



Toxics Link  
for a toxics-free world

**Public Lecture  
On  
'Disappearing Sparrows'  
8<sup>th</sup> May, 2012,  
India International Center, New Delhi**

The common sparrow, which was ubiquitously seen in our cities, is now increasingly rare. One could not open a door leading to a garden without a sparrow instantly flying into the room. Alongside, over the years, the absence of common bird species has become increasingly noticeable. Does the 'loss' of this and other birds we once took for granted is a sign of other changes in our environment? Toxics Link in its endeavor to address the issues surrounding the decline in the population of the sparrows and contemplate the reasons behind the decline; organized a public lecture on '*Disappearing Sparrows*' in collaboration with India International Center, New Delhi on May 8<sup>th</sup> 2012.



The lecture began with the screening of a film titled "*Sparrow*". The film directed by Nutan Manmohan, examines the battle for food and habitat, of the sparrows – one of the most familiar bird in Delhi. It documents predicament of these small birds which are fast losing this war against the rapid urbanization, architectural evolution, increasing pollution and the rise of bigger predators.

This was followed by a panel discussion moderated by **Mr. Ravi Agarwal** (Director, Toxics Link). The panelist included eminent speakers like, **Dr. Surya Prakash** (School of Life Sciences, JNU Member of BNHS, Delhi Birds, Butterfly India and Indian Wildlife Club), **Dr. Koustubh Sharma** (Senior Regional Ecologist-Snow Leopard Trust, Research Associate, Nature Conservation Foundation & Co-investigator, BNHS-Citizen Sparrow Project) and **Dr. Neeraj Khera** (Technical Expert – Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)).



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**Dr. Surya Prakash** shared his childhood memories when trees at his residence housed huge number of sparrows and he could see them hopping all around but the number has dropped significantly. Despite the rapid decline in the species there is no scientific documentation and data available in the country. He pointed that in the recent years the sparrow population has dwindled by almost 50 per cent, with a major decrease seen in Andhra Pradesh where the population declined by 80 per cent; 20 per cent in Kerala and Gujarat, while there is no information about the numbers in Delhi and Bangalore., which is an alarming trend. He further noted that in 2002 Sparrows were included in the red data list of threatened species included by the IUCN.



Elaborating on the causes behind the disappearance of the species Dr. Parkas enumerated that changing urban lifestyles, architectural designs, proliferation of urban predators; climate changes, use of banned insecticides, increasing pollution as the key factors leading to the decline. He briefed that the insects and worms like caterpillars comprise the major diet of these birds and serve as a protein supplement particularly during the early stages of their life. However, the city is losing its microhabitat like lawns and ornamental plants while the plantation of exotic plants is increasing which do not support these insects and worms. Also the widespread use of chemical pesticides is killing these soft bodied insects.

He further expressed concern on the lack of nesting space for these birds across the city and attributed it to rapid urbanization and architectural evolution. He said that the sparrows are the birds which live within the human habitat which today offers no nesting space to these small birds.

He recommended that the kitchen waste could be transferred into bio-manure and the decomposition would help in the development of the microbes that these birds feed on. He further said that attempts should be made to sensitize the citizens at large as human beings themselves are responsible for dwindling sparrows. He urged for the need of appropriate scientific monitoring and documentation.



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**Dr. Neeraj** elaborated on her work on sparrows how she started taking birds as an indicator of the urban eco system. She took through the ecological reasons of why one should be concerned about the house sparrows. She pointed that in the urban eco system today has the connotation a very high intensive development area which in turn is adversely affecting the urban eco system.

Briefing on the imbalance in the urban ecosystem Dr. Neeraj pointed the ecological reasons behind disappearing species and said that there is a need to balance conservation in the urban areas through intensive management of green spaces. She briefed that rapidly developing area with increasing population pressure; changing environmental conditions; Shrinking and deteriorating greens and water bodies are posing grave threat to the species.



Shedding light on the urban green spaces the city presently has she said that biodiversity is the backbone of the ecosystem and there is a need to balance the urban eco systems by building and intensive management of green spaces like the urban parks and gardens. She pointed that the city has 15,000-20,000 green spaces, however due to their small size they are unable to sustain habitat diversity and provide ecological services. She suggested the need to Inter-connect these small ecosystems.

