

anvesha



EXHIBIT

Wildlife Week

Deception in Disguise

In a world where survival and propagation of life are great challenges, plants have evolved unique ways of pollination to ensure the continuity of their species. While most plants pollinated by insects or birds reward their pollinators with pollen grains and nectar, some resort to more deceptive tactics. Mimicry is one such intriguing mechanism used by certain orchids to allure pollinators.

A group of orchids belonging to the genus *Ophrys* goes about deceiving its pollinators by mimicking the insects themselves. Generally, the labellum (lip) of such flowers are modified to resemble a female bee/wasp. Confused males visit the flower and end up pollinating it through their copulatory and precopulatory movements. Such a type of mimicry, which leads to pseudocopulation, is known as Pouyanian mimicry. The hammer orchid is infamous for its visual and olfactory mimics of the female wasp.

Some female bees secrete odoriferous pheromones to initiate search behaviour in their male counterparts.

Some species of the genus *Ophrys* give off a similar odour, and in a few unusual cases, these flowers are more successful in attracting the male than females themselves! Successful pollination is accomplished by a complex interplay of size, odour, and colour of the flower.

These orchids are the quintessence of the adage, 'Appearances can be deceptive.'

J. Vishwathiga
Batch '19

Sources:

1. <https://www.britannica.com/science/mimicry/Orcidhs>
2. https://en.wikipedia.org/wiki/Mimicry_in_plants#Pouyannian

Image Source

Watch the Orchid in Action



Narrow-Lipped Hammer Orchid

Life on Air: A Review

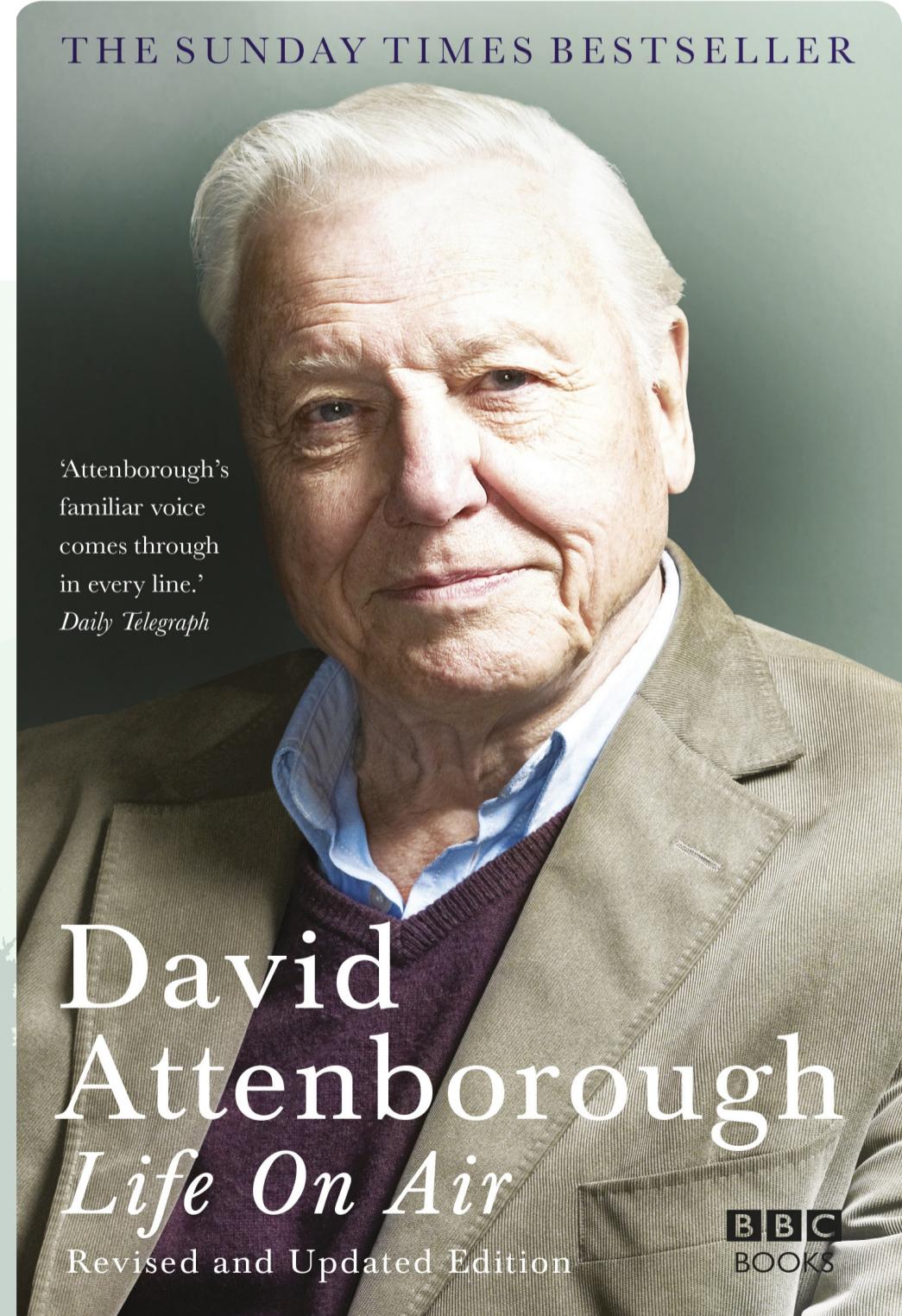
In some strange serendipitous way, a few weeks before Wildlife Week began here at IISER Thiruvananthapuram, a friend of mine lent me a copy of *Life on Air: Memoirs of a Broadcaster*. I usually shy away from autobiographies; my instinctive reaction to most is to gaze at the pages and wonder how someone's life could possibly be exciting and eventful enough to write an entire book about it. However, the person in question is Sir David Attenborough, the beloved naturalist and broadcaster, and doubts were soon allayed. Attenborough's life is nothing short of spectacular, and his autobiography does it justice by recounting his incredible journey.

