after the monsoon, and species associated with shallow water and marshy vegetation become particularly interesting subjects. The Greater Painted-Snipe is an especially beautiful bird, but it is also a reminder that wetland habitats should not be judged only by the number of winter migrants they attract. Even outside the peak winter season, wetlands continue to support a fascinating variety of birdlife.

Eurasian Wryneck - the Unexpected Visitor



Eurasian Wryneck *(Jynx torquilla)*

The Eurasian Wryneck *(Jynx torquilla)* is a familiar winter visitor to our region, and its arrival is eagerly awaited by birders as the season changes. While we were still enjoying the lush greenery and rain-fed landscape of monsoon, spotting one during the monsoon, well ahead of its usual wintering period, adds an unexpected flavour to the birding calendar. The Eurasian Wryneck therefore became more than just another bird photographed during the monsoon, it was a subtle hint of the winter that lay ahead. The species has a remarkable appearance and behaviour, and its cryptic plumage makes it surprisingly difficult to spot.

A Season of Rollers

The monsoon also brought opportunities to photograph two spectacular rollers - the European Roller *(Coracias garrulus)* and the Indian Roller *(Coracias benghalensis)* The Indian Roller is one of those birds that can easily be taken for granted because it is



Indian Roller *(Coracias benghalensis)*

relatively familiar in our landscape. Yet when it spreads its wings, the brilliant blue becomes impossible to ignore.

A Traveller from Europe



European Roller *(Coracias garrulus)*

There are moments in nature when an ordinary morning suddenly becomes extraordinary, a flash of brilliant blue across an open field, a bird sitting quietly on

an exposed wire, and then, without warning, a graceful dive towards the ground. For a fortunate birder, that flash of blue can be the European Roller *(Coracias garrulus)*, a migratory bird that has travelled thousands of kilometres to reach the Indian subcontinent; and it did not remain here too long. The European Roller breeds across parts of Europe and western and central Asia. As summer ends and autumn approaches, it begins one of nature's great journeys, leaving its breeding grounds and heading south and southeast. Its migration takes it through Central Asia and across the Indian subcontinent, with some birds reaching parts of India before continuing towards Africa. After spending the winter in warmer parts of Africa, the Roller begins the return journey. Interestingly, the northward route is different.



European Roller *(Coracias garrulus)*

Saketri village and surroundings, with agricultural fields, open spaces, grasslands and scattered trees, provides suitable stopover habitat for a passing Roller. Here, the bird can rest, scan the ground for food and replenish its energy before continuing its journey. The sighting of a European Roller during the monsoon added a special dimension to my birding season. Amid the greenery and rain-washed landscape, this brilliant blue traveller appeared briefly before continuing its journey. To photograph such a bird during the monsoon is to capture one small moment in a much larger annual journey.

Pied Cuckoo aka Jacobin Cuckoo - More Than a Harbinger of the Monsoon

The Pied Cuckoo *(Clamator jacobinus)* is perhaps one of the birds most closely associated with the Indian monsoon. Its distinctive call, heard around the beginning of the rainy season, has earned it the affectionate title of the "harbinger of the monsoon."

For generations, its arrival has been regarded as one of nature's signals that the rains are on their way. There is another fascinating story behind this familiar bird - its iconic seasonal migration. While we eagerly wait for the Pied Cuckoo to announce the monsoon, it has already undertaken a remarkable journey to reach us. Although resident in South India, central and northern populations of this brood parasite migrate to Africa for the winter. Pied Cuckoos that appear in northern India during the monsoon months are believed to arrive from Africa, crossing considerable distances to reach the Indian subcontinent. The bird then spends the monsoon months in the Indian landscape, taking advantage of the abundance of insects and suitable conditions for breeding. As the season progresses, another journey awaits.



Pied Cuckoo *(Clamator jacobinus)*

Blue-tailed Bee-eater - the Monsoon Aerialist

The Blue-tailed Bee-eater *(Merops phillipinus)* is another beautiful seasonal visitor that cannot be missed in the monsoon. Against that brilliant blue canvas, the Blue-tailed Bee-eater appeared almost as though two shades of nature's blue had come together in a single frame. Its colourful plumage stood out beautifully against the open sky, creating a simple yet striking composition. Its presence also tells us something about the monsoon environment. With insects becoming plentiful after the rains, insectivorous birds have a rich food supply. Watching bee-eaters hunt is an experience in itself. From a favourite perch, the bird suddenly launches into the air, catches an insect and returns, often before the photographer has even managed to react.

For the photographer, capturing a bee-eater is a combination of knowledge, anticipation and a little luck.



Blue-tailed Bee-eater *(Merops phillipinus)*

Monsoon - the Season of New Beginnings

The other fascinating aspect of monsoon birding is that it allows us to witness birds not merely as species on a checklist, but as parents, partners, builders and protectors.



Baya Weaver *(Ploceus phillipinus)*



Baya Weaver *(Ploceus phillipinus)*

The season brings breeding activity to life. Palm trees carrying several helmet-shaped nests suddenly become centres of activity. One of the most fascinating examples is the Baya Weaver *(Ploceus phillipinus)*. The sight of a male Baya busily constructing its characteristic hanging nest is a reminder of the extraordinary architectural skills found in the avian world. The males work tirelessly, weaving and arranging strands of grass into intricate structures, while their calls add to the atmosphere around the nesting colony.

Watching such behaviour is very different from simply photographing a Baya Weaver perched on a branch. The photograph becomes a record of a story - the story of courtship, construction and the beginning of another generation.

Courtship Feeding

I was fortunate to capture an unusual interaction between two Pied Cuckoos *(Clamator jacobinus)* when one cuckoo was perched atop another and feeding it an insect. I found out later that this interesting behaviour represents courtship feeding by a male to a female, and is also mentioned in a book by Salim Ali and S. Dillon Ripley. As for Pied Cuckoos, the male presents food - typically insects like caterpillars to the female as part of their reproductive and bonding interactions. During mating, the male often mounts the female and offers her a fresh insect kill to solidify the bond.

