Guest Editorial

Beauty and the Restorationist: A Response to Darrel Morrison

In a recent editorial (R&MN 5, p. 23), Professor D. Morrison argued that beauty at the community level must always be an integral part of restoration projects. I find this commentary incomplete, naive, and on some points, incorrect.

Professor Morrison states that aesthetics are often ignored in restoration projects because "we've become uncomfortable about beauty in the landscape" as a result of the pervasive attitude that "real men . . . shy away from talking or writing about beauty." In the desert Southwest men have no fear of discussing beauty in connection with revegetation projects. Aesthetics have been considered in all restoration projects I've been involved with and I do not believe that I would be considered unmanly for discussing beauty. But several realities deserve consideration before labelling as wrong all efforts not considering beauty at the community level.

Morrison begins by quoting Aldo Leopold's *Sand County Almanac* (Ballantine, p. 262) in an effort to persuade the reader that unless restoration projects aim to reestablish the "integrity, stability and beauty of the biotic community," they are wrong. While this philosophy may be attractive in some ways it is unequivocally out of touch with reality. Morrison is looking at restoration from one point of view—that of a landscape architect—and his opinion may be legitimate from that point of view, but it is quite different from mine. I am disturbed that he has made his point of view seem like the only legitimate one.

To make the abstract term "beautiful" meaningful Morrison suggests taking careful notes and photographs of intact biotic communities, unspoiled by human influence. These and, I presume, quantitative data as well, used in combination, define beauty. Successful restoration projects then duplicate the natural community. Since any attempt to define beauty is likely to lead to endless discussion, I will accept his definition.

My restoration experience is with riparian habitats in the desert Southwest, but I hope my comments are general enough to apply to other situations. I contend that a series of realities confronts restoration projects, at least in desert riparian habitats, and that these virtually preclude "good" as defined by Morrison.

The first reality: Virtually no unscathed riparian habitats remain in the Southwest from which an investigator could make the careful study Morrison calls for. Leopold undoubtedly meant well when he said that the integrity and stability of natural areas must be preserved, but with respect to riparian habitats in the Southwest—preserve what integrity? What stability? Here at least restoration is necessarily a creative, not merely an imitative, act. If the

results are in some ways novel, is that so unexpected? So wrong?

Even if we compromised on this point, however, and decided that not quite good is good enough as a model, we still confront a second reality: the time and money needed to build the database Morrison demands. Since in many situations conditions vary considerably from site to site, and even from point to point on a single site, gathering the data needed to fine-tune a restoration plan to local conditions can be a major task. Certainly this is true of southwestern riparian habitats: one cannot expect a Pecos River habitat in New Mexico to be an appropriate model for the Colorado River in western Arizona.

Although the need for native or historic ecological communities is urgent, funding falls woefully short of matching the need. To have done the revegetation work that we did in 1987 "correctly" in Morrison's terms, for example, would have required five to ten times as much time and money. But if I were to have demanded five times as much—or even half-again as much—I would have been dismissed as unrealistic, if not mad.

The third reality: Cottonwood trees (*Populus fremontii*), formerly abundant, have nearly disappeared from the lower Colorado River, and this has resulted in serious declines in populations of many associated animals, including the yellow-billed cuckoo, (*Coccyzus americana*), summer tanager, (*Piranga rubra*), and willow flycatcher, (*Empidonax traillii*). In the time needed to carry out restoration projects that would meet Morrison's standards these species might have disappeared.

In the Southwest we began thinking about restoration of riparian habitat only after millions of hectares had already been lost. Currently the rate of riparian habitat destruction exceeds the rate of successful revegetation by at least an order of magnitude. Clearly, we are in a race with many opponents to conserve species and communities, and we are losing the race. Time is crucial, and, churlish as it may be to say so, research and improving technical knowledge actually are more important than aesthetic considerations.

The fourth reality: Knowing what constitutes beauty is not the same as being able to create it. Implementation requires detailed knowledge of autoecological factors affecting the plants in the community being restored. I would not design a restoration project on the basis of photographs of "beautiful" natural communities. At each point a plant is to be planted the physical and chemical environment must be appropriate if that plant is to thrive. Those who think that a site can be designed on paper and then carried out without considering the chemical and physical attributes of the revegetation site, sometimes on an almost point-by-point basis, (and there are many that do) are disassociated from reality. Since there is virtually no information available on how to grow most riparian species, techniques for recreating a "beautiful" riparian

habitat are decades away. And at the current funding rate, we may never achieve that level of refinement.

The fifth reality: Even if information about the structure of pristine riparian habitats were available, it could not be used as a model because in many areas the physical environment once occupied by riparian habitats has been altered so dramatically that it will no longer support many of the native species. Some of these alterations—notably salinization of soils and ground water—are virtually irreversible. Others, such as invasion by exotics, are reversible only with great difficulty. In such a situation “real” restoration may be nearly impossible, and certain compromises may be necessary. These are likely to involve adjustments (not necessarily sacrifices) in aesthetic objectives.

The sixth reality: Compromise. There are many individuals on the sidelines of restoration projects who do not share our definition of beauty. Sometimes they can simply be ignored, but sometimes they control funding and are in a position to impose their views on those doing restoration or revegetation work. So, alas, there is “compromise.” Money and time are squandered. We fall further behind in the race, and Morrison’s “beauty” is not likely to be a result.

The six realities listed above all interfere with the development of beautiful habitats at the community level. Two additional realities should also be considered.

The seventh reality: Wildlife apparently do not perceive beauty as we do. Many of the “ugly” habitats that we have created support a large and diverse wildlife community. In addition, areas that have been revegetated often support large populations of native tree and shrub species that had previously undergone alarming declines.

The eighth reality: Beauty also exists below the community level. I define a beautiful tree or shrub, for example, as one that is healthy, vigorous and attractive to wildlife. Stands revegetated using technically—that is, horticulturally—sound procedures, may be ugly at the community level, but will nevertheless contain many beautiful plants. This should be appreciated as a benefit of even the most severely compromised restoration project.

I agree with Morrison that restoration at its best depends on a harmonious union of science and art. As a scientist-artist the restorationist must both know, must appreciate his or her materials—the plants and animals, the community and the landscape—and must have adequate time and material to do the work. Few artists would attempt to do a water color on oil canvas or to complete a project on the scale of Michelangelo’s Sistine Chapel in three days. Yet restorationists find themselves resisting this sort of demand all the time.

Don’t demand what is “right,” provide inadequate resources to do that work, then call the product “wrong.” If time and money are inadequate, or if one is dealing with a piece of floodplain modified as described above, it is true that the results probably will not meet Morrison’s expectations. Sponsors of restoration projects should—must—keep this uppermost in their minds before embarking on restoration projects.

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Death of Doug Wade

We are sorry to report the death of Doug Wade last August at his home in Oregon, Illinois. A student of Aldo Leopold, Mr. Wade was a lifelong proponent of environmental preservation and restoration, and offered valuable advice and support during the early development of this journal. A memorial fund for Mr. Wade has been established in behalf of the Prairie Preservation Society of Ogle County. For details contact Margaret Knight, Lindenwood, IL 61049.