

Impressions from a Lost World, the Connecticut River Valley Trackway Plan:

Preliminary Concepts

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Introduction

This researcher serves as both a consultant to and member of the project team with the Pocumtuck Valley Memorial Association (PVMA), a nationally recognized history museum and library. PVMA is working in collaboration with institutional partners and other consultants on an ambitious National Endowment for the Humanities (NEH) preliminary planning grant (awarded in 2012) entitled “*Impressions from a Lost World*” under the *Interpreting America’s Historic Places Planning Project* program. With the focus to tell a compelling story about the early 19th century discovery of three-toed dinosaur tracks along a sixty-mile stretch of the Connecticut River Valley in Massachusetts and Connecticut, the innovative concept of a greenway plan as the vehicle to help relay this story is particularly exciting. The approach to the greenway concept with this project is unique because of the significance of the rich historic layers and the way they will be interpreted. This paper will convey the significance of the story of these early dinosaur track discoveries, so that the conceptual challenges to the future greenway planning process can be better understood. That process will also be guided by classic literature on greenways (Lewis 1964; Fabos 1996; Little 1990; Flink and Searns 1993).

Project Goals

As part of the current and initial planning grant, scholars are working to refine the humanities content, to create a unified image and identity for the project, and to suggest final formats for interpretative materials for the next anticipated implementation phase. The greenway plan, tentatively and innovatively to be called a “trackway,” weaves in the rich roots of the story of historic discoveries, while emphasizing the physical landscape where this historic richness can be read. Planned additional formats to augment the physical greenway plan include a web site, applications for hand-held devices, printed and iPod auto tours, promotional brochures/maps, and themed public events and artwork. Planning will also incorporate a detailed media plan for raising public awareness among diverse audiences. These interpretive materials will tell the story of the tracks’ discovery and subsequent controversies in an engaging way that will also connect identified individual sites around the Connecticut River Valley. The main interpretive goal is to present the story of the early discovery of dinosaur tracks in the Connecticut River Valley and

the profound impact of this discovery upon American thought and culture. A secondary goal is to reach a diverse audience, including repeat and first time users, in an engaging and effective way.

Historic Background of the Story

As PVMA wrote in the NEH planning grant proposal, the initial discovery of the “fossil bird-tracks” in the Connecticut River Valley had significance far beyond the emerging scientific community. The implications of these discoveries exerted revolutionary and profound effects upon religion, art, and culture in this country at the time. And these effects continue to reverberate on American culture today. The broad public appeal of dinosaurs can today engage a wide audience not only through the stories of the tracks’ discoverers, but also with the first public reactions to the finds. The discovery in 1802 of the tracks of small, carnivorous theropod dinosaurs of the Late Triassic – Early Jurassic was interpreted within an essentially biblical framework. Dubbed the tracks of “Noah’s raven,” the discovery was regarded as a curiosity. Reactions were quite different when, in 1835, more tracks, 30 miles north of the earlier discovery, caught the eye of a day laborer. These tracks were brought to the attention of professional scientists, who concluded the tracks had been made by large prehistoric birds. It was decades before the connection was drawn between these “bird tracks” and dinosaur bones found elsewhere.

More specifically the first appearance of the tracks in the historical record was in South Hadley, Massachusetts, in 1802, when a farm boy named Pliny Moody uncovered a set of footprints while plowing his father’s fields. According to local popular belief residents and clergy called them the tracks of Noah’s raven. Thirty three years later in 1835 and 30 miles further north, Dexter Marsh, a laborer and church sexton, while laying sidewalk in the town of Greenfield noticed footmarks in a slab he was just about to place. Instead of consulting clergy about the discovery, Marsh’s neighbor, a physician named James Deane, wrote to scientists in Philadelphia, Albany, New Haven, and then-new Amherst College. There Edward Hitchcock was professor of chemistry and natural history. Hitchcock’s subsequent paper on the tracks, published in *American Journal of Science* in January 1836, was the first paper on fossil “bird-tracks” in the scientific world. He studied the tracks and other fossil traces (raindrop impressions, mud cracks, insect trails, etc.) until his death nearly 30 years later, while along the way inventing a new subsience of paleontology called ichnology. And his precepts are still used today. Although Hitchcock lived to read Darwin’s *Origin of Species*, he had deep reservations about Darwin’s views on evolution. Still the two men had pleasant correspondence. Hitchcock’s second published response to the footprints took the form of a poem. Published in a New York literary magazine in June 1836, “The Sandstone Bird” told of a geologist who calls upon a sorceress to summon up the creature that had made the tracks; he envisioned a huge bird looking disdainfully at how small the world it had once inhabited now looked. Poems like Shelley’s “Ozymandias” remind us that poetic reactions to science, such as Hitchcock’s, were not uncommon.