Since Pied Cuckoos are brood parasites (meaning they lay their eggs in the nests of other species like babblers and bulbuls), adult Cuckoos do not build nests or feed their own chicks. Therefore, any instance of an adult Pied Cuckoo feeding another adult is almost exclusively a courtship ritual rather than parental care.



Pied Cuckoo (Clamator jacobinus)

THE SAME SEASON ALSO BRINGS OPPORTUNITIES TO OBSERVE BIRDS IN BREEDING PLUMAGE.

A Purple Sunbird *(Cynnirus asiaticus)* in its brilliant breeding colour, moving from flower to flower in search of nectar, can be an unforgettable sight. During one such encounter, I found the bird feeding on a fresh vibrant flower, its plumage contrasting beautifully with the bloom. Moments like these remind us that bird photography is not



Purple Sunbird *(Cynnirus asiaticus)*

always about finding a rare bird. Sometimes it is about being in the right place at the right season.

The Quieter Characters



Long-tailed Shrike *(Lanius schach)*

Not every memorable birding encounter has to involve a colourful species.Long-tailed Shrike *(Lanius schach)* and Crested Bunting (*Emberiza lathami)* were among the other birds I photographed during the season.

The Long-tailed Shrike is an excellent example of a bird that rewards careful observation. Its distinctive behaviour and habit of using exposed perches make it an interesting photographic subject. The Crested Bunting, with its understated beauty, is another reminder that bird photography is not simply about finding the brightest colours. Sometimes it is the bird's posture, habitat, light or behaviour that makes an image special.

Looking through my photographs from the 2026 monsoon, from a photographer's perspective, monsoon offers a completely different palette. There were mornings when the weather was uncertain and the light was difficult, and there were moments when the soft monsoon light seemed almost perfect. This variety is perhaps the greatest attraction of monsoon birding. Birds can disappear into thick vegetation, sudden showers can interrupt an outing, and the humid conditions are not particularly friendly to photographic equipment.

Yet these Challenges are part of the Experience.

While we eagerly await the arrival of the winter migrants in October, the birds of the monsoon have already given us their own remarkable chapter. With the monsoon behind us, the landscape will slowly begin to change again. The greenery will gradually fade, water levels will change, temperatures will drop, and somewhere beyond the horizon, the first winter migrants will begin their journey towards the wetlands and habitats of our region.



Asian Green Bee-eater *(Merops orientalis)*

In the coming year, I will probably look at the monsoon a little differently, because the months between July and September have shown me once again that there is no off-season in birding. Every season has its own stories. All we need to do is step outside, look carefully, and allow the birds to tell us what season it really is.

How Avian Biomimicry Redefined Modern Engineering

Mitinderpal Singh Sekhon

For centuries, humanity looked to the skies with a mixture of envy and awe. While early pioneers like Leonardo da Vinci attempted to replicate flight through literal mechanical mimicry, modern engineering has evolved to embrace a more sophisticated discipline: biomimicry. *(Biomimicry is the practice of looking to nature's time-tested designs—honed through millions of years of evolutionary trial and error—to solve complex human problems.)*

Birds, as the premier masters of fluid dynamics, structural efficiency, and high-impact survival, offer an unparalleled blueprint for innovation. From the ultra-streamlined noses of bullet trains to the shock-absorbing mechanics of protective sports headgear, avian morphology has fundamentally reshaped transport, robotics, safety, and architecture. This essay explores how ten distinct bird species provided the breakthrough blueprints for humanity's most advanced technological achievements.

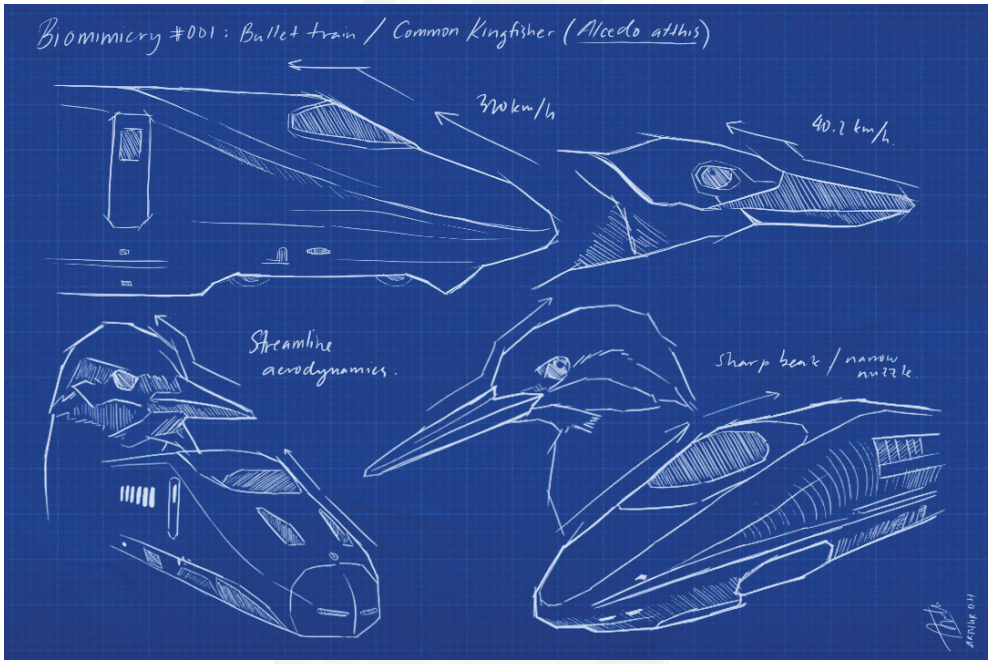
The field of avian biomimicry illustrates that the answers to humanity's most complex engineering dilemmas are often already flying above us. Millions of years of natural selection have optimised birds to operate at the absolute limits of physical efficiency. They conserve energy, navigate turbulent fluids, withstand extreme forces, and construct resilient homes using minimal raw materials.

