

Life has a future; Naturalist E.O. Wilson is optimistic

June 15 2006



E.O. Wilson sees the 21st century as the 'century of the environment,' a time when humans will celebrate and preserve biodiversity, or wreck life on Earth. (Staff file photo Justin Ide/Harvard News Office)

Despite all the destruction of forests, pollution, overpopulation, and overfishing, Edward O. Wilson is optimistic about the future of life on Earth. Science, prudent actions, and moral courage are showing some signs of making a difference, says one of the world's most influential naturalists, a two-time Pulitzer Prize winner, and Pellegrino University Professor Emeritus at Harvard.

Wilson cited one encouraging sign. "In 1960, women on the planet gave birth to an average of six children each," he told a group of Harvard alums celebrating their 50th reunion during the University's June 8

Commencement celebration. "That number is down to three children today, and the trend is likely to accelerate."

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Wilson is working on recruiting another great force into the battle for life - religion. In a forthcoming book ("The Creation," September 2006), he suggests that scientists "offer the hand of friendship" to religious leaders and build an alliance with them. "Science and religion are two of the most potent forces on Earth and they should come together to save the creation," believes Wilson, who was raised as a Baptist in Florida and Alabama. In November, scientists and evangelists will hold a conference that may start them across the existing cultural gap on a bridge of biodiversity.

How much life is there?

One of the first steps to protecting life and biodiversity is to find out just how much life there is on Earth. Wilson admits, "We don't have the faintest idea."

In the 1980s, the best evidence produced an estimate of 1.4 million species of animals and plants. Most of the animals were insects. Now, thanks to an increase in the technology of searching, Wilson puts the number at 1.8 million, a jump of 400,000 species in a couple of decades. Bugs still dominate.

Those who have been exploring the deepest, darkest corners of the planet have found living things in boiling hot springs thousands of feet below the ocean surface, miles under the surface of land, and nestled under thousands of feet of ice near the South Pole. Throw in more

accessible but incompletely explored places like tropical forests, and, Wilson says, the number could rise to 10 million. Add in bacteria, fungi, and other microbes, and the number of species may soar to 100 million.

Scoop up a handful of soil in a place like Franklin Park in Boston and, Wilson assures us, you could be holding 10 billion bacteria, representing 5,000-6,000 different species. Scoop up a ton of soil and the number of varieties of bacteria could jump to 4 million, considerably more than the number of animals and plants now known. The proportion of these bacteria and other microbes that contain biochemicals that could lead to beneficial new drugs is unguessable at this time.

To emphasize such biodiversity, later this year Wilson plans to lead a group from the Explorers Club in New York City on a biotour of Central Park, a well-trodden area in the center of Manhattan. They are going to see how many species they can unearth in one hour. It's the kind of lesson that could be taught all over the world, he says.

When Wilson was a skinny 13-year-old, growing up in Mobile, Ala., he discovered the first colony of imported fire ants in the United States. The bugs had traveled from South America on a freighter. Poking through empty lots and cracks in the hot sidewalks, Wilson was the first naturalist to record their arrival. Now 77, he still can't resist checking sidewalks, empty lots, and parks for ants and other insects. Wilson won a Pulitzer Prize in 1991 for "The Ants," a book written with Bert Holldobler that describes the life and societies of these omnipresent insects. He had already won a Pulitzer in 1979 for another book, "On Human Nature."

What you can do

Wilson now takes part in much larger search efforts. He serves on the scientific board of Conservation International, a nonprofit organization

with the optimistic goal of saving all species of life on Earth.

He also champions efforts by the Smithsonian Tropical Research Institute, which uses skyscraper-tall cranes and cable cars to survey trees that are difficult to reach in dense rain forests. Lots of other organizations exist, from The Nature Conservatory and World Wildlife Fund to local groups dedicated to protecting and counting. People who are interested in the future of life can get involved with such organizations by donating their dollars and their hands and knees.

Wilson is optimistic that such efforts will eventually win out over logging, fishing, and development efforts that threaten a 21st century human extinction of life comparable to the natural extinctions that came before. He thinks that such optimism will be particularly justified if religion joins science in this effort.

In thinking about the outcome, Wilson likes to quote John Sawhill, the late president of The Nature Conservatory, who said, "A society is defined, not only by what it creates, but by what it chooses not to destroy."

Source: By William J. Cromie, Harvard University

Citation: Life has a future; Naturalist E.O. Wilson is optimistic (2006, June 15) retrieved 19 April 2024 from <https://phys.org/news/2006-06-life-future-naturalist-eo-wilson.html>

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