David Attenborough started his career with the Talks (factual broadcasting) Department of the BBC's fledgling television services. He produced and hosted many programs through the 1950s, the most notable being *Zoo Quest*, where he visited different places to film and collect animals for the London Zoo. After a brief hiatus to pursue a postgraduate degree in social anthropology, he returned to the BBC and took

up an administrative role. He resigned in 1973 to become a full-time freelance filmmaker, and went on to create the famous *Life* series.

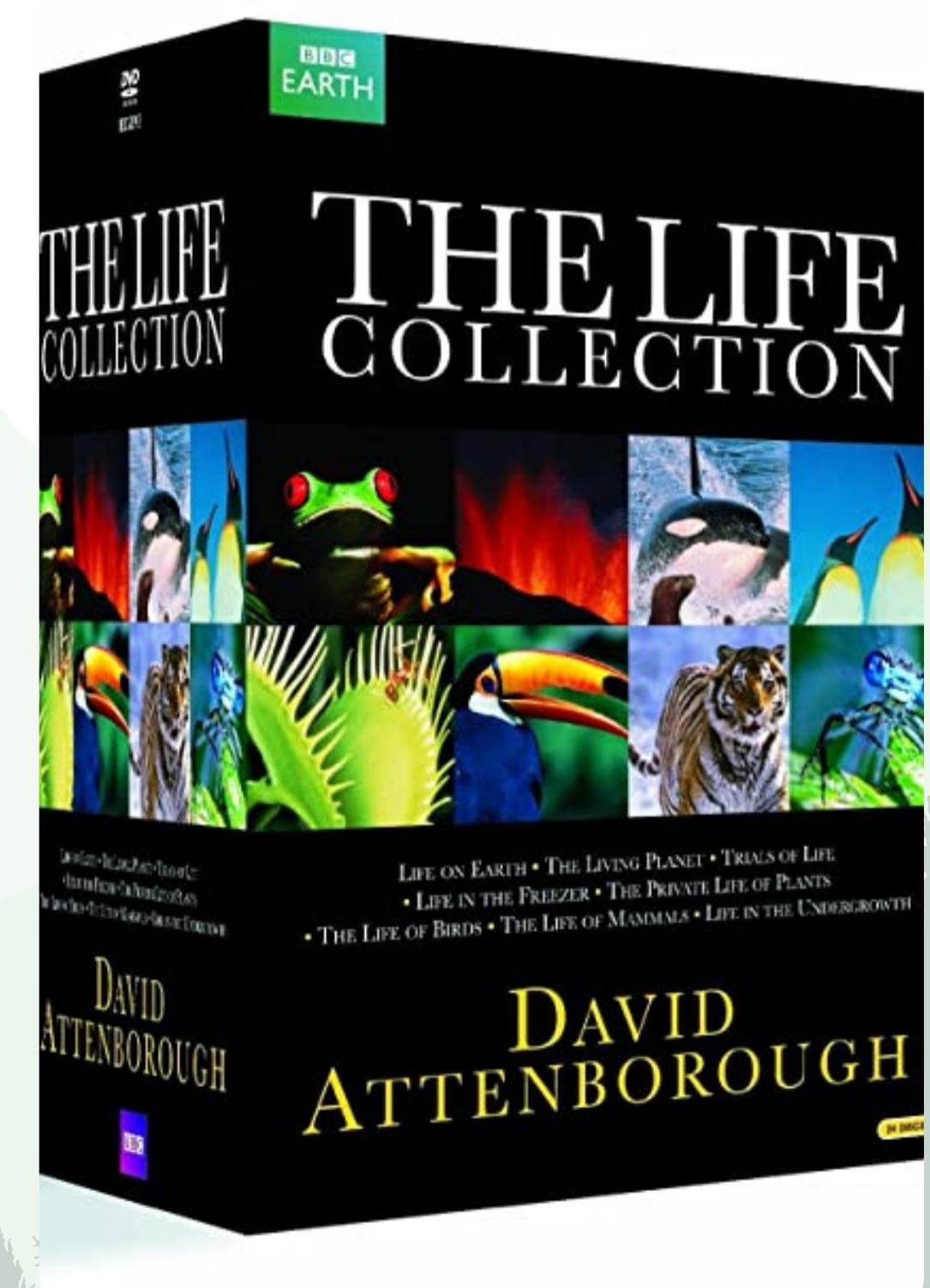
This book feels less like a dry memoir and more like a fantastical adventure book, where you watch him hike through dense jungles, ride in hot deserts or sail through tropical waters. Brimming with humorous anecdotes of his encounters with animals, such as the time the bush babies he collected would urinate all over his living room (much to his wife's dismay), or when he trolled radio audiences on April Fool's Day, this book made me laugh on multiple occasions. It also presents the reader with an opportunity to learn more about diverse life forms and unique cultures from across the globe. This autobiography is as charming, warm, and brilliant as its author.

Ira Zibbu
Batch '19



[Source](#)

Exhibit A



[Source](#)

Flying Colours

'In all things of nature, there is something of the marvelous.' – Aristotle.

On the occasion of ESI Wildlife Week 2020, on March 6th there was an excellent talk given by a PhD student, Sudeep R, who is an active ecologist and an avid bird watcher. The talk, titled 'The Flying Colours', was very intriguing. He started off by narrating his first bird-watching experience when he encountered an Indian paradise flycatcher, which he at that young age described as a robin bird with a white tail.

