

Six Billion and Counting

Overpopulation hasn't brought humanity to its knees, but that doesn't mean people aren't overburdening the earth

COPPER CREEK VALLEY, Colo.—One moment Paul R. Ehrlich and I are standing in the sunshine in a Rocky Mountain meadow strewn with wildflowers, discussing the mating habits of butterflies. The next we are hustling down a mountainside in a drenching downpour, dodging lightning strikes far too close for comfort. Inky black clouds had crept up on us without Ehrlich realizing. When the loquacious professor is deep in conversation, not much else matters, and besides, Ehrlich is used to being in the center of a storm.

For decades, the outspoken Stanford University biologist's warnings of imminent environmental collapse have landed him squarely in the middle of controversy. To his fiercely loyal friends, he is a bold crusader who has used his considerable charm and formidable verbal agility to bring an important if unpalatable message to the public. To his equally fierce enemies, he is a media hound and a Jeremiah who has been proved spectacularly wrong all too often yet refuses to admit his mistakes. His most trenchant critic, the late Julian L. Simon, a fervent proponent of the earth's capacity for limitless growth and a fellow at the conservative Cato Institute, repeatedly accused Ehrlich of leading a "juggernaut of environmentalist hysteria." Not known for pulling his punches, Ehrlich once said of Simon, "The one thing we'll never run out of is imbeciles."

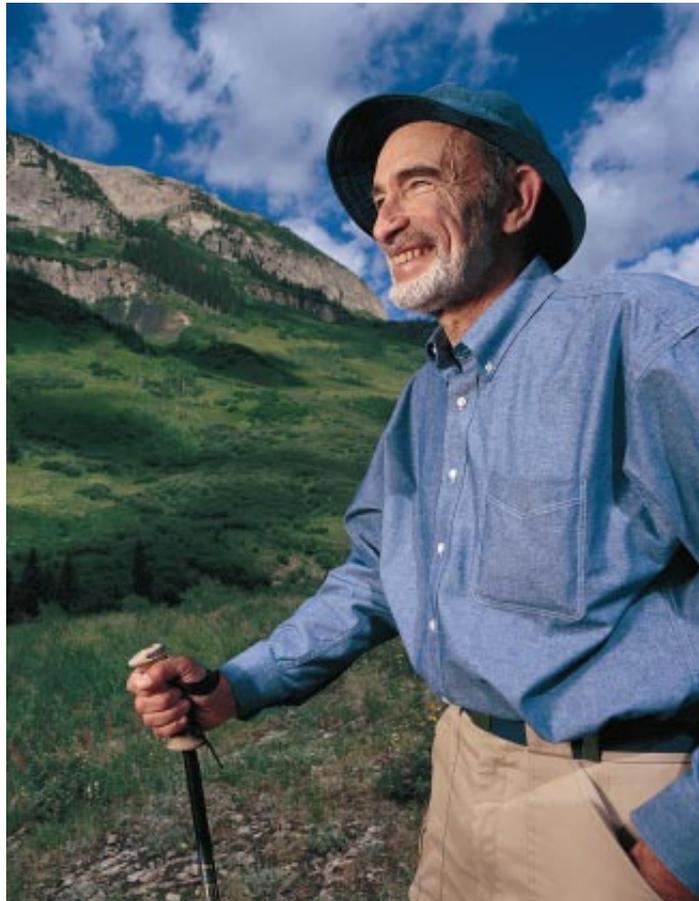
Ehrlich crashed into the public consciousness in 1968 with a slim volume titled *The Population Bomb*. It predicted that overpopulation would lead to famine on a massive scale—and soon. Designed to influence the then upcoming

presidential election (a notion that today makes Ehrlich roll his eyes at his naïveté), the Malthusian manifesto included possible scenarios for the coming chaos. One, envisioning a mystery viral pandemic of animal origins emerging from the shrinking jungles of overpopulated Africa, sounds eerily prescient. Another, foreseeing starvation in Japan and food rationing in the U.S., does not.

At the time, the book struck a loud chord and sold some three million copies. Ehrlich appeared on *The Tonight Show with*

Johnny Carson and went public about his own vasectomy. His proselytizing helped galvanize international action on overpopulation and hunger and made him one of the world's most well known scientists. "He was the one who brought this problem to the attention of the world," says John Bongaarts, vice president of policy research at the Population Council in New York City. But, as Bongaarts acknowledges, "Paul Ehrlich's predictions of mass famines have not panned out."

Indeed, today, although too many people continue to go hungry, there are fewer now than when *The Population Bomb* was written. The Food and Agriculture Organization of the United Nations estimates that the number of chronically undernourished people in developing countries fell from 900 million in 1969–1971 to 800 million in 1988–1990. The figure hovers around 790 million in the latest estimates. While the world's population has boomed, hitting six billion, the number of malnourished as a percentage of the total has declined. The impassioned professor underestimated



PAUL EHRLICH: FAST FACTS

- Married to wife and colleague Anne for 46 years; one daughter, Lisa, and three grandchildren
- Calls his 93-year-old mother at least once a week
- Speaks Spanish and some French, German and Aivilikmiut Eskimo
- Became an atheist at age six
- Turned down medical school
- Serious wine buff; adores chocolate; devoted bird-watcher

the impact of the “green revolution,” says Per Pinstrup-Andersen of the International Food Policy Research Institute: “I don’t think Paul Ehrlich understood—and I’m not sure that anybody understood—the potential of agricultural research in expanding productivity in agriculture.”

