



INTERVIEW

WITH VENA KAPOOR

Vena Kapoor works with the Nature Conservation Foundation (NCF), Bangalore on nature education, outreach and public engagement. She is fascinated by the natural world and enjoys sharing this passion and wonderment with children and young adults. She has a soft corner for spiders – taking unsuspecting people for spider walks whenever possible.

Your current role

As a member of the Education and Public Engagement Programme Team at NCF, a large part of my work focuses on nature education, research and outreach. We help children and young adults develop an interest in and excitement for the natural world by designing nature- and wildlife-related educational resources and collaborative projects with educators. We also use a variety of citizen science initiatives to encourage people from different walks of life to collect scientific data on biodiversity. In addition, I work with colleagues across different organisations on certain aspects of conservation research and practice, and help organise conservation-related student conferences, workshops and outreach programmes. As a member of the executive board of NCF, I help in decision-making, planning and execution of long-term processes in the organisation.

A typical day at work

There are no typical days. Each day is different. On most days, I read, write, research or brainstorm with my colleagues on various aspects of our programmes. We travel on some days – meeting potential collaborators, educators and colleagues. On a slow day, you might see us bird- or tree-watching from our office balcony. This is often accompanied by animated discussions about our observations!

Rewards of your profession

The opportunity to observe, record, and understand the natural world – the incredibly diverse life forms that inhabit our backyards, forests and beyond. In spite of having worked in this field for many years, many aspects of the natural world continue to fill me with wonder and awe.

Also, the fact that I can afford to stare out of the window and observe the

drama of nature unfolding before us – indeed, this is very much a part of my job! Luckily, my office is in an area that still has some open spaces and lots of trees. I am, in fact, listening to the calls of at least three bird species as I am responding to these questions!

Important ethical aspects of your profession

I think of animal and human welfare as being equal and therefore an important ethical aspect of the work I do. Of course, the specific forms that these considerations take is often influenced by personal choice. For example, describing species taxonomically has traditionally required the collection of specimens. My discomfort with this requirement meant a conscious decision to avoid pursuing a career in taxonomy. Luckily, today, we have developed a variety of taxonomic tools that allow us to move beyond this requirement. Sometimes ethical considerations can be shaped by the collaborators and the institutions we work with. For example, all research projects at NCF go through a rigorous review process by an ethics

committee that includes some members from outside the organization.

Early experiences that shaped an interest in science

I was lucky to have a school with open spaces and many large mature trees; and a house with a garden and many plants. It also helped to have supportive parents and friends. For example, my parents did not discourage my fascination for snakes, even though they did not understand it. I, in fact, managed to sneak quite a few creatures into the house, including a rescued snake or two! But, I wish that our school library had been better-stocked. We had only a few books on animals, which I would grab as soon as I could. I still remember my excitement at finding a copy of Joy Adamson's 'Born Free' there. I was in Class VII, and completely besotted with this famous book's description of life in the wild – replaying details of its people, lions and the African landscape endlessly in my head. I also have a clear memory of the amusement on my

teacher's face when I asked to borrow the book a second time.

Decision to become a scientist

I've been in love with plants and animals for as long as I can remember. As a teenager, I would pore over every issue of a BBC Wildlife magazine sent over by a family friend. I would also watch countless episodes of Jacques-Cousteau's programme on marine and underwater life on Doordarshan. But, having never met a wildlife biologist or conservationist in real life, I did not think that it was possible to build a career in this field, especially in India. So, for the longest time, my fascination for wildlife remained limited to my interest in the books, magazines and documentaries I could get hold of. Then, one day, I spotted an advertisement by a Bangalore-based organization seeking volunteers interested in spreading awareness about wildlife and conservation. This was a turning point in my life. I was enrolled in an undergraduate programme in Commerce, but spent summer breaks



Fig. 1. A large part of my work focuses on nature education.

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volunteering with this organisation. A large part of my work involved interactions with children and teenagers through nature camps, talks and demonstrations at schools and colleges. For example, one live demonstration was aimed at showing children the difference between poisonous and non-poisonous snakes, and debunking some of the myths surrounding them. It was through these nature camps that I got my first real exposure to the outdoors. As my interactions with other people with similar interests increased, so did my exposure to Indian wildlife and conservation as a profession. It was around this time that I discovered the worlds and lives of Gerald Durrell, Jane Goodall, and Salim Ali through their extraordinary books. Reading their radical (and often humorous) conservation stories and descriptions of their fascinating adventures cemented my determination to pursue

wildlife conservation and ecology as a profession.

Choosing current area of work

I think life's come full circle! I started my journey in this field by taking kids out on nature camps. My research on spiders was, in large, encouraged by Dr. Vijayalakshmi and A.V Balasubramanian of the Centre for Indian Knowledge Systems in Chennai, who I worked with in my first job after undergraduation. The literature and image documentation on spiders that they had collected opened up a whole new world for me. Also, they encouraged me to spend time in the forests of the Western Ghats and meet wildlife researchers working there to get a sense of this field of work. This opportunity was my first experience and understanding of what it meant to do ecological research.