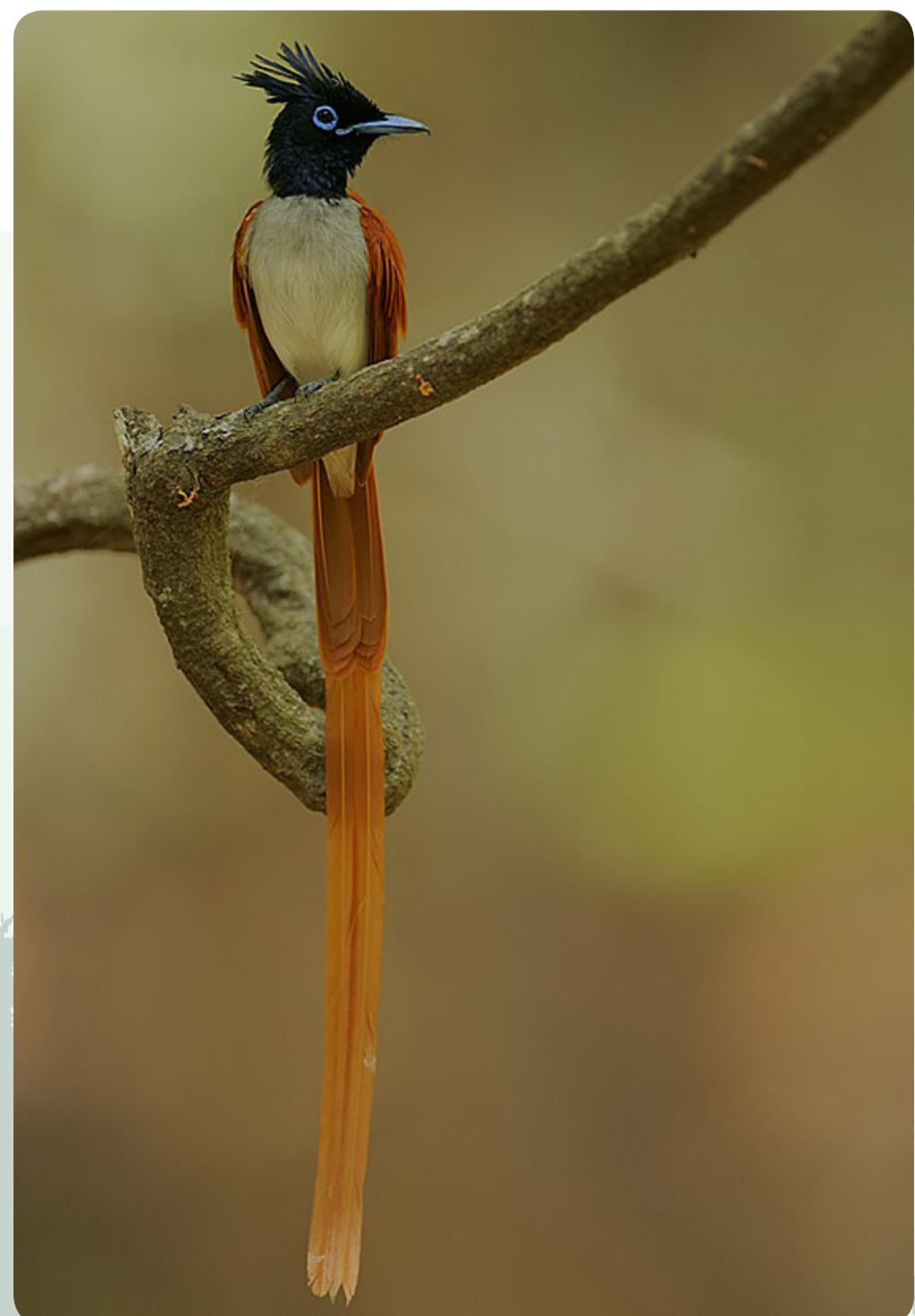
He gave a brief description of around 15 different kinds of birds, most of which are found on our campus. He explained the story behind the presence of the striking features of various birds and why they're crucial. Their calls were also played, which gave life to the pictures displayed.

The black drongo's cleverly executed predation really interested everyone. A real-time video was shown in which a

drongo saves meerkats who are feeding on worms from their predator, an eagle, by giving a warning call. Upon hearing this, all the meerkats drop their worms and run into their hideouts. Feeling safe, the meerkats come out and resume feeding on the worms. Using this tactic, the drongo makes a second warning call. However, this time it is a fake call, and the meerkats drop their worms again and go into hiding. Our clever drongo can now feast on these dropped worms thanks to its masterplan!