That did not stop Ehrlich from moving beyond population growth to speak out on a broad range of environmental concerns—nuclear proliferation, biodiversity, pollution and global warming. His laissez-faire critics followed, however, and in 1980 he made himself an easy target. He and his like-minded friends accepted a now famous bet with free-market economist Simon that the price of five metals would increase by 1990 as a result of shortages. Instead they went down, and Simon won handily. Ehrlich argued in a feisty 1998 book, *Betrayal of Science and Reason*, that a recession in the first half of the decade had depressed prices, but the *New York Times*, in a seminal article on the wager, credited “entrepreneurship and technological improvements.” Plastics replaced metals. Satellites and fiber-optic cables replaced copper wiring. Aluminum replaced tin.

Now, after 30 years of public life and strife, Ehrlich is unrepentant. Sure, his famous book had its faults, he acknowledges, but he counters, “Show me a scientist old enough to write something in 1968 who would still write the same thing today, and I’ll show you an idiot.” The bomb is still ticking, he says. “We’re now in the middle of an explosion.” And the deceleration in the growth rate doesn’t give him much comfort. “Explosions don’t accelerate forever—we seem to be past the peak but still growing very rapidly in historic terms,” he notes. If speculation that population may hit a maximum at around 10 billion in 2050 is borne out, population will still be too high. “If that happens, we’ll add many more people to the planet between now and then than existed when *The Population Bomb* was written, twice as many additional people as occupied the earth when I was born. And the average added person will be a much bigger threat to our life-support systems, a bigger consumer, than the average person in 1932.”

Environmental alarm bells first rang for Ehrlich when, as a butterfly-collecting teenager in New Jersey, he witnessed developers destroying habitat and pesticides interfering with his efforts to raise caterpillars. While working on his doctorate at the University of Kansas, he studied evolutionary biology and the selection process whereby insects develop resistance to DDT. In 1959 he joined the faculty at Stanford, where he studied the ecology and evolution of local checkerspot butterfly populations and spent a decade trying to stop the university from subdividing the butterfly habitat for housing.

Butterflies also led Ehrlich to make significant contributions to evolutionary biology, particularly the theory of coevolution, which he developed with his friend and colleague Peter H. Raven, now director of the Missouri Botanical Garden in St. Louis. They studied the interrelationships between butterflies and the plants their caterpillars eat, finding that plants evolve to foil their predators and that butterflies evolve in turn to avoid plant defenses. This theory is now crucial to understanding the increasing resistance of insects to pesticides. His achieve-

ments include a host of prizes, election to the National Academy of Sciences and authorship or co-authorship of nearly 40 books.

Still, he is best known for his conservation efforts and their attendant controversies, although today the crusader seems tired of the pitched public battle and speaks of it as if it were a chess match he’s grown bored with. “You think you have hammered a certain piece of nonsense into the ground, and then it just pops up again,” he says. “You get a little weary of it, because it is just not interesting anymore.”

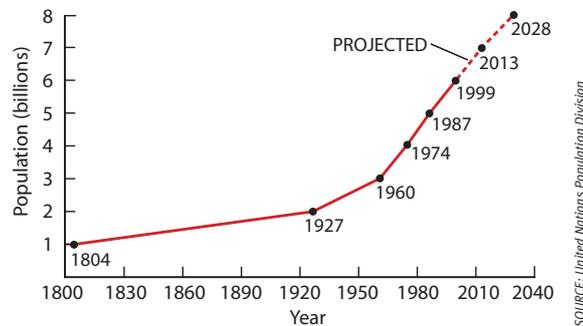
At the age of 68, Ehrlich remains an unbowed six feet, two inches. The deep, sonorous voice that must have delighted *Tonight Show* producers still rumbles out from his rangy frame. Here at his summer workplace, the Rocky Mountain Biological Laboratory in Gothic, Colo., in the heart of mountains some 120 miles southwest of Denver, he’s grown a beard that makes him resemble one of the Victorian-era miners who once worked the area. His large hands firmly grip the steering wheel of his Jeep as we climb the steep, grooved mud track to the cramped four-room cabin he has shared with wife, Anne, for the past 40 summers.

Nevertheless, age is catching up with Ehrlich, and he doesn’t like it. “I can’t beat the grad students up the mountain anymore. They have to wait for me. That’s painful,” he grimaces. His only concession to age as we walk up the hill behind his cabin are two hiking poles to stop him from slipping, and we set off at a steady pace. His take-no-prisoners wit and tidbits about the local environment spice the conversation. (The Western Fuels Association becomes the “Western Fools Association,” his longstanding antagonist the Cato Institute is a “thoughtless tank,” and presidential hopeful George W. Bush is dismissed as “George Shrub ... this guy who is running for some office in our country.”)

His latest work reflects a shifting interest from protesting against the damage humanity does to its environment, to asking why. In *Human Natures: Genes, Cultures, & the Human Prospect* Ehrlich returns to his academic training as an evolutionary biologist to argue against “extreme hereditary determinism,” which he accuses evolutionary psychologists and popular writers of promulgating. Our cultural evolution plays a far greater role than our genes in determining behavior, Ehrlich writes, and we need to consciously direct that evolutionary process to our benefit. “I want to understand how we can change human cultural evolution to deal with our environmental problems,” he explains.

In the book, Ehrlich alludes to his own fear of death. On a comfy couch back at the cabin after our wet walk, he confides that it’s not so much that he fears death as that he regrets leaving his friends behind. And he won’t be renouncing his long-held atheism. Offered the choice of “being tortured for eternity [in hell] or bored for eternity” in heaven, the rebel chooses neither. “No organized religion has ever presented me with anything that is remotely attractive as a reward,” he maintains. To the end, Paul Ehrlich will stick to his convictions. —Julie Lewis

JULIE LEWIS is a freelance journalist based in Washington, D.C.



BOOM TIME: Some estimates peg the 10-billion mark as occurring around the year 2050 rather than in 2183.

SOURCE: United Nations Population Division