Why not all trees may help you breathe easy

Mohammad.Ibrar@timesgroup.com

File photo

WHAT ARE YOU SMOKING?

New Delhi: Not all trees planted in Delhi are effective to counter pollution and a tree needs to be picked after considering multiple factors, Delhi University's environmental studies department has found during a two-year study.

The department has found that areas with high pollution content due to high traffic or industries require trees such as neem and peepal as they have high air pollution tolerance index (APTI).

The study was conducted under professor Chirashree Ghosh of the department in collaboration with Babli Moitra Saraf, principal of Indraprastha College for Women, on the college premises. It was an extension of the tree census of the campus, which listed 803 trees across 91 species.

"Delhi government has announced a target of planting 3.3 million saplings in the coming monsoon months and draft Master Plan Delhi 2041 targets to create green belts," Ghosh said. "Vanmahotsav is organised with a lot of publicity every year. While such policy initiatives are welcome moves, we need to be careful about the rationale behind the choice of the species that are planted," she added.

She explained that plantation without a proper basis behind the selection of species might result in suboptimal and unwanted outcomes. "It is important to follow scientific methods of evaluating different species of trees for selection before starting plantation drives."

The purpose of planting trees, Ghosh explained, is to "use their biological qualities to our advantage". In addition to cooling, providing shade and improving the ambiance, trees prevent soil erosion, retain rainwater and, most importantly, sequester atmospheric carbon dioxide and other gases. Dust consisting of particles of different types and sizes settle on leaves, purifying the air.

"We need to introduce the concept of green infrastructure, which is like a green web that encompasses a wide variety of interactions between biological species and multiple human functions," she said. "The purpose of urban greening is to conserve the biological ecosystem and utilise its benefits, such as reduction of air pollution, improvement of air quality, control of ambient temperature, and attenuation of noise pollution." Trees can lower the pollution levels in areas in the vicinity of heavy vehicular traffic, congested bus terminals, petrol pumps, etc, she added.

A PROFESSOR SAYS

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The study at IP College was essential as it "is located at a disadvantageous location in north Delhi, near Ring Road and Interstate Bus Terminus at Kashmere Gate and high pollution-emitting commercial sites", said Ghosh. The team monitored the responses of all trees within the campus to the concentration of particulate pollution and calculation of vegetation diversity Index, APTI and anticipated performance index.

"We recommend trees with high APTI values for mega plantation, such as semi-evergreen peepal or deciduous neem along with few moderately tolerant species like deciduous shahtoot and chamrod and evergreen ashok that act as fantastic dust filters," Ghosh said.

Barren patches, she added, should be replaced with ground vegetation of native shrubs like arni, chhoti-ari and hedge caper, while vilayati kikar, being an invasive exotic, is strictly not recommended for plantation despite being a highly tolerant variety.

According to Anindita Roy Saha of Centre for Earth Studies and teacher coordinator at IP College, the study can help in improving the life on the campus and "can be used in developing models for efficacious designing and development of urban forests, community parks and green belts in highly polluted sites in a city like Delhi".

Migratory birds find second home at DU college

Shradha.Chettri
@timesgroup.com

New Delhi: Avian species like the red-naped ibis and white-throated kingfisher and migratory species like the Taiga flycatcher and grey-headed canary flycatcher besides the native residents such as the spotted owl and shikra were among the 53 winged visitors at Indraprastha College for Women when the institution's Centre for Earth Studies stepped out to record their presence as part of the Bird Diversity Census.

The college campus located in north Delhi was probably able to log so many species because its area of 21 acres has plenty of open green spaces, which the college has cultivated further by planting an array of flowering plants and shrubs and fruit trees.

The count proved to the Centre for Earth Studies that "green patches in the middle of an urban landscape not only improves the ecology of a city, but also allows space for the bird population to flourish". Anindita Roy Saha, centre coordinator, said, "With the Yamuna on one side and the North Delhi Ridge on the other, the IPC College campus is a habitat island that hosts numerous species of birds, butterflies, dragonflies, etc., maintaining a healthy food chain within this micro-ecosystem. It is home to a large variety of birds ranging from species of the woodlands, open areas and wetlands, seasonal and migratory."

Saha pointed out that as Delhi had undergone rapid urbanisation over the course of the past few decades, the available habitat for bird species such as natural forests and wetlands had also declined. This was the reason why urban patches, like the one at IP College, were so important. She said such habitat islands could be created by planting big trees like neem, Ashok and mango, with smaller and fast-growing trees and shrubs that act as excellent habitat for birds.

"Studying urban biodiversity provides valuable insights into the conservation of remnant habitat patches," said the coordinator. "Birds, because of their popularity, ease of observation and ecosystem services, have the potential to play a crucial role in directing perceptions and policies about urban development."