She further briefed that the common bird population and tree health are ideal ecological indicators on the planet. Birds are sensitive and react to the smallest changes in the ecosystem. An unusual change in bird population or tree health will provide an early-warning help in taking corrective actions towards the urban ecosystem management. Echoing the concerns raised by Dr.Praksh she said that disappearance of sparrows has merely evoked some nostalgia, with no comprehensive surveys or studies to explore the causes behind their possible extinction.

She pointed that in past ten years the major focus has been on planting trees while the native shrub, thorny bushes, herb and grass cover that provide safe nesting havens for these birds has somehow taken a backseat. Even if these are present they are highly manicured leading to a decrease in insects and worms that provides nourishment to these birds.



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Dr. Neeraj also expressed grave concern on the growing population of Rock Pigeons which are encroaching on the nesting space and feeding spaces small birds like sparrows. She further pointed that there have been studies that prove that rock pigeons carry bacterial pathogens and human have been affected by them and that there is a need to control their accelerating population.

Touching on the global scenario of the bird she said that urban bird population of sparrows is also declining in countries like Belgium, Canada, Germany, Netherlands, Spain, and the UK. While in Delhi the population of the house sparrows is not below the critical limit and thus can be maintained. Dwelling on the policy front she said that integrated town planning is the only option



for ensuring connecting green belts which in turn will provide rich biodiversity and habitat for the species. Also, there is a need to facilitate and encourage involvement of citizens to save the endangered bird.

This was followed by a presentation by **Dr. Koustubh Sharma** where he dwelt on the interesting relationship birds and human beings share. He said that sparrows play a significant role in the ecology and are closely attached to the human habitat and fondness. He also touched on how birds and animals represent changes in the environment and said that the sparrows are the snow leopards of the urban eco system. Just as snow leopards are considered indicators of climate and environmental changes at higher altitudes, sparrows are indicators of such changes in the urban ecosystem and their decline indicates that something is wrong

with the eco system.

He also shared that in ancient times the miners used to carry a bird named 'canary' in small wooden or metal cages. The bird is sensitive to the level of changes in Oxygen and to toxic gases in the atmosphere. Any sign of distress from the canary indicated unsafe conditions underground. The canary used to be the first to mark any variation in the level of oxygen and would stop singing and thus served as indicator.

He further pointed that in the past ten years the population of vultures has also dropped significantly and we find just 1 % of the vultures that were there. The concern assumes significance



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as there is no detailed research or understanding on the disappearing birds and we are merely speculating about the problems.

However in countries like England there is a systematic and exhaustive monitoring program. While India lacks any large scale systematic community that puts the information together. Dr. Sharma pointed that it was in this context that the concept of citizen scientist came up through the platform of Citizen Sparrows.

He further elaborated on the project 'Citizen Sparrows' and its initiatives. He briefed that the initiative provides a platform where people from across the country share their experience- on where do they still see sparrows and where they don't and what has changed, if at all. The objective of Citizen Sparrows is to know the status of house sparrow across the country; it also seeks to generate awareness and create a constituency for all common birds.



The discussion was followed by a question and answer session where some pertinent questions were raised -on the increasing population of rock pigeons and the growing trend of feeding them and the food intake of the sparrows. There were questions on *Maiyna* and pigeons and their nesting nature; the effect of radiation on the vulnerable bird. Also questions were raised on the kind of information available in the public realm on disappearing sparrows and it was suggested that science should be made east simple and explainable for common man. There were concerns on the need to integrate information and bring it forth to a much larger audience.

Some significant concerns were raised on the food intake of the sparrows which feed on worms and insects while due to ecological imbalance is hardly available to these birds. There was an observation that rich biodiversity should be provided for sparrows to thrive. The audience also expressed apprehension on the disproportionate increase of some species. The audience further recommended the need to spread awareness through the platform of citizen sparrows and the need to publicize it further. The children, today hardly know about sparrows and have hardly seen the



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bird hence there is a need to sensitize the generation on the issue and get them involved in some meaningful activity. The audience actively participated in the discussion and several substantial inputs were made.

**Mr. Ravi Agarwal** in his closing remark thanked all the participants and the panelist .Wrapping up the session he shared that two decade ago a complete diversity birds could be seen be it green legged yellow pigeons, sparrows, Owls, *Maiyanas*, *Bulbul*, Gray hornbills etc. which were abundant; however these birds are no longer seen. There is a complete



shift in biodiversity which in turn has reduced the breeding and nesting sites in the cities. There is a lot that needs to be done and citizen participation and involvement could make huge difference.