As human technology shifts toward a future that prioritises sustainability, energy conservation, and carbon neutrality, looking to biology is no longer just a creative exercise—it is an engineering necessity. By decoding the sophisticated mechanics of the avian world, scientists and engineers will continue to build faster transit networks, safer protective equipment, smarter autonomous systems, and more resilient cities for generations to come.

The Common Kingfisher and the Shinkansen Bullet Train

The evolution of Japan's *Shinkansen* (bullet train) network is perhaps the most famous commercial victory for biomimicry. In the early 1990s, the 500 Series Shinkansen faced a severe operational hurdle: the "tunnel boom." As the train entered narrow, atmospheric tunnels at speeds exceeding 300 kilometres per hour, it pushed a wall of air ahead of it. This rapid compression generated a massive atmospheric shockwave at the tunnel's exit, creating a loud sonic boom that shattered windows and disturbed residential areas blocks away.

Eiji Nakatsu, the train's chief engineer and an avid birdwatcher, recognised that this issue was fundamentally a transition between fluids of differing densities—specifically, from the open atmosphere to the highly compressed, restricted air space of a tunnel. He found his solution in the common kingfisher (*Alcedo atthis*). The kingfisher hunts by diving from the air into water to catch fish. Water is roughly 800 times denser than air, yet the bird transitions between these two mediums with barely a splash.



Credit: Arthur Hamdani, The Varsity

Nakatsu analysed the kingfisher's beak, noting its highly optimised, diamond-shaped cross-section that tapers smoothly from the head to the tip. By redesigning the nose of the Shinkansen to mirror the precise mathematical proportions of the kingfisher's beak, the engineering team achieved a revolution in aerodynamics. The new nose design eliminated the tunnel boom entirely. Furthermore, it reduced aerodynamic drag by 30%, resulting in a 15% reduction in electricity consumption and allowing the train to travel at faster speeds while meeting strict environmental noise standards.

The Wandering Albatross and Long-Range Aircraft

When it comes to sustained, energy-efficient flight, no organism matches the wandering albatross (*Diomedea exulans*). With a wingspan that can reach up to 3.5 metres, these birds can circumnavigate the Southern Ocean while expending less energy than they do sitting on a nest. They achieve this via "dynamic soaring"—a flight technique that extracts kinetic energy from the wind shear gradients above ocean waves.

Aircraft designers have long battled induced drag, which occurs at the wingtips where high-pressure air beneath the wing meets low-pressure air above it, creating energy-sapping vortices. The albatross minimises this through an extreme aspect ratio: its

wings are incredibly long, narrow, and slender. This geometry isolates the tip vortices across a vast span, maximising the lift-to-drag ratio.



Credit: aerosociety.com

Modern aerospace corporations, such as Airbus and Boeing, heavily study albatross flight mechanics to design ultra-high-aspect-ratio wings for next-generation commercial aircraft. Implementing these slender, flexible wings requires advanced composite materials like carbon-fibre-reinforced polymers to handle the immense structural bending. Additionally, engineers are developing "semi-aeroelastic" hinged wingtips that mimic the albatross's ability to flex its joints in turbulent air, relieving structural loads and reducing fuel burn by an estimated 5% to 10% on long-haul routes.

The Peregrine Falcon and Jet Engine Nasal Cones



Credit: Wierd, Wonder and Amazing Things, Facebook

The peregrine falcon (*Falco peregrinus*) is the fastest animal on the planet, capable of reaching speeds exceeding 320 kilometres per hour during its hunting stoop (dive). At these extreme velocities, the physics of airflow changes drastically. For a long time,

scientists wondered how a falcon could breathe during a dive without its lungs exploding from the immense ram-air pressure.

The secret lies in the falcon's nostrils, which feature small, bony tubercles or cones positioned directly in the centre of the nasal opening. These structures act as aerodynamic baffles. When high-speed air hits the tubercle, the cone breaks up the direct force of the incoming airflow, creating controlled micro-vortices that slow the air down and distribute it safely into the respiratory tract.

In the mid-20th century, as aviation engineers pushed aircraft into supersonic speeds, they encountered a matching dilemma: how to keep jet engines running smoothly when incoming air traveled faster than the speed of sound. If supersonic air hits the compressor blades directly, it chokes the engine and causes a flameout. Looking to the peregrine falcon, engineers designed central inlet cones (or spikes) for early supersonic aircraft, such as the MiG-21 and the SR-71 Blackbird. These cones mimic the falcon's nasal tubercles, generating shockwaves that slow the incoming air to subsonic speeds before it enters the engine compressor, ensuring stable, continuous combustion.

Soaring Eagles and Airliner Winglet



Credit: Noonstop Aviation, Facebook

If you look out the window of a modern commercial airliner, you will likely see a sharp, upward turn at the very edge of the wing. These structures, known as winglets, are direct adaptations of the primary feathers of soaring birds, particularly eagles, hawks, and vultures.

Large land-bound soaring birds rely heavily on thermal updrafts to stay aloft without flapping. Because they operate at relatively low speeds with broad, heavy wings, they are highly susceptible to severe tip vortices. To combat this, an eagle can independently control and curl its outermost primary feathers upward, creating a slotted, multi-tiered wingtip. This vertical dispersion breaks a single, massive vortex into several smaller, less destructive eddies.

Aerodynamicist Richard Whitcomb translated this biological mechanism into aviation engineering in the late 1970s. By installing vertical winglets that mimic the eagle's curled primary feathers, engineers forced the high-pressure air underneath the wing to curl outward and upward, generating a small amount of forward thrust while vastly reducing the size of the wake vortex. Today, winglets are standard on commercial fleets, saving airlines billions of gallons of fuel annually and reducing carbon emissions by up to 5% per flight.

