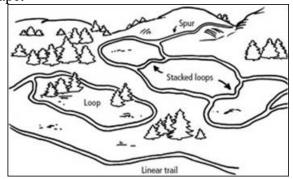# Designing an 'Experience' into a Trail

Trails link people and places, but perhaps more importantly, they provide an 'experience' to the user. A well-designed trail will create this experience by linking together a sequence of visual, physical and emotional 'events' that reflects the landscapes that the trail traverses, and fulfills the user's expectations. For example, a successful 'nature trail' might wind its way gently uphill through a changing landscape from field to forest before 'stumbling' across a hidden pond, and then loop along a tumbling stream before emerging from a hemlock woodland back at its starting place. An unsuccessful cross-country ski trail might be one that followed a relatively straight course downhill from the trailhead through only one type of woodland, to an un-impressive destination, and offers only a return slog back uphill to get home.

As with any sequence, a trail experience will have a beginning (initiation, anticipation); a middle (discovery, destination, accomplishment); and an end (culmination, reflection, realization). In building this sequence, all aspects of a site – the topography, views, water features, ecological communities, cultural sites, developed areas – should be used and will contribute to the trail's character. To be successful, the trail experience **must also** meet the expectations of the visitor in terms of desired mode of travel, level of difficulty, and length of trail.

Trails "Shapes" and Layouts
We begin designing our trail's sequence of events by considering its shape. A trail's shape is defined primarily by its purpose, ownership, and topography, but the shape will also influence and be influenced by the experience. Understanding the emotional response that various shapes induce is critical to designing trails that successfully mesh with the larger landscape**.**

(Trail Shapes: Graphic from "Trail Design for Small Properties"
www.extension.umn.edu/distribution/naturalresources/DD8425.html#1)

Linear Shapes
Linear trails are relatively straight shapes that cross the landscape from point to point. They provide the user with a sense of 'going somewhere' and are often used in a way that involves traveling 'there and back again.'

Bikeways often follow old rail lines, and are therefore very straight with little grade change. This provides a particular type of linear trail experience, and often meshes with more urbanized settings. This allows us to link together and interpret cultural and historical sites along the bikeway, and also provides an experience that is particularly suited to families, children, and a new set of wheels.

Long-distance trails, such as the Mid-State or Appalachian Trail, also tend to be fairly linear as they connect features and destinations over a long distance. They will often follow ridgelines or river corridors, and will thus provide a more rugged and challenging trail experience. They offer opportunities for long-distance views, and for exploring and experiencing a changing landscape at both a local and regional scale. These trails can also provide a special multi-day, 'through hiking' experience.
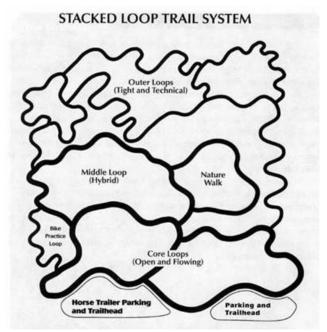
Spur trails are linear segments that take the user to a particular destination of interest and back, perhaps a summit or waterfall. They can also be added components to other trail shapes and can provide for some variation in the trail experience.

Loops
Loop trails allow the users to end up where they started without repeating any part of the trail. They allow us to create a trail experience without necessarily having a specific destination and, unlike linear trails, allow us to interpret different landscapes and features in both the beginning and ending phases of the sequence.

Stacked Loops
A series of loops that build upon each other, or a large loop with different connectors or 'cut-offs' along the way will create a stacked loop trail system. Staked loops can be an efficient design that allows for a variety of trail distances, difficulties and experiences in a relatively compact area. Stacked loops are often used when designing a trail system for a particular mode of travel (such as cross-county skiing, ATV's or mountain biking) because they allow you to integrate easier loops (closer to the trailhead) with more challenging loops (further a field), and create variety of different loop opportunities to increase potential mileage and provide the user with a sense of choice.

STACKED LOOP TRAIL SYSTEM

(Graphic from NEMBA
www.nemba.org/digitalnemba/images/StackedLoopTrails2.jpg)

Taking Advantage of Landscape Features
In addition to the broader concepts of trail 'shape,' good trail design also takes advantage of landscape features along the way to create that sequence of events and enhance the desired user experience. There are five primary design elements.

Terminus and Destinations
Every trail should have a clear beginning and end point. Loop trails may just have a single point, but may also have "destinations" along the way. Terminus points should give the user a clear sense of initiation and culmination. Destinations should be features, such as summits, views or waterfalls, that entice the users, and leave them with a sense of accomplishment.

Gateways
Gateways occur when natural or human structures constrain the trail and thus create a sense of "entrance." A bridge, a passage between two large trees, or a rail bed cut into a ledge, all create a visual gateway. Ideally, gateways will also occur or be created at or near trailheads to give the experience a sense of entrance.

