Guest Editorial

On Aesthetics and Restoration and Management

Aldo Leopold, in a characteristic example of wisdom that transcends professional or disciplinary boundaries, wrote in *A Sand County Almanac*:

"A thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it does otherwise."

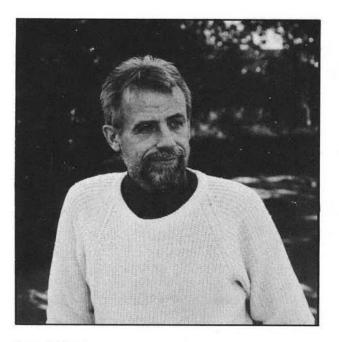
In this statement, he suggested a relationship—perhaps an interdependence—between biological integrity and beauty. Implicit in this concept is the idea that landscape restoration and management practices are *right* when they achieve, simultaneously, the integrity, stability, and beauty of the landscapes where they are applied. They are wrong when they fail in any of the three categories.

Interestingly, we rarely see the words "beauty" or "aesthetic quality" stated as goals of restoration or management projects. Similarly, we rarely see them listed as outcomes of implementation of these projects. Why is it that we've failed so often to recognize or acknowledge the importance of the beauty of landscapes as a goal—or as a worthy achievement—in landscape management and restoration?

There are a number of plausible explanations for this omission. One possible rationale for not mentioning landscape beauty lies in the recognition that it is inextricably linked with biological integrity. One could suppose—with good reason in many cases—that if a site's biotic integrity and stability are preserved or restored, the aesthetic quality will be taken care of too.

More likely, though, I think we've become uncomfortable talking about beauty in the landscape for a couple of reasons. First, just as "real men" don't eat quiche, "real men" shy away from talking or writing about beauty. Interestingly many of our most rugged environmentalist forebearers felt completely comfortable openly discussing and writing about beauty. For example, if you open to almost any page of John Muir's journals, as edited by Linnie Marsh Wolfe in *John of the Mountains*, you will encounter vivid descriptions and observations such as the following entry, dated January 4, 1869:

"Clouds cumulus. A warm, balmy, bright creation is this day. The purple and yellow of the soil and of the old plant stems are rapidly fading in the deepening green of young life. The little triangular rock fern (*Gymnogramme triangularis*) is unrolling its tiny fronds in sweetly arranged knots and mantlings along the rocks of Cascade Creek. I do not know of any fern that has so wide a range as this hardy and contented gold-powdered fellow. I have met it



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on the lower Joaquin and at all altitudes on the Sierra as far as Yosemite. Sunset-sky purple of the most refined quality."

Note the intermingling of botanical and aesthetic observations. Maybe it's time to revive in ourselves (and for those of us teaching, in our students), a capability and interest in integrating science with art—in looking at landscapes and in managing or restoring them.

This leads us to a second reason for our seeming discomfort about discussing beauty—or proposing it as a valid objective in restoration and management planning. That is the fact that beauty, or aesthetic quality, is such an elusive characteristic that it's difficult to pin down, to identify, to measure. It is hard to make it "scientific" enough.

There is a growing body of research during the last decade among landscape architects and environmental psychologists, designed to associate numbers with landscape beauty. At the center of most of these studies are public opinion surveys which elicit from various audiences or "user groups" their landscape preferences. The stimuli to which people are asked to respond in these studies are usually photographs in some form. In some studies, survey participants are lent cameras and asked to photograph scenes they find especially attractive or unattractive. The results of such surveys are quantitative. But they do not quantify the aesthetic quality of the landscape itself; they quantify the popularity of the landscape among the survey participants. As long as this important distinction is kept in mind, the research is of value to

designers and managers whose goal is to "give people what they like." What people like is generally what they have grown up with—often a very stylized and simplified form of nature—a forest whose midstory and groundlayer have been thinned or eliminated, for example; or a grassland whose diverse textures and colors have been replaced by the texture and color of a single species of grass which is kept at a (short) prescribed height.

Hence, the research on landscape beauty—or more accurately, people's perception of and response to landscape beauty—is of only limited value to managers and restorationists whose goals include the preservation or reinstatement of true natural beauty in the landscapes they deal with.

So, where does this leave us? Do we continue to exclude beauty from our goals and objectives in restoration? If, for example, we include the right species of seed in a prairie mix, do we assume since species are matched with environmental factors on a site that aesthetic quality will follow?

I don't think we have to. Instead, in preparing ourselves or our students for roles in landscape management and restoration, we need to include not only observation of species composition and structure in naturally evolving plant communities but also conscious, rigorous observations of their aesthetic characteristics. In addition to knowing prevalent species, dominant species, and modal species, for example, we need to know visual essence species in the plant communities we study. In addition to knowing plant densities and species densities, we need to know the spatial character of a community. We need to see patterns; to note the forms of edges of forests, of open water where it meets a bog mat; to note the colors and textures of prairies and salt marshes and woodland groundlayers, how they merge, and how they change. Ideally, we should also record these observations for our own future reference and for others' use-in drawings, in words, in photographs. We need to reintegrate science and art in field studies, much as John Muir integrated science and art in the beautiful prose of his journals. And, maybe most importantly, we need to be advocates of beautiful restoration and management projects, without apologies-when that beauty is accompanied by the biotic quality Leopold referred to in the quotation at the beginning of this commentary.

Increasingly, I am convinced of the importance of field study that includes observations of the type enumerated above for landscape architecture students in general, but especially for anyone who plans to be involved in landscape management or restoration. Ideally, such courses should be team taught—as Dr. Evelyn Howell and I taught at the University of Wisconsin for ten years, and as Dr. Sam Jones of the Botany Department and I are now teaching at the University of Georgia. There's simply no acceptable substitute, no satisfactory simulation of the lessons we can learn from natural models.

If we learn those lessons well—both the science and the art lessons—we'll be better prepared to prescribe beauty and aesthetic quality in our management and restoration

plans. We will have another source of information and inspiration which can only enrich these plans. We will not only be matching species with environments or eliminating inappropriate invasive species, but we will also be consciously creating or recreating natural patterns, forms, colors, and textural and spatial characteristics that occur in our natural models. And the results on the ground need be no less scientific as they become more artistic. In fact, they may be more nearly "right" in the sense that Aldo Leopold used the word.

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