Snow Geese Formations and "Fello'fly" Platoon Operations

Migrating snow geese (*Anser caerulescens*) are famous for flying in highly organised V-formations. This layout is not a social preference; it is a calculated energy-saving strategy. As the lead bird flaps its wings, it leaves behind a continuous



Credit: Tech Brew



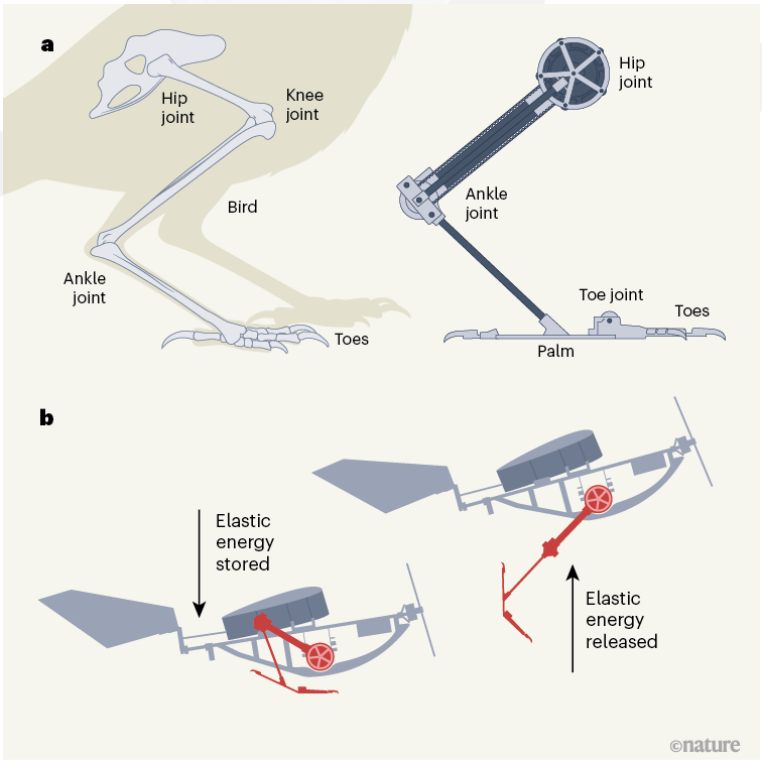
Credit: Pinterest

vortex of air. The bird directly behind it positions its wing inside the upward-moving part of that vortex (the upwash), gaining free aerodynamic lift. By riding the upwash created by the preceding bird, the geese behind the leader significantly reduce their heart rates and energy expenditure. Aerospace engineers have long sought to scale this phenomenon up to commercial aviation through automated "formation flight" or "wake-energy retrieval."

In recent years, Airbus launched the "Fello'fly" project, conducting real-world flight tests with two large commercial airliners. Using precise automated flight control systems, the follower aircraft was positioned roughly 3 kilometres behind the leader, safely riding the smooth upwash of the lead aircraft's wake vortex. The results mirrored the snow geese perfectly: the follower aircraft demonstrated an immediate reduction in fuel consumption of up to 15% without compromising passenger comfort. This operational biomimicry holds massive potential for lowering emissions across transoceanic flight corridors.

Avian Leg Morphology and Hybrid Takeoff Drones

Traditional drones are generally split into two categories: fixed-wing aircraft (which require long runways or catapult launch systems) and rotary-wing quadcopter



Credit: nature.com

(which can take off vertically but suffer from limited range and poor battery efficiency). To bridge this gap, robotics engineers turned to the leg mechanics of ground-dwelling and perching birds.

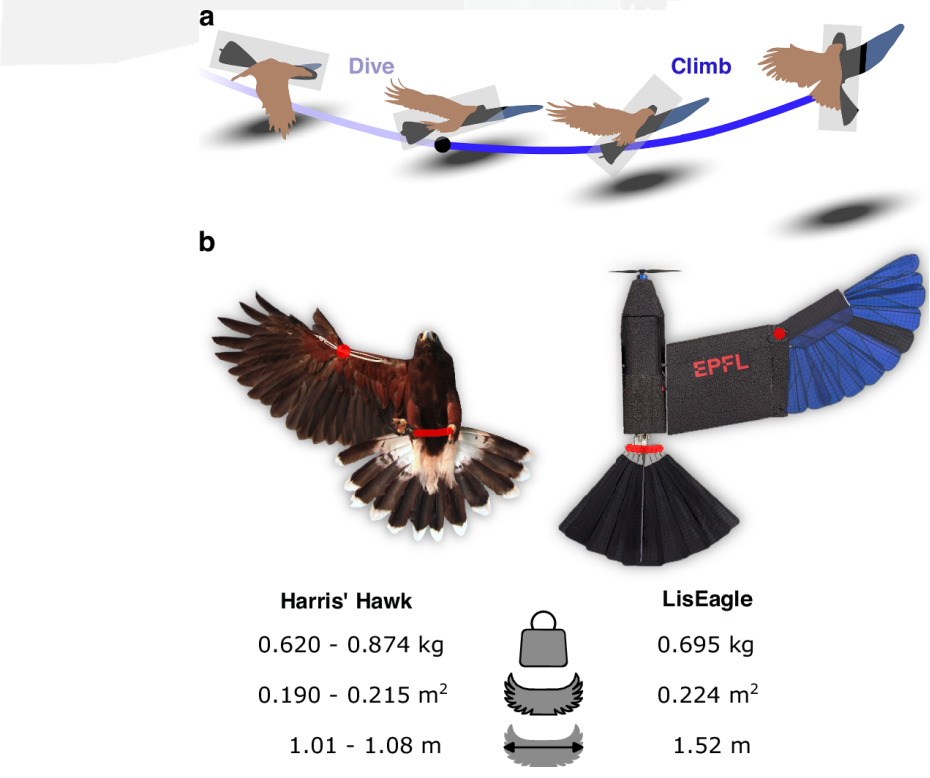
Birds possess highly versatile, multi-functional legs that act as complex suspension systems. When a bird takes off, it doesn't just use its wings; it uses its leg muscles to jump forcefully into the air, providing the initial kinetic energy required to transition smoothly into sustained flight.