The lecture saw an overwhelming response. More than 50 participants participated in the lecture which included representatives from Bombay Natural History Society (BNHS), Educational and Research Institutes, Universities, Media houses, film makers and Civil Societies.

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### **Media Coverage**

#### **Disappearing sparrows: Common bird goes uncommon**

**Source: One world South Asia**, <http://southasia.oneworld.net/todaysheadlines/disappearing-sparrow-common-bird-goes-uncommon>

**Date: 10/05/2012**

Sparrow population continues to decline in urban areas of India. Lack of research and understanding has aggravated the rate of their disappearance. These birds being an indicator of environmental health, needs to be saved before they become extinct.

New Delhi: Gone are days when house sparrows were the most common birds amongst bird species in India. The chirpy sounds made by these small birds are rarely heard today; and their absence, even though tiny, is increasingly becoming noticeable. Due to decrease in numbers, a bird as



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common as the sparrow was included by the IUCN in its Red Data List of threatened species in 2002 alongside the glamorous snow leopard, tiger and red panda.

How and why did these common birds that were once regarded as dominant bird species, suddenly disappear? This is a question frequently asked by ornithologists, researchers, scientists, and bird lovers. At a discussion, disappearing sparrows, organized by Toxics Link in collaboration with India International Centre, in Delhi on Tuesday, experts discussed the reasons for the decline in the sparrow population.

The destruction of wetland bird areas, loss of shrub vegetation coupled with reduction in potential breeding sites, has accelerated the rate of decline in the sparrow population in India. But the major reason for this decline in their number is the scarcity of insects and grains which serve as protein supplements for the young ones of sparrows. The presence of anti knocking agents like lead in petrol is known to cause deadly poisoning in birds.

### **Sparrows as an indicator of change**

Since sparrows are sensitive to changes in the environment, they serve as an important bio-indicator for a healthy urban ecosystem, indirectly indicating human health, and their decline today has started resulting in increasing diseases among the people, said Neeraj Khera, Technical Expert – Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ). She added that the growing numbers of rock pigeons has created an imbalance among the species and they now dominate the bird population.

People in urban areas are often seen feeding grains to rock pigeons. Due to availability of plenty food which gives these pigeons bliss of food security has resulted in over-explosion of their population. These pigeons are now occupying the nesting spaces of sparrows, as a result of which the sparrow population has drastically reduced in urban areas in the country.

Calling sparrows a star species, Koustubh Sharma, Research Associate, Nature Conservation Foundation & Co-investigator, BNHS-Citizen Sparrow Project, noted that in the same way as snow leopards are considered indicators of climate and environmental changes at higher altitudes, sparrows are indicators of such changes in the urban ecosystem; and hence can be regarded as the snow leopard of the urban ecosystem.

### **Evidence of absence or absence of evidence**

Sharma added that due to lack of research and understanding, the reasons for the vanishing of sparrows are still unknown. He added: “We still lack a large scale systematic community that pools in information on species.” Appreciating the efforts made by the UK in monitoring bird species, he said that through its systematic annual bird monitoring programme, the country has been able to generate 10 times more effective and efficient data than any other bigger country. The UK’s bird



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monitoring programme has shown that the decline in the sparrow population in rural and urban areas has been about 50 and 60 per cent respectively.

In the same way as snow leopards are considered indicators of climate and environmental changes at higher altitudes, sparrows are indicators of such changes in the urban ecosystem; and hence can be regarded as the snow leopard of the urban ecosystem.

Khera dwelt on the fact that Delhi has 15,000-20,000 green spaces today, but because of their smaller sizes, these are unable to support larger habitat diversity and provide ecological services. Inter-connecting of such small patches is needed to reintroduce the lost habitat, she added.

"Though sparrows have not declined below the threshold limit in Delhi, therefore we can still afford to bring them back through proper conservation practices", noted Khera.

Dwelling on statistics, Surya Prakash, scientific officer at the School of Life Sciences, JNU, pointed out that during the past 25 years, the sparrow population has dwindled by almost 50 per cent, with a major decrease seen in Andhra Pradesh where the population declined by 80 per cent. Changing human lifestyles, climate change, microwave pollution, human induced changes in species' micro-habitat are some of the reasons for this drop in their numbers, added Prakash.

### **Sensitising citizens for protecting sparrows**

Recognising the importance of peoples' participation in conservation, Sharma highlighted the Citizen Sparrow Project that aims at creating a constituency for sparrows among the citizens in India. A joint initiative by the Bombay Natural History Society and Ministry of Environment and Forests, this project is inviting inputs by citizens on the sightings of sparrows. The project ultimately will help in estimating the exact reason for the reduction in the sparrow population. The program so far has received around 7461 contributions from 4701 people at 6019 locations in India.