Like these, he explained many exciting stories about why various birds have their unique features. It was very intriguing and interesting. Some of the mentioned birds were once found on our campus, but aren't anymore. Therefore, it's our responsibility to preserve their environment, take an interest in the unique bird species present around us, understand them and keep them safe.

Ananya Aravind
Batch '19



Asian Paradise Flycatcher ([source](#))



Black Drongo ([source](#))

Remembering The Birdman of India'

A 10-year-old hunting fanatic shot down a bird. With a tender heart and a curious mind, he ran and picked it up. He thought it was a house sparrow, but it had a different yellowish shade on the throat. His uncle, Amiruddin, unable to answer all the questions asked by the 10-year old regarding the bird, took him to W. S. Milliard, the then secretary of the Bombay Natural History Society. It was this incident that was the turning point in his life. Salim Ali was born in Bombay. Orphaned at a young age, he and his siblings were taken care of by his uncle, Amiruddin. He attended primary school in Bombay and then St. Xavier's College, Bombay. But he dropped out soon and left for Burma (now Myanmar). After 7 years he returned to complete his studies and managed to get a job in BNHS. He made his way through the tough working conditions until he took charge of BNHS.

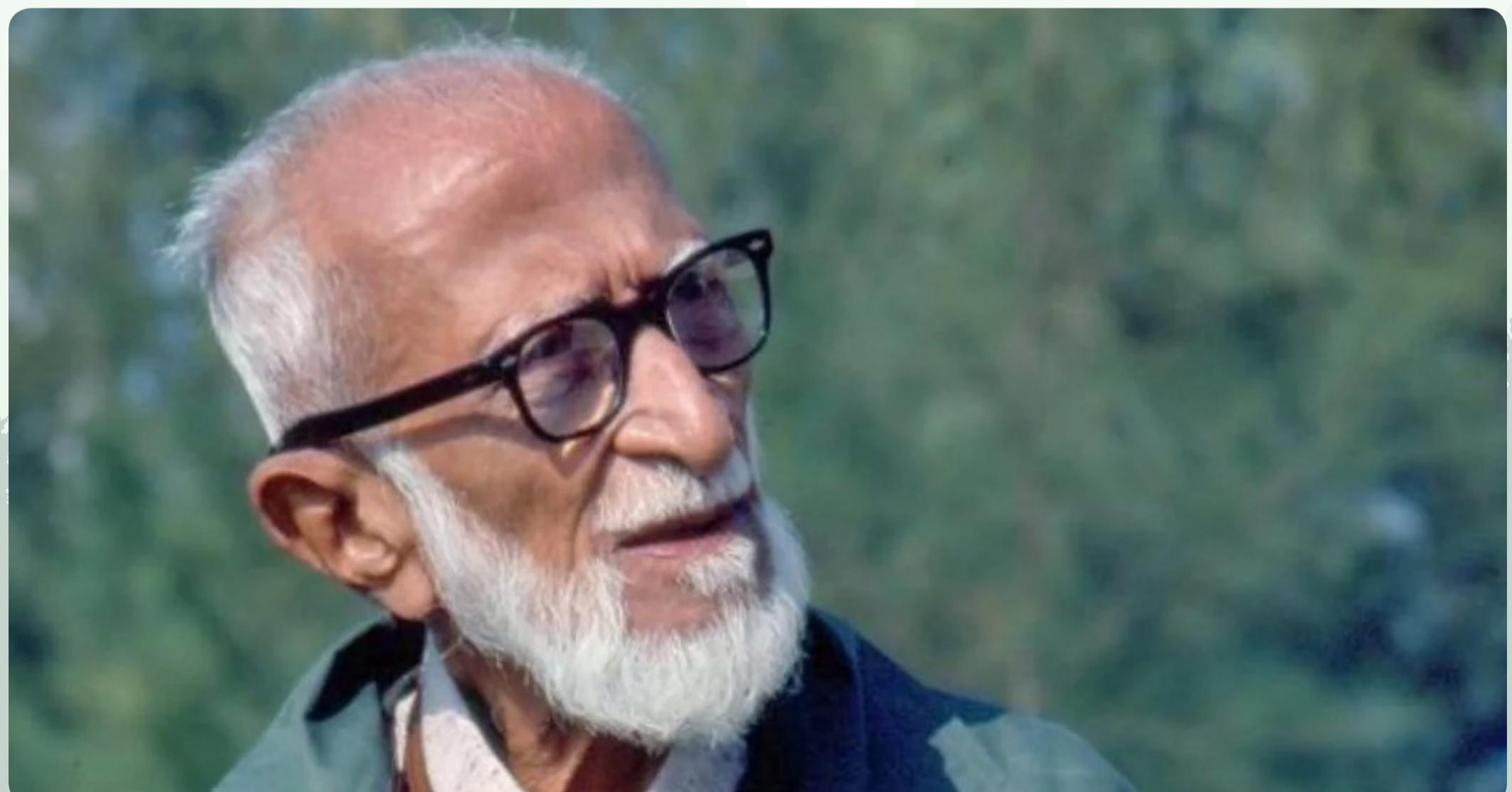
Salim Ali's contribution to the field of Indian ornithology is immense, especially when ornithology was an untouched branch in India. The Silent Valley National Park and Bharatpur Bird Sanctuary exist only due to his dedication and hard work. Despite having no wings of his own, he flew around the country, discovering new bird species and writing books about birds: 'The Books of Indian Birds', 'Birds of Kerala' and his autobiography, 'The Fall of the Sparrow'. His passion and love for birds were unceasing. No mountain, no weather could stop him from chasing and observing birds with unlimited energy. With his hawk-like eyes and a pair of binoculars, he would catch every bird. At the age of 90, he finally flew away along with the yellow-throated sparrow he shot when he was 10 years old.