Robotic platforms, such as the RAVEN (Robust Autonomous Flight Vehicle for Extreme Environments) and similar avian-inspired hybrid drones, replicate this anatomy using spring-loaded, carbon-fibre legs. When stationary on uneven terrain, these legs act as stabilisers. To launch, the drone executes a mechanical "jump," clearing obstacles and gaining instant altitude. This mechanical leap allows the drone to utilise high-efficiency fixed wings for long-range flight without needing a runway, making it ideal for rugged search-and-rescue operations.

Pigeon and Falcon Wing Morphing in Ornithopters

Most human-designed aircraft feature rigid wings that rely on mechanical flaps and ailerons to change direction. Birds, however, navigate complex environments like dense forests or urban canyons by continuously changing the actual shape, surface area, and angle of their wings—a capability known as wing morphing. Pigeons (*Columba livia*) and falcons can tuck their wings to snap-turn or extend them fully to maximise lift during a slow glide.

Engineers have mimicked this behaviour to create a class of drones called ornithopters—flapping-wing robots that fly by beating their wings rather than



Credit: nature.com

relying on spinning propellers. Advanced ornithopters feature synthetic feathers made of lightweight polymers attached to a complex, multi-jointed skeleton.

By individualising the control of these synthetic joints, the drone can mimic a pigeon's asymmetric wing twist. This allows for incredibly tight, silent manoeuvres that are impossible for standard quadcopters. Because flapping wings generate lift more dynamically than small propellers, these drones consume less power at lower speeds, making them highly effective, covert tools for wildlife monitoring, surveillance, and indoor rescue missions.

Hummingbirds and Ultra-Agile Micro-Air-Vehicles (MAVs)

The hummingbird (family *Trochilidae*) is a biological marvel of precision flight. Unlike other birds that rely on an up-and-down flapping motion, hummingbirds twist their wings back and forth in a rapid, continuous figure-eight pattern. This movement allows them to generate lift on both the forward and backward strokes, enabling them to hover perfectly in mid-air, fly backward, and even fly upside down.



Credit: Wikipedia

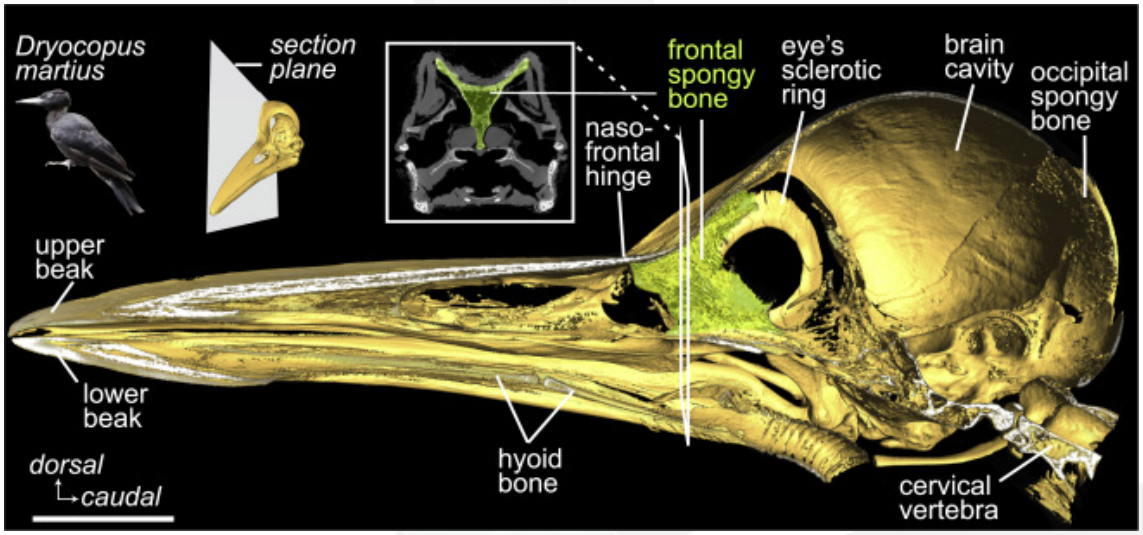
To sustain this, the hummingbird possesses an oversized pectoral keel structure and highly specialised shoulder joints that allow for a massive range of motion. This specific biomechanical profile has served as the baseline for micro-air-vehicles (MAVs) designed for tight, confined spaces.

Roboticists have successfully engineered nano-drones that weigh less than a AA battery but fully replicate the hummingbird’s figure-eight kinematics. By utilising piezoelectric actuators that vibrate hundreds of times per second, these micro-drones can stabilise themselves instantly against sudden indoor wind drafts. This hyper-agility makes

them uniquely suited for inspecting hazardous, collapsed infrastructure, such as nuclear power plants or mine shafts, where traditional drones would crash.

Woodpecker Skulls and Shock-Absorbing Engineering

A woodpecker (family *Picidae*) can drum its beak against a tree trunk up to 20 times per second, experiencing a deceleration force of roughly 1,200 *g* (twelve hundred times the force of gravity) with every single strike. For context, a human being can suffer a severe concussion at just 80 *g*. Yet, the woodpecker suffers no brain injury, retinal detachment, or structural skull failure over its entire lifetime.



Credit: sciencedirect.com

Anatomical studies reveal that the woodpecker's head is a masterclass in mechanical shock absorption, relying on four key components:

1. **A hard but elastic beak:** The outer layer is made of flexible keratin that deforms slightly upon impact, absorbing initial peak forces.
2. **The hyoid apparatus:** A long, muscular, tendon-like bone structure that wraps entirely around the bird's skull, acting like a structural seatbelt to distribute energy.
3. **Spongy bone tissue:** The skull contains a highly porous, uneven layer of bone that dampens incoming high-frequency vibrations.
4. **Minimal cerebrospinal fluid:** This design prevents the brain from sloshing inside the skull cavity, eliminating the rotational forces that cause concussions.