The discussion, moderated by Ravi Aggarwal, Director, Toxic Links, also had a film screening. Directed by Nutan Manmohan, the film Beyond the Mirage shows the battle over food and habitat among the small and big birds that throng Delhi. It documents the predicament of smaller birds like sparrows, which are fast losing this war against their big brethren.

These birds, being an indicator of environmental health, need to be saved before they can be seen only in books or on the internet.

### **Sparrow decline spells trouble**

<http://www.deccanherald.com/content/248365/sparrow-decline-spells-trouble.html>

**Source: Deccan Herald**





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**Dated: May 9, 2012.**

House sparrows are an indicator of the environmental health of an area, and their disappearance could be linked to a rise in infectious diseases and ecological change, say experts.

These common birds have been edged out of Delhi homes by changes in architecture and agriculture as well as by urban predators like crows and cats, top ecologists said at the India International Centre here on Tuesday at a public lecture to discuss the mystery of the missing sparrows.

“The sparrows are still there, but changes in our lifestyle, housing architecture, agricultural patterns and increasing urban predators such as crows and cats have forced them out of many areas where they were commonly seen earlier,” bird expert Surya Prakash said.

He added, “The lack of scientific data has also prevented experts from finding their actual status.” However, he agreed that the decline in numbers was a concern as it was a marker of deeper ecological changes in the city.

### **Chidiya chirps: In pursuit of the vanishing sparrows**

**Source: Sunday Guardian, <http://www.sunday-guardian.com/young-restless/chidiya-chirps-in-pursuit-of-the-vanishing-sparrows>**

**Date: 13/05/2012**

Thanks to urbanity and technology, house sparrows have been vanishing from cities over the past decade. But this little bird has sizeable fans following, who are on a mission to figure out why it has opted out of their company. Last week, at a screening of Nutan Manmohan's short film *Disappearing Sparrows* at the India International Centre, a small but passionate crowd turned up looking for answers to this strange 'abandonment'.

The film itself chalked out this phenomenon in Delhi, registering a decline in numbers of the species and attributing it to changes in lifestyle and architecture, use of unleaded petrol and pesticides. Over 25% bird species have become extinct in the past 2,000 years, the audience informed.

This is not to say that the sparrow is extinct, since it can still be found in pockets around the metropolis, particularly in Lutyens Delhi or Defence Colony. Also, there is practically no comprehensive study on this phenomenon, only a gathering of observations that has grown world-wide. A survey in London in 2002 showed that it had completely vanished from that city.



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The film screening was followed by a panel discussion, where Prof Surya Prakash at the School of Life Sciences, JNU, elaborated on the causes of this disappearance. "The house sparrow originated from the Mediterranean and spread out to Europe over the years. Its breeding habitat is within human society," he explained.

For Neeraj Khera, an ecologist with GIZ, human beings are not the only culprits. Another big bad villain is the rock pigeon that, by virtue of being bigger, has also encroached upon the sparrow's accommodative and feeding space. She also said that Delhi, being one of the greenest capitals of the world, cannot improve this situation until the preserved or cultivated ecosystems are linked with one another.

The sparrow's 'flight' is also a marker of larger ecological changes on the planet. "Birds are sensitive — they react to the smallest changes in the ecosystem," said Khera, who has been studying the sparrow's flight patterns to unearth any climate change indicators. But the sad fact remains that the *chidiya*'s disappearance has only triggered a wave of nostalgia so far, without any comprehensive surveys or studies to explore causes of its possible extinction being initiated. To remedy this, the Bombay Natural History Society has launched a nation-wide online survey called Citizen Sparrow till 31 May to track the bird's remaining perches. "Just because we don't see it nesting in our balconies or flying into our courtyards and chirping its sweet song anymore, it doesn't mean that it is on the brink of extinction," cautions Kaustubh Sharma, member of the Snow Leopard Trust and officer at Citizen Sparrow.

Whatever results they come out with, their aim to create a constituency for the sparrow's return and a stronger co-habitational environment would be closer to fulfillment.

