

Bioprofile of William Newmark

William Newmark is a research curator and conservation biologist in the Utah Museum of Natural History at the University of Utah. He holds a B.A. in biology from the University of Colorado, a M.S. in wildland management from the University of Michigan, and a Ph.D. in ecology from the University of Michigan. His research is focused on patterns of extinction of vertebrate species, protected area and wildlife corridor design, and animal movement. His findings on patterns of extinction of large mammals in western North America (*Nature* Vol 325: 430-432 January 1987) and Tanzanian parks and birds on tropical forest fragments have highlighted the problems that nature reserves face in conserving biological diversity and have provided an important justification for a series of worldwide initiatives to link national parks and related reserves with wildlife corridors. Technical as well as popular reviews of his research have appeared in many publications including *Science*, *Science News*, *Nature*, *The New York Times*, *The Washington Post*, and *The Independent* and his findings have been extensively cited in undergraduate and graduate ecology and conservation biology textbooks. He has been conducting field research for over twenty-five years in western North America and East Africa. He has written two books and more than 75 scientific papers and technical reports.

Testimony

I first would like to thank the Committee on Natural Resources for inviting me to testify today. It is a great honor. My testimony today represents my own views and not those of the Utah Museum of Natural History nor the University of Utah.

One hundred thirty-five years ago, Congress established the first national park in the world initiating a modern era in conservation. Since 1872, more than 57,000 national parks and related reserves have been established worldwide. Indeed the creation by Congress of the national park to conserve species and ecological processes in perpetuity is one of the most important and far-reaching contributions that the United States has made to the global community.

Today we are in the midst of the sixth major global extinction event. Scientists estimate worldwide species are being lost at a rate of one species every two hours which is 1,000 to 10,000 times higher the normal background rate. The two most important factors that are contributing to species loss worldwide are habitat loss and fragmentation. Yet a third factor, global climatic change, is looming on the horizon which can and will interact with habitat loss and fragmentation to further endanger many species. Without a dramatic expansion in protected area coverage worldwide, it is predicted that upwards of 50% of the world's species will be committed to extinction by the end of this century.

Scientists now recognize that even the largest national parks in western North America such as Yellowstone and Glacier National Parks are not large enough to conserve long-term viable populations of many species. I am attaching several of my own scientific reprints that document this as attachments to my written testimony. Furthermore with global climatic change, many plant and animal populations that were thought previously to be viable will not be unless they are able to relocate over time to new geographic areas. Indeed it is estimated that for mammal

species alone upwards of 20% of all species currently found in selected U.S. national parks may be lost if atmospheric carbon dioxide concentrations were to double.

To conserve species and ecological processes in perpetuity, we need to conserve and manage large ecosystems which means protecting large core areas, such as national parks and wilderness areas, and enhancing ecological connectivity among these protected areas through the establishment of movement and dispersal corridors.

The Northern Rockies Ecosystem Protection Act is an extremely important and innovative piece of legislation because it adopts an ecosystem approach to conserving species and ecological processes. This legislation is also important because of the protection it gives to many roadless areas. These latter areas play a critical role in not only maintaining water quality and quantity, providing recreational opportunities, and protecting critical habitat for many threatened species, but also because they often contain old-growth forest that is important in sequestering carbon and thus reducing potential green house emissions. Furthermore, the Northern Rockies Ecosystem Protection Act is important because of the new management categories it establishes for federal lands that are essential for conserving species and ecological processes. These are biological connecting corridors and wildland restoration and recovery areas.

If the Northern Rockies Ecosystem Protection Act is enacted this bill will be precedent setting in relation to how federal lands are managed for biodiversity. Indeed the Northern Rockies Ecosystem Protection Act, because of its emphasize on conserving ecosystems, has the potential to influence and promote biodiversity conservation globally as much as did the establishment of the first national park by Congress one hundred thirty five years ago due to the enormous influence that the United States has scientifically.

I strongly urge Congress to pass the North Rockies Ecosystem Protection Act and I thank you again for allowing me to address this Committee.