



Meet Dr. V. Shubhalaxmi

Entomologist, ecopreneur and author

After working for more than two decades at one of the oldest conservation and research organisations in the country, the Bombay Natural History Society (BNHS) as an educator, this 'bug lady' branched out to launch her own environmental consultancy firm and a non-governmental organisation. Widely acknowledged as the first woman in India to study moths, she speaks to Anirudh Nair about the inner purpose that drives her remarkable career.

WHEN DID YOU GET BITTEN BY THE NATURE BUG?

As my former boss at the BNHS, Dr. Asad Rahmani, often said, one must be bitten by the nature bug in childhood. And so, it was for me. I remember chasing dragonflies and butterflies as a child, especially the slow-flying grass jewels and grass yellows, in a huge, open ground with all varieties of wild plants in front of our house at C.G.S Colony in Mumbai's Antop Hill. When the ground became flooded during the monsoon, we would try to spot the odd snake among the fresh grass and make little pathways for ants to traverse. I feel that kind of exposure to nature at a very young age is what developed my love for biology.

HOW DID YOUR ASSOCIATION WITH THE BNHS BEGIN?

I was sure that I wanted to pursue something in the field of science, and back then it was a choice between either engineering or medicine. My hopes of becoming a doctor didn't bear fruit, and though many of my friends pursued Chemistry, I decided to follow the then less-trodden path of BSc. in Zoology. It was during this time that I signed up at the Society as a student member, began volunteering and visiting the library. Though I didn't have enough pocket money to go on BNHS-organised trips and had to take up odd jobs after my graduation, an innate passion took me back to the Society. Isaac Kehimkar, who was then the librarian at BNHS, encouraged me to come regularly for nature trails and walks. I was keen on being surrounded by people who discussed nature and wildlife all the time. I actively volunteered with the Society and when a vacancy for a post of an administrative assistant became available for a Conservation Education Centre (CEC) that was being established, I immediately applied. Though they were looking for a commerce graduate who would be well-versed with accounting, my prior experience working as a cashier at a branded jewellery shop, and volunteering with the Society, worked in my favour and landed me the job!

AND YOU WENT ON TO HEAD THE CEC 13 YEARS LATER!

After joining the BNHS in 1993, I was introduced to Naresh Chaturvedi, the curator at the time, who was also a post

graduate and doctorate guide. BNHS was the only institution in the city, which was offering a master's degree through research and I signed up for it. Going on nature walks with Isaac inevitably makes you fall in love with butterflies and I had almost chosen them as my study subject, when my guide, a butterfly expert himself, said I should study moths as very little is known about them. I heeded his advice and went on to study ecology of moths in the Sanjay Gandhi National Park (SGNP) for my masters and doctoral research. This helped me secure a position as an education officer at CEC in 1997. There were very few women working in conservation education then and I was fortunate to have the opportunity to pursue my passion as a profession. CEC became an open classroom for me. I surveyed the entire BNHS Nature Reserve on which the CEC was established, and it had a great impact on my understanding of natural history. Winning a Fulbright Fellowship in 2003 gave me the chance to learn and imbibe new ideas, which I was able to implement at the Centre after I returned from the United States. Conservation education programmes we launched such as Breakfast with Butterflies, Brunch with Birds, Tour with Trees, Bash with Bugs and Meal with Moths became extremely popular. We initiated volunteer-training programmes and launched the first online course in entomology in India. These events and programmes not only transformed the way CEC functioned, but also helped glamourise the natural world. I had the freedom to execute my ideas and loved my job.

WHEN DID YOU FIRST FEEL THE ITCH OF STARTING SOMETHING OF YOUR OWN?

In 2009, I went to study non-profit management at Boston University after I was chosen for the Hubert H. Humphrey Fellowship programme. On my return, I wanted to move beyond my role as an environmental educator. We were doing all kinds of nature education programmes at CEC, and there were limitations to upscaling them. I won the U.S. State Department's Alumni Innovation Engagement Fund for India in 2012, and I, along with four other



ABOVE Dr. Vaylure (second from right) with a cohort of Hubert Humphrey Fellows at Boston University. **FACING PAGE** The Bombay Natural History Society had a profound impact on this entomologist's understanding of natural history. She is seen here on one of her mothing expeditions in Bhutan.

fellows, trained about 150 individuals across India in non-profit organisational development. Back at the BNHS, I was looking for more challenges and complex projects. In 2014, the Government of India enacted the *Indian Companies Act*, which prescribed a mandatory corporate social responsibility spend of two per cent of average net profits for registered companies and I immediately thought it was a great opportunity for environmental NGOs. I tried to convince the BNHS to pursue it but was unsuccessful.

WAS THAT THE GENESIS OF LADYBIRD ENVIRONMENTAL CONSULTING?

