Again, the experience of restoration teaches the folly of this. Restoration is, in fact, nothing less than an experiment in the importance of history. By attempting to reverse change, the restorationist learns to discriminate change that can be reversed from change that cannot. The resulting wisdom is a crucial component of our emerging relationship with the rest of nature.

The important thing is to pursue our experiment in pastoral hopefully in the expectation of finding every element of harmony we can in the relationship between ourselves and the rest of nature, rediscovering old harmonies and, perhaps discovering some new ones.

At the same time, let's keep the darker side, the intransigent tragic element in mind. Let's hope for progress but not perfection—be Ishmael and Huck and Nick, not Gatsby.

* * *

With this issue, R&MN marks the end of its first decade of publication. It has been just ten years this July since we unloaded the first, thin issue of the journal from a van and mailed it out—free—to a thousand or so likely subscribers.

Since then, the enterprise has prospered. We have gone from "occasional" to twice-yearly, and are considering moving to quarterly publication. We have more pages, and those pages are filled with news from a vigorous, rapidly growing young discipline. Circulation, aided by the creation three years ago of the Society for Ecological Restoration, is well over 2,000 and is growing healthily. For a number of years, R&MN has been paying its own production costs. This past year it began paying editorial costs as well. And since Dave Egan joined the staff two years ago we have for the first time had regular help with the work of getting the journal together.

All this bodes well for the future of the publication and—we think—for the science and art of restoration. Indeed, progress so far has only made everyone involved more keenly aware of the need for more effort, including more and better publications, if the discipline is to achieve its promise as a way of conserving—and communing with—the natural world.

Even as this anniversary issue goes to press, SER's Editorial Advisory Committee is considering plans for improvements in the journal, and for the development of a comprehensive publication and communications program for the restoration community.

As this planning proceeds, keep in mind that your ideas are welcome. The planners hope to hear from you. You may even be contacted directly—but if not, don't hesitate to contact the R&MN office in Madison (608–262–1491 or Advisory Committee Chair Glenn Hughes (DuBois, PA; 814-375-4700).

And look forward to exciting developments ahead.

In the meantime, congratulations to all of us.

Onward and upward!

William R. Jordan III

Guest Editorial

Restoring and Re-storying the Landscape

by Gary Paul Nabhan

Find me the first vermillion flycatcher that sallies out from the canopies of newly-leafed cottonwoods and willows to pick off recently-hatched insects, and I will warble with delight: spring has come once again to the Sonoran Desert. "*Tut-tut tiddly-zing*," and it flutters out from a catkin-laden branch, hovers like a butterfly, dives to spear its prey, then whips back to the same branch. Such a sight, though, cannot be seen everywhere across the desert floor. It is restricted to the ribbon-like riparian corridors that roll out of the volcanic and granitic ranges to meander across otherwise dry basins. The lushness of greenery on a gallery forest floodplain, splotched with the reds, yellows and oranges of warblers, orioles, tanagers and flycatchers, is a sight for the sore eyes of one used to the greys and drab, subdued greens of a desert winter.

Down on the Mexican side of the desert, the first flush of foliage on cottonwoods and willows has added significance. It means, to a Sonoran floodplain farmer, that the new cuttings for his living hedgerow have taken root. Following the torrential floods brought by the summer monsoons and late fall El Nino downpours, the untamed river shifted course and meandered across his field edge, leaving his fields a mess. A few years before, he had planted a hedgerow along the riverbanks, weaving brush between the saplings to slow the force of any floods that spilled over the banks into his fields. Last year's flood did surge high, and uprooted a few of the willows in his line of defense. So in January he trimmed branches from the survivors to plant as poles a meter deep above the newly-formed bank at his field's edge. By late February they had rooted and soon after began to leaf out. Now, in mid-March, he sees insectivorous birds arriving and perching in the new growth, then foraging over his fields for bugs, which he sees as pests. The renewal he beholds gives him a feeling of fulfillment known to many of us who labor with plants and animals. It is a feeling that our well-placed efforts can contribute to the diversity within our surroundings, restoring habitat rather than further degrading it.

If you walk with an elderly Sonoran farmer out among the curvilinear hedgerows on the floodplain near his village, each row prompts a story of a flood, and how people healed the scars it left and planted more protective trees in their stead. He can rattle off the years of the great floods that have come within his own lifespan, and sometimes those since his father's time: 1887, 1890, 1905, 1914, 1915, 1961, 1977 and 1983. He can point to trees that

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were planted after each inundation. He reads the growth on the floodplain as if it were a history book recording the landmark years of flood and the patterns of recovery that followed.