The avian occupancy on the campus involved three-year-long, multi-season monitoring. "The variety of bird species sighted on the campus is amazing," exclaimed Saha. "Species such as the red-naped ibis and white-throated kingfisher are not very commonly seen in urban areas but are frequent visitors to the campus. Due to the proximity to the Yamuna khadar, riverine species like red-wattled lapwings can sometimes be seen nesting on the campus."

Project coordinator Nawin K. Tiwary, a trained ornithologist, added, "Birds are the most easily perceivable life forms in cities. They can be seen from our balconies, in parks and gardens and even by the roadsides. Bird sounds and sightings provide us with the much-needed feeling of closeness to nature in this multi-dimensional urban matrix."

Times View

The students and authorities at IP College must be lauded for this eco-friendly initiative. Other schools and colleges, especially those with huge campuses, can well follow their path.

तेजी से कम हो रही गौरैया की संख्या, पर्यावरण संरक्षण की जरूरत

चिंता

दिल्ली की गणना में नजर आई पक्षियों की 53 प्रजातियां, जीवन पर मडरा रहा खतरा

नई दिल्ली, 8 अगस्त (अनिल सागर/नवोदय टाइम्स): राजधानी के कुछ इलाकों में अभी भी पक्षियों का कलरवा सुनाई देता है और हाल ही में हुई एक गणना से पता चला है कि अगर इन पर ध्यान नहीं दिया गया तो इनकी संख्या तेजी से कम जरूर हो जाएगी। दिल्ली के पक्षी गौरैया का उदाहरण सामने हैं क्योंकि इस गणना में गौरैया भी नजर आई है। देखने में आया कि ये परिंदे इमारतों के बीच घोसले बना

लेते हैं वहीं पेड़ों, सजावटी वनस्पतियों में भी पनप रहे हैं।

पक्षियों के जानकार मानते हैं कि दिल्ली के पक्षियों की बाबत लेखक मैल्कम मैकडोनाल्ड ने अपनी किताब 'बर्ड्स इन माई इंडियन गार्डन' और मशहूर लेखिका उषा गांगुली ने 'बर्ड्स ऑफ देल्ही' में किया है। शहरी फैलाव के बीच सर्वाहारी चील, कौवे और मैना जैसी कुछ पक्षी प्रजातियों की जानकारी तो मिलती है लेकिन इसके अलावा जो पक्षी बुलबुल, हॉर्नबिल, रॉबिन और वॉरब्लर जो ज्यादातर वनों में पाई जाती हैं वह तेजी से गायब हो रही हैं। हाल ही में उत्तरी दिल्ली के आईपी कॉलेज परिसर में रहने वाले पक्षियों पर किए गए एक अध्ययन से शहरी इलाकों में दिल्ली के पक्षियों की पूरी तस्वीर बयां करती है। खुला हरा-भरा यह परिसर एक तरफ यमुना तो दूसरी तरफ उत्तरी दिल्ली रिज के साथ जुड़ा हुआ है।

शहरी क्षेत्रों से गायब हो रही गौरेया

गौरेया, शहरी क्षेत्रों से गायब हो रही है लेकिन यहां दिखाई देती है। कभी-कभी परिसर में रेड वॉटल्ड लैपविंग्स जैसी प्रजातियां घोसला बनाती हुई दिखाई देती हैं। परियोजना समन्वयक डॉ. नवीन कुमार तिवारी बताते हैं कि पक्षी शहरों के भीतर सबसे आसानी से दिखने वाले जीव हैं। उन्हें हमारी बालकॉनी, पार्कों, बगीचों, सड़क के किनारों पर भी देखा जा सकता है। प्रसिद्ध पक्षी विज्ञानी प्रो. अब्दुल जमील उर्फी ने रिपोर्ट जारी करते हुए कहा शहरी इलाकों में पक्षियों, पर्यावरण के लिए चिंता जरूरी है और नए विकास में पेड़, पार्क बनाएं, ताकि परिंदें आजादी से रह सकें।

प्रिंसिपल प्रो. बबली मोइत्रा सर्राफ कहती हैं कि परिसर में पक्षियों, तितलियों, ड्रैगनफलाई की कई प्रजातियां अच्छी संख्या में हैं। सेंटर फॉर अर्थ स्टडीज की समन्वयक डॉ. अनिंदिता रॉय साहा कहती हैं कि जैव विविधता की गणना हर मौसम में तीन साल में पूरी हुई और यहां पक्षियों की 53 प्रजातियां दिखाई दी हैं, जिसमें रेड नेप्ड आईबिस और व्हाइट थ्रोटेड किंगफिशर जैसी प्रजातियां जो शहरी क्षेत्रों में नहीं दिखती नजर आईं। प्रवासी प्रजातियों में टैगा फ्लाईकैचर, ग्रे-हेडेड कैनरी फ्लाईकैचर, स्पॉटेड ओवलेट, शिकारा जैसे पक्षी भी दिखते हैं।