Material scientists and safety engineers have closely analysed this four-part system to design high-performance protective headgear, such as football and motorcycle helmets. By mimicking the spongy bone with variable-density polyurethane foams and replicating the hyoid apparatus with external elastomeric straps, modern helmet designs

can deflect sharp, high-velocity rotational impacts. Furthermore, this exact woodpecker blueprint has been used to design ultra-durable casing protections for black-box flight recorders and delicate military electronics.

Bird Nests and Seismic Architecture

Biomimicry is not limited to the physical anatomy of the bird itself; it also extends to the structures they construct. Bird nests, particularly those built by twigs woven tightly together, are incredibly resilient. They can withstand heavy winds, support immense weight relative to their mass, and absorb external physical disruptions without collapsing.



Credit: lyferbrand.com

When architects Herzog & de Meuron were tasked with designing the main stadium for the 2008 Beijing Olympic Games—the National Stadium—they sought a structural system that was visually striking, structurally self-supporting, and capable of withstanding major seismic activity, as Beijing sits in a geologically active zone.

The resulting design, colloquially named "The Bird's Nest," features a massive, interwoven web of steel columns and beams that mask the stadium's functional concrete bowl. Just like a natural bird's nest, where individual twigs bear little load but the collective network distributes forces evenly across the entire matrix, the stadium's steel lines are configured to create a unified, self-supporting framework. This design eliminates the need for massive, rigid interior support pillars. The structural redundancy of the interwoven steel path ensures that if an earthquake strikes, the seismic energy is dispersed throughout the entire web, allowing the building to flex slightly without fracturing. Additionally, the open, porous spacing between the steel struts facilitates natural ventilation, reducing the building's reliance on energy-intensive air conditioning systems.

EURASIAN WRYNECK — *JYNX TORQUILLA*

Rima Dhillon

Jynx torquilla was derived from Greek mythology, where it was linked to magical charms, enchantment and divination. Goddess Hera turned a nymph called Jynx into a wryneck for trying to attract the God, Zeus. This jealous action by Hera has forever cast the Wryneck as a symbol of bad luck. ***Torquilla*** comes from the Latin word ***Torquere,*** literally meaning 'to twist'. In medical terms, wry neck refers to a twisting of the neck causing the head to rotate and tilt at an odd angle – aptly describing the bird.



At Morni

There are only two species of wryneck in the world, of which Red-throated Wryneck *Jynx ruficollis* is found in sub-Saharan Africa, and Eurasian Wryneck *Jynx torquilla* in Europe and Asia.

PLUMAGE & BEHAVIOUR

The Black Sheep of the woodpecker family, the Eurasian Wryneck bears little resemblance to its relatives. It lacks their powerful, chisel-shaped bills, does not drum on tree trunks, and spends considerable time foraging on the ground. Yet it belongs to the family Picidae, sharing with woodpeckers the characteristic zygodactyl arrangement of toes which helps it grip branches and tree trunks.

The intricately patterned plumage, extraordinary flexibility of the neck and unusual defensive behaviour make it the most intriguing member of the woodpecker family.

A mere 16 cm in length, the Wryneck is a master of camouflage with its plumage of greys, browns, buffs and black, with vermiculation and streaks resembling the

texture of weathered bark. When perched motionless against a tree trunk, the bird can virtually disappear into its surroundings. Its cryptic plumage and unobtrusive habits mean that it is probably overlooked more often than birdwatchers realise.



At Morni

The most interesting characteristic is the behaviour that gives the bird its name. When threatened, particularly at its nest, the Wryneck stretches its neck, twists its head from side to side, raises its head feathers and produces a hissing sound, resulting in an uncanny resemblance to a snake, thus also earning it the popular names of Snake Bird and Twister in some countries.

FOOD & HABITAT

The Eurasian Wryneck is primarily an **insectivore**. Ants and their larvae form a substantial part of its diet. Unlike most woodpeckers, which excavate insects from wood, the Wryneck searches for food on the ground, among leaf litter, in grass and along the base of trees. Its long, sticky tongue is particularly well adapted to extracting ants from their nests and crevices. Therefore, open woodland, orchards, grassland edges and areas with scattered trees are its most suitable feeding habitats.

NESTING

Although it belongs to the woodpecker family, the Wryneck does not excavate its own nesting cavity. Instead, it occupies existing holes in trees or abandoned woodpecker nests. It may occasionally displace other cavity-nesting birds. The female generally lays a clutch of seven to ten white eggs, usually without constructing a conventional nest. Both parents participate in raising the young, bringing them a steady supply of ants and other small insects.

BREEDING & DISTRIBUTION

The Eurasian Wryneck has an extensive geographical distribution, breeding across much of temperate Europe and Asia. In Asia, its breeding grounds extend from the Ural region and Siberia eastwards through Kazakhstan, Mongolia, northern China and Far Eastern parts of Russia. There are also breeding populations in the Caucasus, Turkey, the Himalayas and parts of Japan and Korea. In South Asia, it breeds mainly in the northwestern Himalayas – northern Pakistan, Kashmir, Ladakh and neighbouring mountain regions. Unlike many other woodpeckers, it is strongly migratory. Populations breeding in northern and central Europe generally migrate to Africa for the winter, while Asian populations move southwards into the Indian subcontinent and other parts of southern Asia.



At Banni, Gujarat

Six subspecies are commonly recognised. Of particular interest in the Indian context is *Jynx torquilla himalayana*, which breeds in parts of the northwestern Himalaya, including Ladakh and Kashmir. Another subspecies, *J. t. chinensis*, occurs in eastern and northeastern India during the non-breeding season. Wintering birds in other parts of India may belong to different migratory populations. The identification of these subspecies in the field is often difficult.



At Mullanpur

Although small populations of Eurasian Wryneck breed in the northwestern Himalayan region, in the plains of Punjab, Haryana and Chandigarh, this bird is a winter visitor, encountered during the cooler months in scrublands, open wooded country, orchards and grassy patches with scattered bushes. It often remains inconspicuous, either sitting motionless on a low branch or quietly searching for ants on the ground.