I went on to dabble with ecology and wildlife conservation research and practice for a few years. This included efforts to document urban wildlife, and help raise a nursery for rainforest seeds and saplings for a long-term rainforest restoration programme in the Western Ghats. For a while, I helped raise funds and manage the running of NCF. I also co-wrote a couple of children's books on nature. After a long hiatus from academics, a full scholarship from the The Ravi Sankaran Inlaks Foundation allowed me to pursue an MPhil in Conservation Leadership from the University of Cambridge, UK. The course helped me get on track with current conservation research and practice, and develop a wider understanding of the field. As part of my thesis, I did a short research project on how conservation organisations were using geographic co-location to improve their collaborative potential.

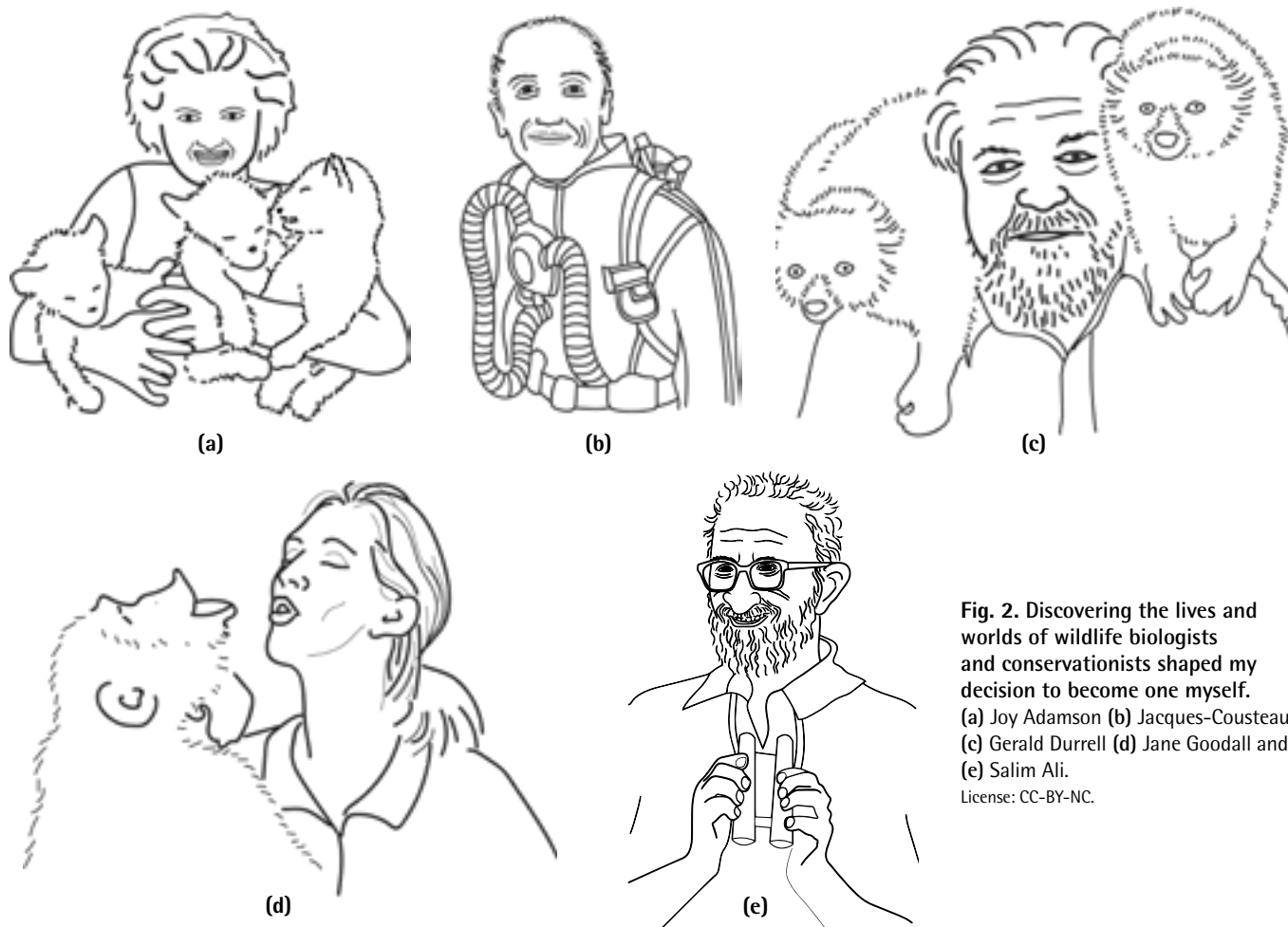


Fig. 2. Discovering the lives and worlds of wildlife biologists and conservationists shaped my decision to become one myself. (a) Joy Adamson (b) Jacques-Cousteau (c) Gerald Durrell (d) Jane Goodall and (e) Salim Ali.
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Fig. 3. My first job involved research on spiders from the Western Ghats.

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When I rejoined NCF, I was given the opportunity to engage with nature education and outreach full-time. I think that the multiple roles I've had the opportunity to work in during my career have helped me think out of the box and given me the ability to develop a variety of skill sets.

