

Can We Afford Biodiversity?

In view of the National Park Service's preservation mandate, the question of whether or not we can afford biodiversity may appear to be rhetorical. But as scientists learn more and more about the habitat requirements of the myriad species still extant in North America, the cost of maintaining species richness—beginning today and extending into the unforeseeable future—mounts to confounding proportions. Mounting political resistance and shrinking preservation budgets may have a lot to do with how the emerging controversy plays itself out.

The June 25, 1993 issue of *Science* devotes its News & Comment section to a piece entitled "The High Cost of Biodiversity." Its authors, Charles C. Mann and Mark L. Plummer, describe the plan to protect North American biodiversity that emerged from the seventh annual meeting of the Society for Conservation Biology, held June 11 at Arizona State University in Tempe. This dramatic proposal, labeled the Wildlands Project, calls for nothing less than the resettling of the entire continent—"the most ambitious proposal for land management since the Louisiana Purchase of 1803."

Even the dedicated faithful ("a mix of Oxford cloth and Birkenstocks, with a preponderance of male facial hair") greeted the design with gasps. It calls for a network of wilderness reserves, human buffer zones, and wildlife corridors stretching across hundreds of millions of acres—as much as half of the continent. The long-term goal of the Wildlands Project is the transformation of the United States "from a place where 4.7% of the land is wilderness to an archipelago of human-inhabited islands surrounded by natural areas."

Ecologist Reed F. Noss, editor of *Conservation Biology* and one of the plan's architects, called it "a vision of what this continent might look like in 200 years if we can reduce the scale of human activities."

Wild as the notion may seem, Mann and Plummer report that the principles behind it have been endorsed by scientists of stature including Edward O. Wilson of Harvard, Paul Ehrlich of Stanford, and Michael Soule of the University of California, Santa Cruz, who view the approach as the logical follow-up to the reserve design underlying the proposed

Northwest spotted owl reserves. One prominent ecologist who asked not to be named acknowledged that the plan "seems nuts," but added that when you think about it, it is more or less where the science is pointing.

The color maps that accompany the *Science* article show how the plan would affect coastal Oregon and Florida. Color coding shows core areas, corridors, and buffer zones that would protect not just spotted owls (in Oregon) and panthers (in Florida) but a host of other species—from charismatic to microscopic.

The article explores the controversy surrounding the concept of corridors, questioning their efficacy on the one hand (data is scanty as to their actual use) and proposing on the other hand that relatively little use "may be enough" if one or two individuals a decade manage to migrate and add new genes to a stagnant pool.

NPS ecologist Craig Shafer, author of *Nature Reserves: Island Theory and Conservation Practice*, is quoted as having some doubts about the numbers on which the Wildlands plan is based, but as contending that the whole package—core reserves, buffer zones, and corridors—is needed for complete protection. "For every line of analysis," Shafer said, "the weather vane is pointing in the same direction... toward needing a network in the landscape."

Deborah Jensen, the Nature Conservancy's director of conservation science, commented "drily" that "this whole business about wilderness being fierce is a male thing" and disagreed with the plan's decision to begin with present wilderness areas ("often species-poor") instead of focussing on areas of maximum biodiversity and preserving those first. Mann and Plummer spent one paragraph alluding to the hue and cry that would inevitably go up if the plan were to be sprung as a whole on the political scene. Dave Redmond, press secretary to Rep. Bob Smith (R-Or), who has introduced legislation to scale back the Endangered Species Act, warned that "the people who would be impacted by such reserves are absolutely terrified by them." Politically, Redmond said, the plan "is just undoable." If such a plan is the only way to preserve biodiversity, then said Redmond, some biodiversity will have to go. "That is what we are facing."

Jean Matthews, Editor