

Keynote Address: *The Future of Life and Biologic Publishing*

Speaker:

E O Wilson

Harvard University
Cambridge, Massachusetts

Reporter:

Misty R Bailey

University of Tennessee College
of Veterinary Medicine
Knoxville, Tennessee

The future of life and the preservation of biologic diversity, said E O Wilson, depend on the willingness of two disparate groups of people to recognize what they have in common and to work together. Both fundamentalists and secularists consider saving Earth's creations sacred but for different reasons. The key then, Wilson argued, is evoking the inward-seeking values of society to influence leaders. Wilson encouraged us to join him in using our technology and foresight to interrupt the human consumption and ruinous practices that are eroding a 3.5-billion-year-old biosphere. To accomplish that mission, though, the general public must be behind it: "Statistics don't cut it," said Wilson—"not with most people." That reality is why Wilson has decided to approach religious leaders to try to disseminate truth and suspend culture wars, all in the name of biodiversity preservation.

Wilson sees biologic publishing as an important medium through which to share and advance knowledge between scientists and engage political leaders by spreading awareness. Specifically, technologic advances in publishing have allowed high-resolution digital photography to reproduce microscopic images so that entomologists no longer need to borrow specimens or travel to many museums to classify insects. Just the improvement in image publishing has made the classification process at least 10 times faster. Furthermore, scientific publications can familiarize the public and



Wilson prepares to speak

their political leaders with species preservation and touch people in an ethical and caring human way. After all, Wilson contends, we are a civilization that can believe in God and explore space because they are the right things to do. He expects a similar attitude in support of biodiversity.

Although Wilson predicts that the 21st century will be known as the century of the environment and biology, he urges us to move quickly to save the estimated 1.5 to 1.8 million *named* species on Earth. The actual number of species is largely unknown, but anywhere the potential for water exists, biodiversity also exists. Most of life on Earth is concentrated in tropical rain forests, where Wilson found 42 ant species on just one tree in Peru. Maintaining rain forest canopies, in particular, is necessary to preserve biodiversity, and Wilson demonstrated the decline with maps that showed the increasing destruction of the Philippine rain forest since 1900. Rain forest made up 70% of the Philippine landscape in 1900 versus just 22.2% in 1998 (Decline of the Philippine forest [ecologic map]. Quezon City [Philippines]: Environ

Sci for Soc Change; 1999). As we reduce the available habitat, we also reduce the number of species that can survive.

However, a few species can exist in extraordinary places, such as acid mine drainage, which has a pH similar to that of battery acid. Subsurface lithoautotrophic microbial ecosystems (SLiME) exist as far as 2 miles into Earth and sustain their energy from inorganic material, not depending on life atop Earth. But all those organisms perfect the balance of life, which is everywhere in peril. Habitat destruction, pollution, and overharvesting disturb that balance, and Wilson's goal is for human awareness, concern, and action to prevent and correct destruction.

Despite working with insects and SLiME, the entomologist, conservationist, and two-time Pulitzer Prize winner admitted that he shares the nearly universal scientist's fear of editorial acceptance. "You are the gatekeepers", he told the audience of editors. This prescribed responsibility makes the science editor's role in conservation integral to Wilson's long-term plan. 🌱