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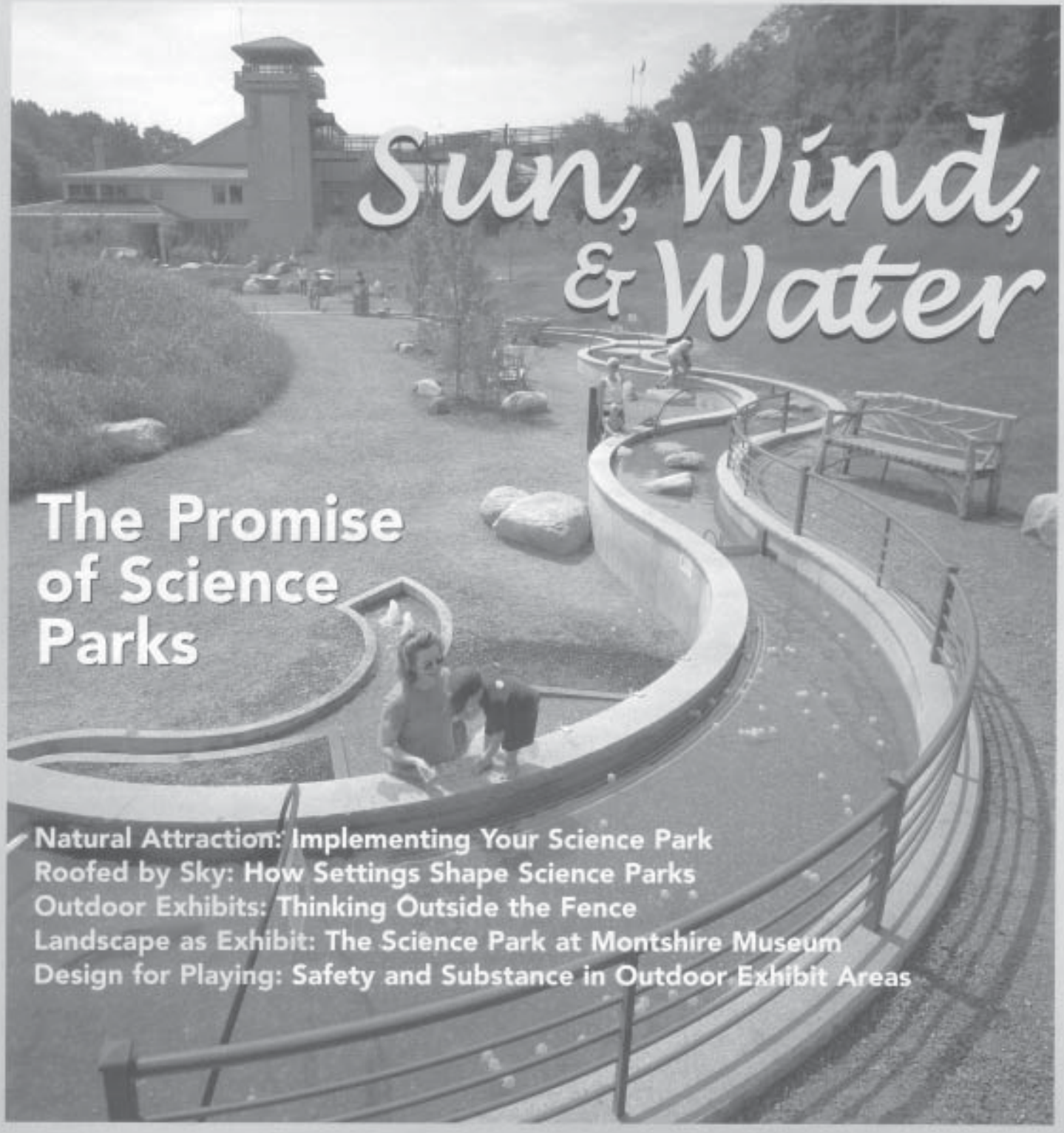

Sun, Wind, & Water

The Promise of Science Parks

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Landscape as Exhibit:
The Science Park at Montshire Museum

By David Goudy

There are many ways to offer visitors an experience of science out of doors. At the Montshire Museum in Norwich, Vermont, we planned our Science Park, which opened in July 2002, as an exhibit in its own right. We envisioned the new two-acre space as a transitional experience, one that would link the constructed world of the museum to the natural world of the surrounding landscape.

Just as a Roman atrium could be seen as a garden with walls or a landscaped room without a roof, so Science Park reflects a spatial and experiential duality. It is more open, more natural, more subject to the elements than the museum building it adjoins. Yet, at the same time, it is more constrained, more controlled, and more formal than the natural areas to which it leads.

Visitors young and old enjoy the water steps at the Montshire Museum's new Science Park.