Misconceptions about 'being a scientist'

Often, the term 'scientist' conjures up images of a bespectacled person (usually a man!) in a white lab coat with beakers surrounding him. But, many scientists work outside lab-like settings. This is especially true in fields like ecology and conservation science, where our lab is the outdoors! This is where many of our observations and discoveries take

place. In some cases, however, biologists and ecologists may have to recreate situations and experiments in labs to mimic natural phenomena that are difficult or time-consuming to observe in the wild.

The other popular belief about scientists is that they have many educational degrees. While formal training in science is useful and important, I think an enquiry-based approach coupled with an aptitude for logical reasoning may be more essential to the practice of science.

Perspective on school science education

We need a complete overhaul of how science is perceived and taught in school. But, while we may have a long way to go to achieve this, I can see small and

positive changes in the way science is being taught in school classrooms today. These changes are largely the result of sustained efforts by many institutions and individuals pushing for a more hands-on and enquiry-based approach to science. For these changes to be more impactful, we need to get many more people on board – especially those involved in framing educational policy.

Suggestions for teachers to encourage an interest in science

Get children to read books other than their textbooks. Initiate classroom research around curriculum topics and point them to other resources they can use. Always encourage students to ask 'why' questions so they can reason

with themselves, their classmates and you. Encourage group discussions on problems and phenomena in science. Get students to play out stories based on their understanding of the subject. Engage with wider conversations on science education. One such conversation is that of fair representation of gender, race and class in textbooks and the teaching of science. For example, 'The Life of Science' platform by Aashima Dogra and Nandita Jayraj chronicles life stories of women scientists across the country.

The role of observation and wonder in science education

Encouraging curiosity, a sense of wonder, and a keenness to observe are necessary first steps for children to develop an interest in the natural world. Extensive research shows the

positive impacts of outdoor teaching on learning outcomes. Teachers could design classes that take these principles into consideration. They could also reach out to individuals or organizations in specific fields of science, like ecology and conservation, to help with this process.

The importance of engaging researchers in school science

This may seem radical, but I think it may be good for researchers, especially in the early stages of their career, to engage with some form of school science teaching. Such experiences, preferably facilitated by their institutions, may be very useful in also developing a researcher's ability to contextualise his/her understanding of science. Researchers can also help put together resources that school teachers may not have access to – especially

those related to the latest discoveries in their fields. It may also help to include at least some early- and mid-career researchers in government consultations for textbook content and teacher training programmes.

Environmental education in school science

School science should engage with environmental education. Governments and school boards have begun to recognize this need. In recent years, the lower-grade school curriculum has a mandatory Environmental Science (EVS) component.

While this is an important step in recognizing the necessity to sensitize children and young adults to environmental issues, many of us in the field believe that the way the EVS component is framed and delivered has made it a burdensome additional



Fig. 4. It is important to encourage children to develop a connection to nature.

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Resources on ecology and nature from NCF that educators can use in the classroom and outside:

1. Themed outdoor activities on 'nature around us': www.edu.ncf-india.org.
2. Activities and games around common birds in India: <http://www.early-bird.in/resources/>.
3. Adopt a tree, observe and record their flowering and fruiting patterns when seasons change: <http://www.seasonwatch.in/>.
4. A series of articles on nature, written for children that can be read out in class, enacted or modified with alternate storylines: <http://ncf-india.org/projects/writing-about-nature-for-children>.

'subject'. Textbooks for EVS highlight issues like pollution, deforestation, and global warming that can leave students with a feeling of helplessness. We argue that this can be detrimental in getting children to engage with nature and the environment. Ideally, the curriculum should be designed to encourage young students to engage with their own immediate surroundings and to experience, be awed by and develop a connection to nature. And, ideally, it is only once the child begins to recognize this connection (usually in a higher class), should she be introduced to more complex perspectives and environmental issues.

Suggestions on teaching about nature and the environment

Try and keep interesting resources like field guides, magazines and natural history books on birds, butterflies, animals and insects of India in your classroom and school library. Some of us working in fields like ecology and conservation education have been creating content and modules that a teacher can directly use to help students feel connected to their immediate surroundings (refer detachable Activity Sheet – **Early Bird Nature Detectives Bingo**). Use and refine these resources in the context of your neighbourhood.

In our experience, keeping a bird attendance register in the school or classroom can be a big hit! Each day, encourage your students to tick off birds that they have observed in their school campus. Ask questions about their observations – what were the birds doing? Why do they look a particular way? How are they grouped? Get them to compare these observations across months and years. Why are they seen only in a particular time of the year? Display visuals of common birds, insects, trees and flowers that you can see on campus. This makes it easier for students to connect with nature in their immediate surroundings. There is a special thrill in being able to identify something you come across!

Remember, don't get daunted by the fact that you may not be able to identify or remember the scientific name of a bird, tree or insect. Encourage your students to observe the natural world, describe their observations in their own words, and preferably record these in a nature journal. Stress that it's not important to correctly name a species but to ask why and how they are classified and grouped.