Salim Ali spent half of his life bird watching and working in the field of ornithology. His dreams and vision for the future of ornithology in India are unmatched. He set a standard and an example for future bird watchers. Regardless of his awards and the wildlife sanctuaries in his name, he was very down to earth, making him the best role model. As an amateur birder, I look up to him. In those days when he had no access to any birding manual, he made one; when there were no bird behavioural studies, he studied them and published papers on them, this is what pure dedication and passion look like, and he wanted to see more of it. He started small, just with a sparrow, but he did that with utmost interest and joy.

Don't be disappointed that you only got to see a crow today; keep searching, you might get a peacock soon. Never give up, try harder, go deeper, run faster till you find the source of that melodious call, and when you do find it, let the beauty seep in. Learn to appreciate birds, fall in love with their unique and extravagant plumage, find grace in their movements. These are some of the things which I have learnt from the works of Salim Ali. He has done his part by establishing a strong foundation for ornithology in India and now we have to do our part by continuing his work of ornithology and conservation, and at the same time, inculcating the love for birds.

'I suppose, I've done my bit, it's now up to you younger people.' – Salim Ali.

Vidyarashmi Hanehalli
Batch '19



The ESI Trek to Vazhvanthol

The morning of March 7th saw much activity at the main gate of IISER Trivandrum; over 35 people had gathered prior to the reporting time. After all, in this scorching summer, the idea of a trek in the wee morning hours to the beautiful Vazhvanthol falls through a dense forest was most desirable. As soon as we set out, by sheer coincidence, the gods of KSRTC sent us a bus that carried us all the way to the entry of the falls, saving us several kilometres' worth of walking. Upon arrival, we spent the next half an hour dividing ourselves into groups while the ESI members handled the financial affairs with the clerk at the gate. Each group was given a pair of binoculars and a few words of caution and advice before we set out into the forest. The birders among us identified several, if not all, birds by their calls and then the rest of us spotted them with our binoculars. The greater racket-tailed drongo, green bee-eater, Nilgiri flowerpecker, Malabar trogon, Malabar whistling thrush, etc., are a few among the many birds that we saw. We walked for several kilometres while we were guided and watched over by our guides, during which they mentioned that a herd of wild elephants roamed these parts. That seemed to liven up everyone as the wanderers fell back into order with everyone else. Not long after, we found elephant dung scattered along our path; yet we kept walking, taking in the stunning scenery, but always