I had been harbouring the thought of becoming an entrepreneur for two years, and the time felt right with the new law in place. I also knew that corporates might be reluctant to put their money on wildlife-related environmental projects, when there are so many human causes to be associated with. One of the reasons environmentalists are unable to generate funds is because we are unable to effectively demonstrate the tangible outcomes of our projects. The fact that environmental conservation activities do not yield immediate results does not help either. Having worked with corporates, I had a fair understanding of their attitudes and approach, and a good understanding of the non-profit sector with my fellowship training and experience with BNHS. I felt that I

could liaison successfully between these two sectors. My scientific knowledge and environmental experience helped to make Ladybird stand out. Integrity and authenticity are values we hold close at Ladybird. All the companies we work with are listed. I am yet to encounter a corporate that asked me to compromise or manipulate something for their benefit. I have realised that the perception that corporates will take over the execution of projects is largely a myth perpetrated by those who are not able to guide them efficiently.

When I established Ladybird in 2014, my intention was not to start an NGO or do any work similar to what I did at the BNHS. So we began specialising in the environmental corporate social responsibility sector. But soon, those who knew me, began expecting me to conduct nature education programmes as well.

IS THAT WHY YOU FOUNDED THE INATUREWATCH FOUNDATION?

Yes, people often complained that they missed walks organised by me and the online courses I conducted. I also felt that the culture of nature outreach programmes was lacking in the satellite city of Navi Mumbai, where I lived, and there was space for an organisation to fill that gap. But I didn't want Ladybird to get involved in everything, which is why I decided to start an NGO to specifically conduct nature outreach programmes.

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WHAT DO YOU ENJOY MOST ABOUT NATURE CONSERVATION EDUCATION?

I like to make people fall in love with nature and I feel my purpose is fulfilled when they do. I get immense pleasure when they tell me, "Oh, I didn't know this tree was so interesting or I never knew that this bug can do this." It gives me joy when they take these little lessons home and remember me when they see a bug. If I can transform people from being just casual observers into nature lovers, I think that is something.

IS THERE A GROWING INTEREST FOR NATURE WALKS AND PROGRAMMES?

When we began conducting nature walks, very few people turned up. We made an active effort to reach out through social media marketing, and now have a minimum attendance of 15 to 20 people for every walk. Some are regulars, who bring others with them, while some are curious newcomers. This interest can be multiplied manifold if environmental organisations make a conscious effort to create interest about nature-based activities, which is exactly why we received a tremendous response for our flamingo watch programme at the Thane Creek Flamingo Sanctuary. Urbanites are looking for varied experiences and in that sense, environmental programmes are competing with other events held over the weekend. Those who attend our walks often tell me that more than fauna sightings, it is the knowledge sharing, which they value. An increasing number of young parents now want their children to experience nature first hand and not fall victim to the mall culture. The iNaturewatch Foundation has been able to conduct events in Bengaluru, which has several nature groups, only because we were able to successfully reach out to people, who had little exposure to nature-based activities previously.

WHAT KIND OF ROLE DO YOU ENVISAGE FOR TECHNOLOGY IN CONSERVATION?

Technology-savvy conservation organisations have a competitive edge over others. Traditional nature education methods are changing. In fact, the first project that Ladybird undertook was the development of three mobile-

based applications iButterflies, iTrees, iNaturewatch Birds under iNaturewatch Urban Challenge, a citizen science programme, which allowed us to work with schools in Mumbai, New Delhi, Kolkata and Hyderabad to collect data on their city's flora and fauna. We also developed another app eForestrails-SGNP, which guided visitors to the park. It was while developing these apps that I first felt the need to establish the iNaturewatch Foundation, which could continue such projects and keep a record of all the collected data.

HOW DID THE COLLECTED DATA CONTRIBUTE TO CONSERVATION?

When we started the iNaturewatch Urban Challenge, our aim was to understand tree-flowering trends and bird migration patterns. We fed much of the data to portals such as India Biodiversity Portal and eBirds so that it is available in the public domain. We received a great response in the first year but lost momentum when funding stopped, and we couldn't provide incentives to the schools to collect data. Nonetheless, we were able to provide a free resource to citizens to help them identify the city's flora and fauna, without having to lug a heavy book on a nature trail!

Citizen science is one of my favourite domains, though I have not

been able to focus my energies on it. We have, however, submitted proposals for some projects, and are hoping that funds materialise. Citizen science empowers and enables the layperson to be part of research. It is still at a nascent stage in India. There is a need to provide citizen scientists with incentives and feedback to motivate and encourage them. It helps if these projects are structured well and are outcome-based and data is analysed properly.

ARE CONSERVATION NGOS OVER DEPENDENT ON FUNDING AGENCIES?

