

## Thoughts on Looking Back

*Ecosystem restoration may be a form of agriculture. But it is agriculture transformed by marriage with ecology.*

Bringing together material for the cover article for this issue of *R&MN* was an interesting experience. Looking over our shoulder, as it were, reading the old memos and accounts of the early work here at the Arboretum, talking with the few who still remember, we found ourselves wondering about the efforts of these pioneer restorationists and the nature of the peculiar task they dreamed up for themselves.

Ted Sperry commanding a platoon of CCC workers in the first major effort at prairie restoration.

Henry Greene hauling bucketfuls of water from an old farm well to his prairie plantings.

Aldo Leopold supervising creation of a forest of pines on a derelict pasture.

Prairie restoration. Ecosystem restoration. What kind of activity is this? How new? And how old?

Since these are questions all of us will have to ask ourselves as we set about to shape and define the new discipline, here are a few ideas on the subject, offered in the hope that they may at least stimulate thought and discussion.

It seems to us that ecosystem restoration is first of all a form of agriculture. But it is agriculture transformed by marriage with ecology. And this makes it something new—a novel development in the relationship between human beings and their environment.

In his essay "The Tree," British novelist John Fowles wrote eloquently of what he believes must have been man's earliest way of perceiving nature and his place in it.

The marshes, the forests, the savannas on which he evolved were all seen whole, as a continuous fabric of which human beings were only a part. In this view, Fowles writes, even trees were seen not a species or individuals but as members of the whole; their boundaries unclear, wavering and blending into the forest.

Agriculture was the world-shaking discovery that this great whole can be broken into pieces—that it is possible to tear, say, a grape vine, an olive, seeds of wheat or corn, out of the landscape and to grow them separately in simplified ecosystems near the house or village.

This was the first great step toward dealing with nature analytically—by taking it apart. It is a process that continues today as botanists, working hand in hand with agronomists and horticulturists, break plants down into cells and even protoplasts, chromosomes and genes—both to learn how they work and to make them work the way we want them to.

Ecosystem restoration goes just the other way. It begins with the ancient task of cultivating the soil, but it rejects productivity as its goal and ecosystem simplification as its way of getting there.

It is still a form of agriculture, and borrows from all its major branches—agronomy (think of Bob Betz at Fermilab, harvesting 5,000 kg of prairie seeds with a combine, spreading them on his prairie with a salt spreader); from horticulture (think of Henry Greene set-

ting out plants in his prairie, planning each vista with an eye for color and shape, for contrasts in pattern and texture); and from animal husbandry (think of the nesting platforms for double-crested cormorants on the cover of our last issue).

But while agriculture accepts, and to some extent prefigures the machine as a model, and aims for simplification, uniformity and mass production, the restorationist takes as a model nature itself in all its diversity and complexity.

While agriculture is dedicated to taking nature apart and dealing with it in simplified terms, ecosystem restoration is dedicated to putting it back together—often using agricultural techniques. In John Fowles' own phrase, it is committed to seeing—and then making—nature whole.

This changes an approach to nature that is aggressive and analytical into one that is still aggressive, or at least manipulative, but that is synthetic rather than analytical.

What fascinates us about this is that it places the restorationist in a novel and interesting position, rather like that of an artist working with nature as a model. This means the restorationist, like the artist, will find himself or herself looking at nature in new and more critical ways, for it is not the taking apart but the attempt to put back together that provides the most stringent tests of perception and understanding.

We have already seen this in the development of the UW Arboretum and in the work of others who have contributed to *R&MN*.

We hope and expect to see more of it in the future.

Now we have to add a few words by way of justifying our decision to put ourselves on the cover of the third issue of *R&MN*.

One of the purposes of this journal is to help define and articulate the new discipline of ecosystem restoration.

To do this we need new techniques. We need new ideas. We need to develop connections between people and disciplines and ways of doing and thinking about things.

But we also need a history. We need a sense of where we are coming from and just what we are trying to do.

This is why we feel justified in telling our own story. Certainly we are patting ourselves on the back just a little. But why not on our fiftieth birthday? And more than that, the UW Arboretum was among the first—as far as we know it was *the* first—attempt to restore ecosystems systematically on a large scale. If we are to have a history, what has happened here since Aldo Leopold proposed his daring development plan in 1934 is an important piece of it.

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