Currently classified globally as a species of **Least Concern**, populations have declined in parts of Europe with the loss of traditional orchards, old trees, insect-rich grasslands and suitable nesting cavities. Changes in agricultural practices and the use of pesticides can reduce the ant populations on which it depends.

In India, too, the continuing disappearance of scrublands, open habitats and mature trees is a reminder of the importance of conserving landscapes that may appear unremarkable but support a wealth of biodiversity.

Pelagic Birding Trip to Mangaluru: September 2026

Sarbjeet Kaur

Pelagic Birding had long been on my wish list, and this trip to Mangaluru was my first experience of birding far out at sea. It was exciting, challenging and completely different from birding on land - a true adventure for anyone who enjoys watching birds in their natural habitats.



Greater Crested Tern *(Thalasseus bergii)*

The trip had originally been planned the previous year by V. Neeraja. Rima, Neeraja and I had reached Mangaluru in September 2025, but stormy conditions at sea forced us to cancel the pelagic outing. We returned to Chandigarh after doing a little birding along the shore. Fortunately, we did not cancel the booking, and the plan was revived this year. Neeraja had another commitment, so Rima and I travelled on an IndiGo flight from Chandigarh to Mangaluru via Delhi on 11 September. The connection at Delhi was very short, and we practically ran to catch our Mangaluru flight - rather like the way birders rush to see a lifer! Another keen birder, Parmil Kumar, was already on board.

We arrived in Mangaluru at about 8:30 pm. A taxi was waiting for us, and within half an hour we reached Hotel Punj. The hotel was conveniently located in the city, close to the Old Port from where we were to board our boat the next morning. We had dinner at the hotel; the food was good, and we retired early in anticipation of the adventure ahead.

12 September: First Day at Sea

We woke up at 5:00 am, had tea and got ready to leave. Auto-rickshaws are readily available in Mangaluru and are a very practical way to get around the city. The moment we stepped out of the hotel, we found an auto waiting by the roadside. Within ten minutes, we reached the meeting point, where our guide and several birders had already assembled.

There were fourteen birders in all, from different States but united by one mission: to see pelagic birds and, hopefully, add a few lifers to our lists. After tea at a small shop, we walked towards the Old Port. The port was alive with activity. Numerous fishing boats were anchored there - some heading out to sea, others returning with their rich catch, the livelihood of the local fishing community. The atmosphere was full of hustle and bustle.



Flesh-footed Shearwater *(Ardena carniepes)*

At 7:00 am, we finally boarded *Yojaka Pacific*, a fishing boat adapted for our pelagic birding trip. The moment the boat left shore, we realised that the sea demanded care and balance. The boat rose and dipped, swayed left and right with the waves, and we had to be especially cautious with our cameras. As we travelled farther from shore, however, the sky cleared and the sea became calmer.

Although it was a little early in the season for peak pelagic activity, we soon began seeing birds. Flocks of 15-20 Flesh-footed Shearwaters were observed, with a lone Streaked Shearwater among them. We also saw a few Wilson's Storm Petrels. Watching these birds skim, glide and seemingly surf over the waves was a delight. Photographing them, however, was far from easy, as the constant movement of both boat and birds made focusing a real challenge.

The boat travelled approximately 25-30 km into the sea. One particularly memorable sight was a Greater Crested Tern enjoying what looked like a roller coaster ride on a floating piece of thermocol. It gave the birders with long lenses ample opportunity for photographs. Bridled Terns and Common Terns were also spotted.

After lunch, we returned to our positions with renewed energy. Then came the day's big surprise: three Masked Boobies appeared, flying overhead and skimming the sea surface in search of food. It was a thrilling sight. At around 5:00 pm, the boat began its return journey. A few more species were seen near the shore, while Brahminy Kites hovered above us. We reached the port at 6:00 pm, took a group photograph, and then everyone dispersed to their respective hotels. Tired after a long but rewarding day, we had dinner at our hotel.

13 September: A More Confident Second Day



Wilson's Storm Petral *(Oceanites oceanicus)*

We again hired an auto at 6:00 am and reached the meeting point on time. After tea, we walked to the boat, and this time we boarded with greater confidence, after having experienced the previous day's sea adventure.

Palm Swifts were flying over the boats near the shore, while Night Herons crossed the sky with their distinctive calls. About 10-15 Brahminy Kites were soaring along the coast. They are very common in this region.

We left the port on schedule. As soon as we exited the estuary and entered the open sea, a giant wave crashed against the boat and sent a great splash into it, welcoming the unsuspecting birders who had barely settled with their cameras. Perhaps that is the sea's own way of greeting strangers! Thankfully, everyone's expensive

equipment remained safe. Rima, who was sitting on a lower chair, got a little wet, but her camera was unharmed.

As we moved farther into the open sea, we prepared ourselves for whatever mood the sea might show us. Our main aim was to photograph these beautiful avian surfers. Luck was better on the second day. We saw larger flocks of Flesh-footed Shearwaters close to the boat, as well as more than 30-35 Wilson's Storm Petrels dancing over the waves. It was a wonderful sight: such tiny birds moving so confidently among giant waves, using the sea as their feeding ground.



Bridled Tern *(Onychoprion anaethetus)*

Birding is always enjoyable and thrilling, but pelagic birding takes the excitement to another level. By now, everyone had become more adept at focusing on the fast-moving, swinging birds. I too managed a few satisfying photographs of the tiny storm petrels. Unfortunately, the Masked Booby did not show itself on the second day.

We had hoped to find another new lifer, but it was perhaps a little early in the season, as migration had only just begun. October and November may be better months for such an adventure. As planned, the boat began moving back towards the port. Near the shore, we spotted a White-bellied Sea Eagle flying across the port area.

We reached the port at 6:00 pm, took another group photograph and said our goodbyes. Back at the hotel, although tired, we decided to eat out. We visited Thimmappa Seafood Restaurant in Lalbagh, Mangaluru, a well-known restaurant recommended by a local doctor known to Rima Dhillon's family. The restaurant was extremely busy, with people waiting in a queue, but the seafood was excellent and well worth the wait.