### **Sparrow decline indicates serious environmental change: Experts**

**Source: IANS,**

[http://twocircles.net/2012may09/sparrow\\_decline\\_indicates\\_serious\\_environmental\\_change\\_experts.html](http://twocircles.net/2012may09/sparrow_decline_indicates_serious_environmental_change_experts.html)

**Dated: 9/05/2012**

New Delhi: House sparrows are an indicator of the environmental health of an area, and their disappearance could be linked to a rise in infectious diseases and ecological change, say experts.



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These common birds have been edged out of Delhi homes by changes in architecture and agriculture as well as urban predators like crows and cats, some top ecologists said at the India International Centre here Tuesday at a public lecture to discuss the mystery of the missing sparrows.

Starting the discussion after a small clip on the sparrow's declining habitat by filmmaker Nutan Manmohan was shown, bird expert Surya Prakash said the birds had not vanished, but had been pushed out of their regular haunts.

"The sparrows are still there, but changes in our lifestyle, housing architecture, agricultural patterns and increasing urban predators such as crows and cats have forced them out of many areas where they were commonly seen earlier," he said.

Prakash, a professor at Jawaharlal Nehru University's school of life sciences, said: "The lack of scientific data has also prevented experts from finding their actual status."

However, he agreed that the decline in numbers was a concern as it was a marker of deeper ecological changes in the city.

Fellow speaker Neeraj Khera agreed, claiming the declining numbers of sparrows could actually be used as a pointer to more direct problems such as an increase in infectious diseases.

"In the areas where the sparrows have declined, rock pigeons have increased drastically. And pigeon's excreta is a confirmed carrier of disease causing bacteria," said Khera, a technical expert and ecological researcher.

"Although not linked directly, the decline in bird population and tree health can be used as an indicator of the environmental health of a region," she added.

Ecologist Koustubh Sharma said in Britain, the declining yard birds, which include house sparrows, was one of the 15 critical indicators of the quality of life in any area.

"Despite their importance, birds like the house sparrow are often neglected by even environmentalists due to their apparent commonness," he claimed.

Citing the absence of large-scale community-based data regarding house sparrows and other common birds in the country, Sharma claimed that a new citizen-scientist project website, [www.citizensparrow.in](http://www.citizensparrow.in), had been launched in April which focuses on the issue.

"Through this website, we aim at utilizing the vast reach of the internet in capturing data about sparrows and their numbers from across the country," he said.



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Sharma added that besides generating useful data, the website also served as a tool to generate awareness among the public about sparrows and said there could be progress only if there were focused studies on these changes in sparrow population and the reasons behind them.



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## Environment and Health Public Lecture Series

Toxics Link and India International Centre cordially invites you to a film screening and panel discussion on

### "Disappearing Sparrows"

The common sparrow, which was ubiquitously seen in our cities, is now increasingly rare. One could not open a door leading to a garden without a sparrow instantly flying into the room. Alongside, over the years, the absence of common bird species has become increasingly noticeable. Does the 'loss' of this and other birds we once took for granted, a sign of other changes in our environment?

Toxics Link invites you to the film screening and panel discussion in an attempt to understand this question. The film "Sparrow" directed by Nutan Manmohan, (produced by PSBT), examines the ensuring battle for food and habitat in Delhi's among the small and big birds that throng the city and documents the predicament of smaller birds, like sparrows, which are fast losing this war against bigger predators.

#### **Program:**

"Sparrow", a film by Nutan Manmohan (Duration 15 minutes)

#### **Panel discussion:**

#### **Speakers:**

- **Dr. Surya Prakash**  
(School of Life Sciences, JNU  
Member of BNHS, Delhibirds, ButterflyIndia and Indian Wildlife Club)
- **Dr. Koustubh Sharma**  
(Senior Regional Ecologist-Snow Leopard Trust,  
Research Associate, Nature Conservation Foundation &  
Co-investigator, BNHS-Citizen Sparrow Project)
- **Dr. Neeraj Khara**  
(Technical Expert – *Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ)*  
Extensive work on urban biodiversity & specifically population of house sparrow in Delhi)

Moderated by Ravi Agarwal, (Director, Toxics Link)

**Venue :** Conference Room I, India International Centre, Lodhi Road, New Delhi

**Date :** Tuesday, May 08, 2012 **Time:** 6:30 pm

**RSVP :** Rambha Tripathy, [rambha@toxicslink.org](mailto:rambha@toxicslink.org)

**Ph:** +91-11- 24320711, 24328006

Toxics Link

H-2, Jungpura Extension, New Delhi-110014, [www.toxicslink.org](http://www.toxicslink.org)



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