

Reviews Reviews

published online June 25, 2006

SUPER WOMEN

They smash atoms, save endangered apes, and protect the planet.

By Josie Glausiusz

As a child, Cynthia Breazeal fell in love with a robot. As an engineering student at MIT, she built one. The first robot was a fantasy—*Star Wars*' R2-D2—but the second was real: a talking head named Kismet that interacted with humans like a baby. Breazeal's creation—which could smile, babble, and sneer—later earned her a spot as a consultant to Steven Spielberg on the 2001 movie *AI: Artificial Intelligence*.

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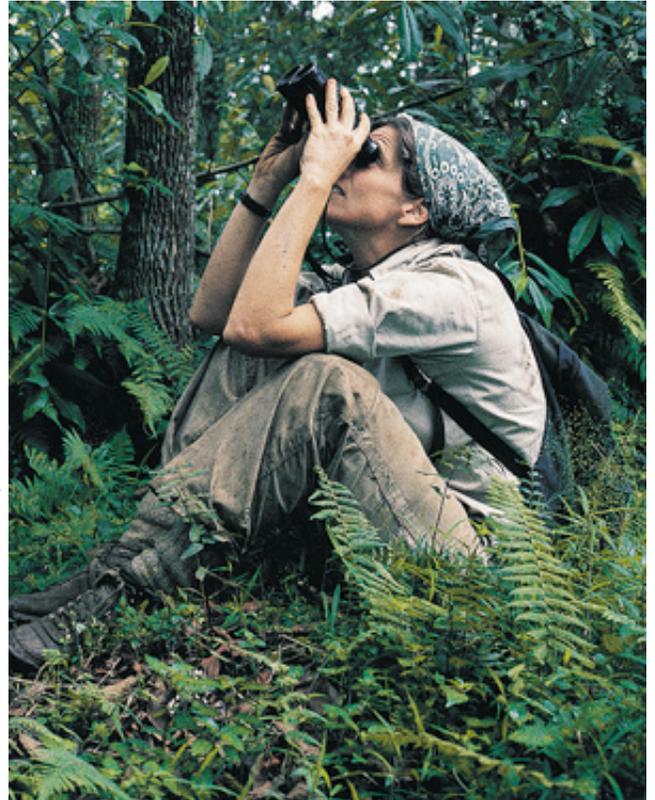


Photo: Bill Weber and Amy Vedder/Joseph Henry Press

Wildlife biologist Amy Vedder studies the primates of Rwanda's Nyungwe Forest, a 400-square-mile paradise populated by 200 species of trees and packed with baboons, vervet monkeys, bush babies, colubus monkeys and chimpanzees.

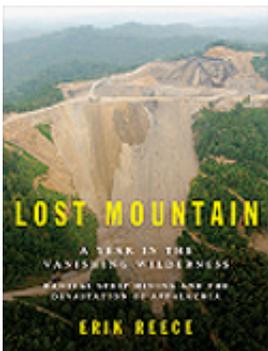
Physicist Shirley Ann Jackson followed a tougher path. As an African American born in 1946, she attended a segregated school in Washington, D.C. She too studied at MIT but found that no one would sit next to her in class. She went on to smash atoms at Fermilab. In 1995 Jackson became the first woman and the first African American to head the Nuclear Regulatory Commission.

Mimi Koehl's mother warned her that smart girls don't get dates. As a teen, she tried out for the majorette team and dislocated her jaw after hitting her own head with a twirling baton. As an adult, she studied how sea anemones survive strong waves and how insects fly. In 1990 she won a MacArthur genius award for her work in biomechanics.

These women—brilliant scientists all—are just 3 of the 10 profiled in a series of books for young adults called *Women's Adventures in Science*, published by Joseph Henry Press/Scholastic. Although different authors penned the books, they all seem to write in the same eager tone, being careful to balance the serious science with wedding snapshots festooned with bad 1970s hairdos (perhaps an attempt to refute Koehl's mother's advice). Thankfully, they also offer clear explanations of such knotty topics as genetic diseases and nuclear fission. Most notable is the discussion of the human impact on climate change in *Forecast Earth: The Story of Climate Scientist Inez Fung*. The straight talk, along with colorful illustrations, makes the series a great resource for school projects.

The best laughs, though, are to be found on an accompanying Web site, www.iWASwondering.org, which complements the books with cartoons and games introduced by a sassy lass with blue-streaked locks named Lia. This gal thinks scientists are cooler than rock stars: Shirley Ann Jackson, recites Lia in an excited crescendo, "explores the invisible particles that make up everything in the universe, including you and me and your computer and Limburger cheese and the rings of Saturn and even giant squids!" Astronomer Heidi Hammel, she says, has "seen comets crash into Jupiter, the Great Dark Spot on Neptune, and close-ups of the moons of Mars," and planetary geologist Adriana Ocampo "went to work for NASA when she was a teenager, which is way more interesting than, like, babysitting or bagging groceries."

iWASwondering.org offers more than Lia's streetwise patter, however. Budding climate scientists are advised to build a "greenhouse in a bottle" using soil, seeds, and sunlight. Future geneticists can map their own family's "gene tree" by examining their relatives' dimples and earlobes. Nascent engineers can design their own bug-eyed robot. Most important, though, both the Web site and book series dismantle the stereotypes of women scientists as spectacled spinsters locked in a lab. These brave women travel the world, tackle global problems, and explore outer planets. They're, like, totally awesome.



DEATH OF A MOUNTAIN

America's ravenous appetite for coal is destroying Appalachian peaks and their wild inhabitants. By Alison Fromme

If the United States suffered a toxic spill 30 times the volume of the *Exxon Valdez* disaster, we'd know about it, right? Not necessarily. In 2000, 300 million gallons of coal sludge, a by-product of mining, poured out of a containment pond and poisoned the flora and fauna of Coldwater Creek in eastern Kentucky. Incredibly, the catastrophe barely registered as a blip in the national media.

Journalist Erik Reece picked up the story—and so much more—in his book *Lost Mountain: A Year in the Vanishing Wilderness* (Riverhead Books, \$24.95). In compelling prose peppered with cold, hard facts, he tracked the fate of one Appalachian peak, aptly named Lost Mountain, that was slated for radical strip mining. This grotesque "mountaintop removal" method slices off summits with explosives, bulldozers, and enormous dragline excavators as tall as an eight-story building. Just 10 men can blast away an entire mountaintop to reach the coveted coal below.

In its natural state, Lost Mountain was swathed in ancient rain forest that was home to more than 80 tree species. Because it escaped the Pleistocene glaciation 1 million years ago, the forest supported stunning biodiversity. Cerulean warblers, flying squirrels, grouse, ovenbirds, bobcats, and countless other species populated the wilderness.

Towering tulip poplars, lush sassafras, and ground pines shared soil laid down inch by inch over the millennia. But in the space of one year, the 300-million-year-old mountain was gone. Everything that blocked access to its underlying coal—trees, boulders, soil—was dumped into surrounding valleys and streams. Lost Mountain's 1,847-foot summit morphed into a desert mesa of lifeless rock.