The food and hospitality on the boat had also been excellent throughout both days. Breakfast around 9:30 am consisted of delicious local dishes. About an hour later, coconut water mixed with lime and a little sugar was served, followed by fresh fruit, including the small, sweet, sugary oranges which were absolutely delicious and not to be missed. Lunch again consisted of local dishes and was delicious, with a dessert afterwards. Tea was served very often, and after lunch we were given some juice, followed by fruit and evening tea. Fresh papaya was served later in the day. On the second day too, the hospitality was equally warm. Buttermilk with lunch and fresh watermelon and papaya were particularly tempting after several hours at sea. The care taken by our hosts to keep everyone comfortable, well-fed and refreshed added greatly to the enjoyment of the trip.



Streaked Shearwater *(Calonectris leucomelas)*

A Memorable First Pelagic Experience

These two days of pelagic birding were an amazing experience and absolutely worth undertaking. Being out in the open sea, learning to balance on a moving boat, protecting one's camera equipment, and trying to photograph birds flying low over the waves make pelagic birding unlike any other form of birding. It is challenging, exhilarating and unforgettable.

The trip was very well organised by our host, Shiva Shankar, with expert guidance from Harshit and Gopala. Their warm hospitality and attention to everyone's needs made the experience even more enjoyable.

For me, this was my first pelagic birding experience, and it has certainly left me wanting to go out to sea again. I would strongly recommend this adventure to fellow birders, especially those who wish to see seabirds in a truly wild and spectacular setting.



Masked Booby *(Sula dactylatra)*



Flesh-footed Shearwater *(Ardena carniepes)*

Pelagic Birding Contact:

Shiva Shankar: +91 9886082546

CBC Monthly Fieldtrip - Siswan, Punjab

6th September 2026

Birders :



1. Rima Dhillon
2. Sarbjeet Kaur
3. Aprajita Lobana
4. Sumeet Labana
5. Samrath Singh
6. Minni Sarkaria

1st Location -Siswan Dam (Bird Walk)

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1. Greater Coucal	*(Centropus sinensis)*
2. Little Cormorant	*(Microcarbo niger)*
3. Indian Pond Heron	*(Ardeola grayii)*
4. Eastern Cattle Egret	*(Ardea coromanda)*
5. Grey Heron	*(Ardea cinerea)*
6. Purple Heron	*(Ardea purpurea)*
7. Indian Grey Hornbill	*(Ocyceros birostris)*
8. Asian green Bee-eater	*(Merops orientalis)*
9. White-throated Kingfisher	*(Halcyon smyrnensis)*
10. Rose-ringed Parakeet	*(Psittacula krameria)*
11. Indian Golden Oriole	*(Oriolus kundoo)*
12. Hair crested Drongo	*(Dicrurus hottentottus)*
13. Rufous Treepie	*(Dendrocitta vagabunda)*



14. Asian Tit *(Parus cinereus)*
15. Ashy Prinia *(Prinia socialis)*
16. Grey-throated Martin *(Riparia chinensis)*
17. Wire-tailed Swallow *(Hirundo smithii)*
18. Red-vented Bulbul *(Pycnonotus cafer)*
19. Himalayan Bulbul *(Pycnonotus leucogenys)*
20. Grey-hooded Warbler *(Phylloscopus xanthoschistos)*
21. Jungle Babbler *(Argya striata)*

2ND LOCATION- MEDICITY



1. Knob-billed Duck *(Sarkidiornis melanotos)*
2. Indian Spot-billed Duck *(Anas poecilorhyncha)*
3. Indian Peafowl *(Pavo cristatus)*
4. Grey Francolin *(Ortygornis pondicerianus)*
5. Eurasian Collared-Dove *(Streptopelia decaocta)*
6. Red Collared Dove *(Streptopelia tranquebarica)*
7. White-breasted Waterhen *(Amaurornis phoenicurus)*
8. Red-wattled Lapwing *(Vanellus indicus)*
9. Common Hoopoe *(Upupa epops)*
10. Asian Green Bee-eater *(Merops orientalis)*
11. White-throated Kingfisher *(Halcyon smyrnensis)*



12. Brown-headed Barbet *(Psilofogon zeylanicus)*
13. Long-tailed Shrike (*Lanius schach)*
14. Rufous Treepie *(Dendrocitta vagabunda)*
15. House crow *(Corvus splendens)*
16. Ashy Prinia *(Prinia socialis)*
17. Wire-tailed Swallow *(Hirundo smithii)*
18. Red-vented Bulbul *(Pycnonotus cafer)*
19. Jungle Babbler *(Argya striata)*
20. Common Myna *(Acridotheres tristis)*

Chandigarh Bird Club®

Chandigarh Bird Club® is a registered organisation formed by a group of local birdwatchers. The idea is to record the local avifauna, its habitats, and help make the residents of Tri-City aware of birds in our region and protect them.

Incepted in 2008, the Chandigarh Bird Club® dedicated itself to its goal of protecting the environment.

The Club owes its existence to those few dedicated and expert members who started this Club in Chandigarh Boat Club; namely Navjit Singh, Narbir Kahlon, Vikramjit Singh, Mrs Rima Dhillon, Mrs Sarbjeet Kaur, and Mrs Geeta Goswami.

The fundamental objectives of Chandigarh Bird Club® continue to be to:

- Bring people, especially the younger generation, closer to nature through birding and help them to enjoy the outdoors while making it a fun activity.
- Make individuals and governments more sensitive towards the environment to create a dynamic database for analysis to focus on conservation efforts.
- Create a forum for birders to share information and discuss related activities.

President - Rima Dhillon
Vice President - Narbir Kahlon
Secretary - Amandeep Singh Channa
Joint Secretary - Navjit Singh
Treasurer - Mahesh Garg

Editorial Committee:
Rima Dhillon
Amandeep Singh Channa
Jasbir Singh Randhawa

Back Cover - Indian Grey Hornbill *(Ocyceros birostris)*

