

WOMEN OF DISCOVERY: Q&A WITH NALINI
NADKARNIMarch 20, 2018
by Bianca Fortis

WINGS WorldQuest will induct five new groundbreaking women as Fellows during the 2018 Women of Discovery Awards. Leading up to our April 25 Awards Luncheon, we are highlighting the work of each of our new Fellows. For three decades, Dr. Nalini Nadkarni has used mountain-climbing techniques, construction cranes, and hot air balloons to explore life in the treetops of Costa Rica and the Pacific Northwest, documenting biota that are rarely or never seen on the forest floor. She also studies the effects of forest fragmentation on biodiversity, and has published over 110 scientific articles and three scholarly books. She is a Professor of Biology at the University of Utah, and her research has been supported by over 40 grants from the National Science Foundation and the National Geographic Society. She will receive our Lifetime Achievement Award. Read the rest of the series [here](#).



WINGS WORLDQUEST: TELL US YOUR STORY. HOW DID YOU GET INVOLVED IN SCIENCE AND IN YOUR FIELD SPECIFICALLY?

NALINI NADKARNI: I was raised by parents from different cultures, and our family was a cacophony of five siblings, pets, celebrations, school, and chores. I found that climbing the maple trees in our front yard always brought me to a peaceful space that was my own world. Held by those strong limbs, I vowed that I when I grew up, my work would help trees. In college, I discovered the field of ecology - the study of biota and their environments - as a way to understand and help conserve forests. I visited a tropical research station early in graduate school, and decided to study the forest canopy, which at that time, was an unknown world. I mastered mountain-climbing techniques to gain safe access to the treetops, and have spent my research career exploring and describing the complex interactions in forest canopies on four continents.

But I soon became aware of the harmful effects of deforestation, forest fragmentation, and climate change on these ecosystems. Another way that I could contribute to forest conservation would be to directly communicate the wonder and importance of trees and nature to people who might never have the opportunity to visit or have access to education about those forests. I began working with museums and zoos, to raise awareness about the values of forests, but I soon realized that those visitors are already aware! So I forged new pathways between my world of academic science and other institutions by finding common ground on which to exchange ideas. For example, knowing that the trees are powerful spiritual symbols, I read their holy scriptures of many world religions and created a sermon on "Trees and Spirituality," which articulates the values of trees based on verses in sacred texts that describe trees. I have delivered this sermon from the pulpits of numerous churches, which has led to regional tree-plantings. I created TreeTop Barbie to bring forest science to young girls. I collaborated with modern dancers to create a dance about rainforests that we have performed for arts audiences. I have started a fashion company - "InNature" - that creates clothing with biologically correct nature images and informational hang tags, and serves to make the wearer a vector of nature knowledge.

My greatest efforts have been to bring the values of nature and science education to the people who are farthest from it -- incarcerated men, women, and youth. Since 2004, I have collaborated to establish prison science lecture series, trained inmates to rear endangered species for restoration projects, and brought nature videos to men in solitary confinement. Looking over my lifetime activities, I feel

fortunate to have been able to attain my childhood goal of helping trees through a rich tapestry of disciplines, colleagues, and perspectives.

WWQ: WHAT IS SOMETHING YOU WOULD LIKE PEOPLE TO UNDERSTAND ABOUT YOUR FIELD AND YOUR WORK?

NN: Perhaps because I grew up in a diverse home (my dad was a Hindu scientist from India, my mother was an Orthodox Jewish linguist from Brooklyn), I have always understood that there are many different ways of understanding the world, and that each has merits and blind spots. I have incorporated this idea into my work and my life. From the outside, I appear to rapidly jump from academia to the arts, to prisons, to policy-makers, and to the fashion world. From my internal compass, I have learned that all segments of our world benefit from being connecting with each other.

WWQ: WHAT ARE THE GREATEST BARRIERS TO HAVING MORE WOMEN WORK IN SCIENCE?

NN: We often think that becoming a scientist requires that we must ride the same pointed arrow that others (especially men) have successfully ridden before, a linear vector that arrives in a particular space called “scientific achievement.” However, many women have been raised or educated without the tools that allow them to stay aboard that arrow, and so if they slip off, they are considered failures. In addition, our current system has generated relatively few “riders of that arrow”, and so emerging women scientists lack models and mentors. To me, the root of those barriers is the mindset that all scientists must ride that same arrow to get to that same particular space. When we recognize that there are many and diverse vectors and many and diverse spaces that contribute to the scientific enterprise, the old barriers will no longer have the power to keep women – and men and youth – from contributing to the scientific enterprise.

WWQ: WHAT GETS YOU UP IN THE MORNING?

NN: I swing my two feet from sheets to carpet each morning with the grateful awareness that I am alive. I experienced a near-death fall from the top of a tree two years ago, which has given me a new appreciation of the fragility of life and the privilege of being physically and mentally sound. There is no specific project that rouses me. Rather, it is the quiet joy of simply rising and entering the awaiting day.

WWQ: WHAT'S YOUR NEXT CHALLENGE?

NN: My next challenge is to foster both immediate and long term “tapestry thinking” in arenas where the separation of threads has been the rule. My immediate challenge is to help my academic colleagues to step outside their labs and classrooms to effectively engage and exchange ideas with people who come from other ways of knowing — e.g., faith-based groups, the incarcerated, policy-makers, stay-at-home moms. My long-term challenge is to have each of the 6.2 million scientists in our country to engage with just one person outside of science per week. That would allow every one of the 320 million people in our country to connect with a scientist and engage information and ideas. Meeting this challenge will lead to interactions that are like a tapestry – complex, connect, strong, useful, beautiful.