Anchors

Landscape anchors are any vertical feature (a tree, boulder, wall, hill, valley, sign, etc.) that visually help to tie the landscape scene together and give it a sense of anticipation, interest and balance. Anchors can also serve as stand alone points of interest that draw attention and provide continuity from one visual sequence to the next. Designing the trail to take advantage of natural landscape anchors, such as interesting trees or boulders, and wrapping the trail from one anchor to the next, provides the trail with a sense of flow and purpose.

Edges

Edges are borders between landscape features or between ecological zones. The trail itself creates edges within the site. Examples of edges include borders between:

- − land and water
- − steep slopes and level ground
- − woodlands and grasslands
- − forest types or habitats
- − human features like fence lines and roadways

Edges often offer rich opportunities for trails. Following or subtly crossing edges enables the user to experience different aspects of a site in unison. Crossing an edge abruptly can provide a sense of mystery or surprise. Edges are also often ecologically rich and provide habitats for diverse plants and wildlife.

Viewsheds

Finally, views are one of the most important features we can build into our sequence of events. Taking advantage of compelling views and downplaying those that detract from the trail is all part of controlling the sequence of events that enhances the trail's recreational value. Managing viewsheds is also an ongoing maintenance issue and may, at times, conflict or coincide with forest management, wildlife habitat management or wetlands regulations. In these instances, it is important to define which viewsheds are important to the trail

experience and how those will be preserved and maintained over time as part of your site management program.

Pulling together the above concepts on the ground is where the fun in laying out trails begins. Trail shapes are usually defined by ownership and the trail's purpose. Obstacles, such as wetlands and property boundaries, often constrain your options. But exploring the possibilities of gateways, edges, destinations, and anchors to create a memorably sequence of events within a particular shape, can be a wonderful trail experience all on its own.

Tips and Tools
(Resources, links, and publications)
Trail Design for Small Properties, is a helpful University of Minnesota Extension publication. See more at
http://www.extension.umn.edu/distribution/naturalresources/DD8425.html.

Minnesota Department of Natural Resources Trail Planning, Design and Development Guidelines, is a 300-page spiral bound technical manual that covers all you need to know about designing and building trails. It can be ordered at
http://www.americantrailsstore.org/items/MNguide.html

IMBA's 10 Most Common Trail Building Mistakes:
For as long as humans have been following trails, they've been making mistakes on trails. Although our missteps usually only affect ourselves, when trail builders make mistakes, they affect everybody. Trail users, land managers, vegetation and wildlife all feel the sting of the well-meaning but inexperienced trail builder. We often see the same mistakes again and again, but the good news is they can all be avoided. In an effort to bury them alongside dinosaurs in the evolutionary graveyard, IMBA brings you the top 10 at
http://www.imba.com/resources/trail_building/top_10_mistakes.html.

Blazing the Way
2008 AmericanTrails.org Website Contest:
Interested in publicizing your trails-related website? Do you have a favorite website you'd like to see recognized?
American Trails is looking for great websites that support or promote any kind of trail activity:
- Individual trail projects or plans
- Organizations and clubs
- Community trail systems
- Educational, historic, and stewardship efforts
- Rail trails, snow trails, motorized trails, long-distance trails, hiking, bikeways, etc!
- Sites managed by individuals
- Trail-related businesses and products

Awards are given in several categories. Winners are recognized in the American Trails Magazine and may use the "Winning Websites" logo on their site. It's easy to enter! Just send us the URL, website name, and contact information for you and/or the webmaster. See all the details at
http://www.americantrails.org/webcon.html.

On the Trail Ahead
(Upcoming events and deadlines)
Moving Together 2008, the Massachusetts Bicycle and Pedestrian Conference,
October 14, Courtyard by Marriott Tremont Hotel, Boston, Massachusetts. For more information see http://www.ecs.umass.edu/baystate_roads/mt/.

National Trails Symposium, November 15-18, Little Rock, Arkansas. With speakers and presentations from across the country, the symposium will discuss a nationwide vision for trails and greenways, and address motorized and non-motorized trail issues.

8th Annual New Partners for Smart Growth - Building Safe, Healthy, and Livable Communities, January 22-24, 2009, Albuquerque, New Mexico. For more information, see http://www.newpartners.org/.

To subscribe, please email your contact information to paul.jahnige@state.ma.us.

Please also forward this to others who might be interested in Massachusetts Greenways and Trails.

Connections is the electronic newsletter from the Department of Conservation and Recreation's Greenways and Trails Program,
Paul Jahnige, Director
136 Damon Road
Northampton, MA 01060
(413) 586-8706 ext. 20
paul.jahnige@state.ma.us
www.mass.gov/dcr/stewardship/greenway/index.htm

Deval Patrick, Governor
Tim Murray, Lieutenant Governor
Ian Bowles, Secretary, Energy and Environmental Affairs
Richard K. Sullivan, Commissioner, Department of Conservation and Recreation
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