A path of discovery

The Science Park design team, led by landscape architect Lynn Wolff, of Boston's Copley Wolff Design Group, and Montshire curator of exhibits Joan Waltermire, planned the new park to reflect its rural New England setting. The museum sits on a dramatic 110-acre tract along the Connecticut River, the state's eastern border. The sculpted landforms that shape Science Park, and the native materials utilized throughout—wood, stone, granite, and plant materials—were chosen to harmonize with the larger river valley and mountain landscape.

In keeping with the transitional theme, the edges of Science Park were intentionally blurred. Visitors move from manipulating hydraulic devices in the Rill, a winding, 250-foot-long artificial watercourse, to relaxing on a bench in a riparian forest, unaware of when they have left the built environment and entered the natural setting.

Also reflected in the design is Science Park's educational agenda: helping visitors to experience the patterns and complexities of the natural world. Many natural processes are so subtle that their inherent beauty and intricacy can be missed, or so common that curiosity about them is lost. Visitors who encounter Ned Kahn's Wind Wall, a 40-foot-high panel of shiny steel disks fluttering in response to bursts and streams of moving air, are apt to note the exhibit's resemblance to patterns visible in nearby wind-tossed trees. Or they may comment, as one did, that "it looks like water," making a basic connection about air and water as related fluid phenomena.

Other exhibits in Science Park support the intellectual transition from abstract indoor exhibits that model natural-world behavior to the natural world itself. Indoors, for instance, visitors can explore flow in the Flow Tunnel exhibit by moving various-shaped objects in a pearly fluid under glass and observing the resulting streamlines. Outside, in Science Park, they can plunge their hands directly into water and manipulate objects in the winding Rill. A few hundred yards away, on one of our interpretive trails, they can watch water tumbling around huge boulders as it flows from a natural brook into the Connecticut River.

Sounds in nature provide another example. In the controlled environment of Montshire's aquarium, visitors can observe frogs and listen to recordings of each species' songs. Outdoors, those who wonder how such small creatures can generate so much noise can try dramatic and surprising experiments with acoustics and resonance in exhibits like the Humming Stone, the Listening Tube, and the Resonant Pendulum. Then, farther along the path, visitors can pause on a bench beside a natural pond to enjoy a springtime amphibious chorus.

Photos courtesy Copley Wolff Design Group

The Connecticut River and surrounding woods and fields form a backdrop for the Science Park, seen here from the main museum building's tower.

Lessons learned

So complex a project demanded a lot of patience from the collaborators. Some aspects of the undertaking were classic landscape design, and some were clearly the domain of the exhibit designer, but most were a blend of both. Finding the right balance proved exceptionally challenging, especially given the museum staff's desire for rigorous prototyping.

Landscape architecture and exhibit design are disciplines that inherently respect one another but have little experience working closely together. The customary pacing and scheduling of a landscape project may not allow time for an exhibit designer to adequately test the exhibit aspects of a proposed design. Technical or cost issues that arise during development may induce modifications in the landscape that appear to be benign—yet turn out to compromise carefully prototyped exhibition elements.

At Montshire, with our many outdoor water features, the line between visitor enjoyment and participation and visitor safety was difficult to predict. In several cases, we were perhaps too successful with the former, at the expense of the latter. Generally operating on the assumption that providing many degrees of experimental freedom is a positive aspect of exhibit design, we didn't anticipate that some of our young visitors would find the Rill most enticing as a water slide, or that decorative boulders in the stream—intended for experiments in water flow—would inspire people to leap across their wet and slippery surfaces.

Look, Mom, I'm all wet! A Science Park visitor beams with delight.

Rather than impose rules and forbid behavior, we have attempted to analyze the unsafe behaviors and redesign those features to channel youngsters' interest in safer and more educationally productive ways. For example, by adding more experimental devices in the Rill, we have made it less appealing for body sliding, but more enticing for experimental hydraulic challenges. Rock hopping appeared to be, in part, a desire to cross the Rill, and bridges have now been added for safer crossings and more access to the stream flow.

In its initial season, Science Park was a stunning public success. Visitation was up by 40 percent, and visitor comments were highly complimentary. As a transitional pathway, Science Park has increased the percentage of museum visitors who spend time on the nature trails during the warm season from approximately 16 percent to nearly 80 percent. Already, the park has received extensive regional print coverage, as well as an article in the *New York Times* Travel Section, and it was featured in a television special by a major New England station.

Lessons learned from our first summer of operation resulted in a long list of improvements and modifications, including those mentioned above. Still, given the scale of the project, the list represents a reasonable level of remediation.

Questions remain to be explored, of course. Have visitors to Science Park increased their observation skills? Are they making more connections? Has curiosity grown? The museum has its own continuing path of discovery ahead, as these questions are answered and Science Park continues to evolve. ■

David Goudy is director of the Montshire Museum of Science, Norwich, Vermont. For more information, visit the museum's web site: www.montshire.org.