

Making Science Rock, Roll and Swing From the Treetops

By CAROL KAESUK YOON

Ever since science became a world apart from the arts and culture and daily life, and there were no more da Vincis painting a Mona Lisa one day and carrying out a scientific experiment the next, there have been scientists trying to bridge their isolation from the rest of the world.

Such efforts to reach the masses — and to be understood and appreciated by a finicky public — have included Carl Sagan's search for intelligent life among the stars, Stephen Jay Gould's essays and the quirkier, if short-lived, offerings like the Studmuffins of Science calendars.

But now comes what may be science's blondest and most curvaceous attempt yet to reach the public, the Treetop Barbie. Outfitted with a safety helmet, crossbow for shooting ropes up into trees, field notebook and measuring tape, this Barbie, still a concept doll, does not worry about how hard math is or where Ken has gone. She is ready to swing from the treetops and take reams of data while she's at it.

Not sold by Mattel (at least not yet), Treetop Barbie is the brainchild of Dr. Nalini Nadkarni, a highly respected treetop or canopy ecologist at the Evergreen State College in Washington. As a Guggenheim fellow last year, Dr. Nadkarni has taken it upon herself to find every way possible to connect trees, forests and their science to an often apathetic public.

So she has invented a line of botanically correct clothing whose textiles look like actual species of mosses and liverworts. ("People say, 'Wow! That looks great!'" she said of the clothes, which do in fact look better than they sound.) She has developed skateboards whose wooden tops bear canopy logos and baseball cards



Photographs by Gary Seide for The New York Times

showing players saying things like "Without trees, I'd be batting zero." And she is teaching prisoners how to raise valuable forest mosses. ("They have a lot of time on their hands, and you don't need sharp tools.")

Dr. Nadkarni may be indulged such way-outreach because she is such a well-known and respected scientist, with plenty of grants and publications to her name. But she said she felt she was putting all at risk



Treetop Barbie stands on a ledge 20 feet from her inventor, Dr. Nalini Nadkarni, an ecologist at Evergreen State College. She also created the baseball cards that embrace wood and forests.

when she decided to share these efforts, not with the public, but at the sacred altar of a scientific meeting.

"I thought, 'O.K., here goes my reputation,'" said Dr. Nadkarni, recounting how during her keynote address at an international meeting of tropical biologists she presented one of her students, George Brady, who performed an original canopy rap song.

"He came out with this handkerchief on his head and the drumbeat in the back," she said. "He was saying, 'I'd never chop it down, I want to be a hermit, I never want to burn it.' Everybody's jaws just dropped."

But as often happens, Dr. Nadkarni said, she found the reception positive. She has had her greatest effect, she added, speaking at places of worship.

"I tell people I've been reading

about trees in your religion," she said, describing herself as half-Hindu and half-Jewish.

"There are 328 references to trees and forests in the Old Testament. There it is, I tell people. I guess you better start thinking about conservation. I'm not a Buddhist, but being silent and sitting — who does that better than trees?"

Manufacturers who have been offered her tree-friendly toys and ideas have been less enthusiastic. But while Treetop Barbie languishes, Dr. Nadkarni presses on.

She recently received a National Science Foundation grant to develop a program to help other scientists become "research ambassadors."

"My dream is to have an entire program to do a kind of makeover, the way you put yourself in the hands of a hairdresser and nail person," she said of the team that so far consists of herself and an assistant. "But this would be an academic makeover. Our SWAT team would come to a scientist, case out what you do, help you translate your work efficiently to nonscientists and give you a list of contacts and off you go."

Her first two volunteers are a scientist who studies wood anatomy, whom she will send off to talk to woodcarvers, and a scientist who studies rodent behavior, whom she will be gearing up to talk to fancy mouse and rat breeding enthusiasts.

"Ten or 15 years ago, people were saying this is a big fat waste of time," Dr. Nadkarni said. "I think the climate is changing. I think it's a time to really encourage scientists to step out."