I feel that every organisation, whether an NGO or a private enterprise, should be making a profit. If a conservation NGO is receiving funds for a project, which aligns with its mission statement, then it should go ahead. But if it wants to execute a pet project, which might not necessarily receive funding, it must ensure that the project is self-sustainable. We recently submitted a proposal to train nature guides from the Forest Department for mangrove awareness programmes. In this case, the beneficiary is the Forest Department, we are the facilitators, but we can't afford to train them for free. We need to be remunerated and that's why we seek grants from agencies who believe in the project. In the case of the mobile app we developed for SGNP, the Forest



After taking an entrepreneurial plunge in 2014, Dr. Vaylure has helped establish several butterfly habitats, gardens and parks across India. She is seen here interacting with officials from the Kanpur Zoo for creating one such park.

COURTESY: DR. SHUBHALAXMI VAYLURE

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Department thought it was a great idea but it wasn't a priority for them. So, instead I presented it to the Mumbai Metropolitan Region – Environment Improvement Society, who liked and funded the project. There is nothing wrong in getting your ideas funded by funding agencies, because ultimately your objective is social good.

ARE INDIVIDUALS AND PRIVATE ORGANISATIONS MORE WILLING TODAY TO PAY FOR ENVIRONMENT-BASED ACTIVITIES?

I am a strong proponent of the idea, which is why we charge for almost all our programmes, unless it is supported by another organisation. But we ensure that the charges are not exorbitant, and people are gradually realising the value that we offer. There are certain sections of the society, who are not able to afford our services and we reach out to them through funding agencies. Even though I want to create butterfly gardens in Mumbai's municipal schools, I know that they wouldn't be able to maintain it once the funding period is over. So we try to look at other ways to provide our services.

YOUR BOOK *FIELD GUIDE TO INDIAN MOTHS* WAS RELEASED LAST MONTH...

It was after my doctoral research that I began collecting data for the book; so it's been 15 years in the making! Though taxonomy information on moths was available, information on their ecology was lacking when I was studying them. The book is therefore a result of my travels across India. The actual compilation began later, after I left the BNHS and had more time to spare. Considering that this is a first of its kind book on moths published in independent India; the last being *The Fauna of British India, Including Ceylon and Burma*, a series started in 1881 having five volumes on moths, I went the extra mile to ensure that there are no errors in species identification by verifying them with Dr. Roger Kendrick, Founder, Asian Lepidoptera Conservation Symposium series. Many of the common names of the 700-odd moth species described in the book have been coined by me.



Dr. Asad Rahmani (second from right), former director of the Bombay Natural History Society, releases Dr. Vaylure's book *Field Guide to Indian Moths* on May 1, 2018, in Mumbai.

HOW HAVE YOU TRIED TO BRING ATTENTION TO THE CONSERVATION STATUS OF LESSER-KNOWN FAUNA SUCH AS MOTHS, BUTTERFLIES, AND INSECTS?

My approach has always been to use education to create awareness and dispel myths. Fear of insects is a genetic problem, which is passed on from one generation to the other. Insects are our greatest competitors; they live where we live, eat what we eat, and in fact, they are very often after our blood. Those who have attended my programmes and online courses often confess that I have changed their perspective towards insects. We need to recognise that they are coexisting with us, be more compassionate and understand that there is no need to kill every insect that we see. Insects play a very important role as plant pollinators and are a major source of protein for the animal world. If they disappear or their numbers dwindle, it will gravely affect the balance of the natural world and cause conflict. When we were working to create habitats for pollinators across Mumbai through Ladybird, I chose to call them butterfly habitats, because they are beautiful and evoke positivity. And what we managed to do is create habitats not only for butterflies, but also for bees and birds and boost the biodiversity of these locations many times over.

Nobody knows if insects are going extinct before even being discovered. Entomology research today is solely focused on agricultural pests because that is where the money lies. We still know

very little about species such as moths and cicadas because they are difficult to observe and study. Nobody knows what the lifespan of a cicada is and we in India are still following a reference, which was published in a foreign journal years ago!

WHAT MESSAGE DO YOU HAVE FOR YOUNG BOYS AND GIRLS, WHO HOPE TO PURSUE CONSERVATION-RELATED CAREERS?

You must have a passion for nature and follow your heart. Money should not be a motivator because I have met so many burnt out professionals in the corporate world, who wish to do something more meaningful. It is essential that you acquire knowledge. Undertake small projects, field trips, internships, volunteer when you are in school and college. While a job is not a guarantee, I hope things will change in the next five years and the government will create more jobs in the environment sector. When the *Indian Companies Act* was enacted, corporates were required to hire environment officers, which was hitherto unimaginable. If you wish to become an entrepreneur, subject expertise is an absolute must.

Though most of the researchers studying moths in India are men, I am glad a few women have taken it up. I remember during my doctoral research, the then Field Director of SGNP asking me why I must roam about the forests at night studying moths, when I could study butterflies, during the day. "Being a girl, it doesn't suit you," he told me. "Well, someone's gotta do this unpleasant, night shift," I told him. 🦋