Learning to read those rows of cottonwoods and willows is what makes a Sonoran farmboy literate. They not only convey the ethical heritage of his community, reflecting its close relationship with its natural surroundings, they remind him of his responsibility to add to life, not deplete it.

This kind of literate looking after the floodplain reminds me of an observation by Annie Peaches, an Apache Indian elder, who suggests that a relationship with the land can be reciprocal: "The land is always stalking people. The land makes people live right. The land looks after *us*."

But Apaches have traditions of looking after the land as well. Years ago, I heard of the time when an Apache work crew was told by their Anglo boss to take chainsaws down to the floodplain and cut down all the water-guzzling cottonwood trees there. When he went to check on them a few hours later he found them smoking cigarettes, sitting in the shade of the trees, not a single one cut. Pressed for an explanation of their refusal to cooperate, one of the workers finally replied, "Apaches can't cut down all the cottonwoods by this river. Something bad would happen to us."

Such a story sticks with the Apaches because the landscape they inhabit is full of stories, and they cannot pass a particular place without remembering the parable that goes with it. As Apache elder Nick Thompson told Keith Basso, "You won't forget that story. You're going to see the place where it happened, maybe every day if it's nearby . . . Even if we go far away from here to some big city, places around here keep stalking us. If you live wrong, you will hear the names and see the places in your mind . . . They make you remember how to live right, so you want to replace yourself again."

Stories, it seems, often play an important role in the relationship between indigenous people and the places they inhabit. In central Australia, zoologists Ken Johnson and Andrew Burbridge set out to learn what aboriginal peoples of one desert area knew about certain threatened mammals, for a third of the species in their area had disappeared during the last fifty years. The zoologists were interested in wildlife introductions, but their scientific predecessors had left few records of populations and distributions. Local aborigine elders, however, provided a vast store of information, reflecting lifetimes of being out in the bush observing animals. When it came to discussing bilbies, older aborigines sadly told how they had been abundant as recently as two decades ago, but had since become so rare they were rarely seen. They expressed a longing to see bilbies again, so Johnson proposed reintroducing animals from distant remnant populations back into the area. Now, with the help of the aboriginal men, who knew the bilby's former habitat, the Conservation Commission of the Northern Territory has successfully reintroduced bilbies into the central desert.

While the environmental and scientific rewards of the project would have made any wildlife biologist proud, Ken Johnson later heard from the aborigines something that made him even happier. Since the bilby had been reintroduced and sightings of it had increased among the aborigines, stories about them have begun to resurface in tribal memories, to be shared by the elders with the younger generations. The ceremonial "dreaming" reenactments of their culture's history of contact with other creatures had been reinitiated. A cultural revival of sorts was on its way.

Today, we can read in nearly any conservation newsletter or journal about efforts to reintroduce endangered plants and animals as part of larger efforts toward the restoration of degraded landscapes. This emergence of ecological restoration is, in my mind, the most important environmental development since the first Earth Day. It allows people to participate in healing the wounds left on the earth, acknowledging the human power to create as well as to destroy. But as restoration becomes more technically sophisticated, there is the danger that it will simply become another professional pursuit that excludes laymen capable of participating in effective grassroots community action.

That would be unfortunate because we need to restore not only landscapes, but the diversity-enhancing capabilities of the human communities inhabiting those landscapes as well. Like the Sonoran, the Apache, and the Aborigine, we must be encouraged to live and work like natives of our particular homeland. To truly restore these landscapes, we must also begin to re-story them, to make them the lessons of our legends, festivals and seasonal rites.

This is what the Land Institute is doing at its Prairie Festival in Kansas; what Steve Packard of The Nature Conservancy and his colleagues are doing with their rites of fire in the restored savannas outside of Chicago; what the Sinkyone Intertribal Park proposes for the northern California coast, and what our Native Seeds/SEARCH fosters through its native plant festivals in southern Arizona. To conserve the rarest or most vulnerable species, we must sustain the landscape processes that historically nurtured them. Humans can be participants in these processes, rather than mere bystanders, or the cause of their cessation. But they will not do this unless the sensitive species and the landscape processes have cultural meaning. Their value must be understood beyond the ranks of a few scientific specialists.

Story is the way we encode such values in our culture. Ritual is the way we enact them. We must ritually plant the cottonwood poles in winter to be able to share the joys of the vermillion flycatcher in the rites of spring. Re-storying the landscape will allow the roots of ecological restoration to grow deep within our consciousness, so that the floods of modern technological change cannot dislodge us from the earth.

This article is based on Mr. Nabhan's presentation in the symposium, Restoring the Heartland — II, held at the second annual conference of the Society for Ecological Restoration in Chicago, April 29 - May 3, 1990.