keeping an eye out for anything that resembled an elephant. A well-deserved break was taken as we reached a gentle stream. The cool water washed away our sweat and weariness, and the irresistible landscape soon compelled us to change the break into a photoshoot session. Here we split into two, half of us who would climb on to reach the main falls and the other half, who would stay at the stream resting. It is safe to say that the group that went up to the falls was rewarded with a sight like no other and some were drenched when they got back to us. During our walk back, I noticed that all of us were smiling from cheek to cheek. The excursion hadn't simply been about the wildlife and the waterfalls, it also brought all of those people together. Lots of dialogue between batches, lots of jokes thrown around, new friendships and enthusiasts meeting enthusiasts. It seemed to me as though this was the true goal of such excursions. As we walked back, I thought of how fortunate we were to have this great team who organised this for us. ESI has done an excellent job thus far and I am positive they will continue to do so in the future.

Adarsh Karekkat
Batch '17



Too Evolved for Tinder

Peculiar Mating Behaviours Seen in the Animal Kingdom

Wahnes's Parotia

'Oohh... My! My! You are such a gentleman!'

The birds of paradise have the most peculiar evolutionary features, unmatched by any other species on Earth. One such bird is the Wahnes's parotia. The male begins his dance with a low bow to the female and then transcends into a ballerina with a colourful tutu. The female judges him based on his dancing and the colour of his plumage. If she is impressed with the artistic performance, she agrees to mate with him!

[Watch it here](#)

[Image source](#)



Gentoo Penguins

'Honk honk! You got me a present? A stone? Amazing, I love it!'

And that's all it takes to become mates for life. The males woo the females by gifting them a perfect stone found on the shore of the nesting ground, and if the female is impressed, they both "trumpet" skyward.

[Watch it here](#)

[Image source](#)

Skunks

'Damn! It's February already?! Time to start looking for the love of my life,' says the male skunk.

The male skunk starts roaming around looking for a female to mate with around February. Female skunks are very choosy; they may spray their suitors with a foul-smelling substance that quells his ardour and sends him off to find a more willing female. This results in the 'skunk smell' that wafts through the air on a warm spring night.

'Is that love in the air? Nah, just another disappointed male skunk.'

[Watch it here](#)

[Image source](#)



Great Bowerbird

'First date? Let me build her a bower!'

The male bowerbirds span the outskirts of the city looking for shiny items to decorate their bowers, which are usually: green glass, a plastic toy elephant and sometimes even a toy soldier. When a female pays a visit to his bower, he shows off his stuff and also gives her a tour around his bower. Jealousy doesn't leave these birds alone! If a male, while flying around spots a better bower, and if the owner of that bower isn't around, he will definitely destroy it. Serves you right!

[Watch it here](#)

[Image source](#)

King Cobra

'I thought more of you would show up, my pheromone is pretty mind-boggling,' she said. 'Uhhh . . . about that . . . ,' he said.

Early in the season, the female king cobras shed their skin, causing the pheromones to be released to attract the males from all over the thick rainforest. If there are more males, they usually fight for mating rights and the larger male might end up eating the other male king cobras!

[Watch it here](#)

[Image source](#)

Courtesy: BBC

Vidyareshmi Hanehalli
Batch '19



We hope you enjoyed this month's edition of Exhibit A!

If you are interested in contributing any content, artwork, or want your research featured here, please get in touch with us at:
anveshacontent@gmail.com

Send your suggestions to: <https://forms.gle/pBzJW7GSv7bC5r7RA>

Have any science-related questions you'd like answered? Send them to us and we'll get our best minds on it!

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