So the scientist credited with discovering the fossil footprints, Edward Hitchcock, was a professor of chemistry and natural history at Amherst College and later its president. But he was also a Congregationalist pastor who viewed himself as a bridge between the Scriptural and scientific worlds. Hitchcock's career is thus a window onto mid-19th century convictions about the unity of knowledge. Hitchcock was a scientist of considerable achievement. For example, he organized the first geological survey of Massachusetts and cofounded national scientific institutions. Throughout his life, he remained confident that the worlds of science, religion, and culture could be integrated seamlessly; he believed in the essential unity of the various kinds of knowledge he sought. In the broader culture, that conviction about the unity of knowledge gave way to increasing specialization. The history of the footprints reflects this transition. In examining professionalization and specialization, PVMA will use the rather feisty struggle between Edward Hitchcock and James Deane, an amateur geologist, over who should receive official credit for the tracks' discovery, as an avenue for exploring issues of who "owns" science and controls its process.

Through Hitchcock and other figures in the story, PVMA will trace the shift away from Transcendental Romanticism, with its attitude of awe and mystery in the face of nature, and toward knowledge of natural history as a serious intellectual pursuit. The study of natural history alongside music, drawing, dancing, and other refinements in the 19th century provides a useful lens to view differences between men and women. The participation of women in this early science will be interpreted through the stories of Orra White Hitchcock and Jennie Arms Sheldon, who lived in Deerfield, Hitchcock's home town. Women's experiences with natural science also will be viewed through Mary Lyons, founder of Mount Holyoke College (1837) and close family friend of the Hitchcocks. Lyons included the study of sciences in the curriculum at her religiously orthodox female seminary from the beginning, and her students studied from a textbook written by Hitchcock.

Identifying Notable Sites in the Valley

To begin to list significant resources within this area, an abundance of rich sites is readily apparent. A windshield survey of notable natural and cultural sites includes:

- Amherst College Beneski Museum of Natural History, Amherst MA
- Barton Cove Campground, Gill MA
- Dinosaur Footprint Reservation, Holyoke MA
- Discovery Center, Turners Falls MA
- Dinosaur State Park, Rocky Hill CT
- Nash Dinosaur Track and Rock Shop, South Hadley MA
- Springfield Science Museum, Springfield MA

Other significant geologic sites well off the beaten path augment this list (Little 2003; McDonald 2010). Connecting the dots of these resources will not be difficult. Certainly care to protect the landscape, while promoting a new network for users, will need to be considered (Birnbbaum

1994). The major design challenge will be to interweave the historic layers together to tell the exciting story PVMA is unfolding. The Amherst College Library holds the single largest repository of document resources related to the Hitchcocks. Many of these resources have been extensively researched by one of PVMA's core scholars, Dr. Robert L. Herbert. He has written articles on the Hitchcocks and personally transcribed many of the Hitchcock letters, notes, and diaries. He also (with former Amherst archivist Daria D'Arienzo) co-curated and co-wrote the catalogue for a 2011 exhibit of the work of Orra White Hitchcock at the Mead Museum at Amherst College. His work on the subject will be extremely helpful toward informing and shaping the story. The research will serve as an inspiration to the design of the historic layers for the trackway, as well as possible artwork for the trackway.

Plans and Goals for the Trackway Study

To help teach this complex, multifaceted story about 19th century American nature study and science with its broader cultural impact, the team is formulating a plan for a physical trackway to interconnect all of the rich and sundry resources within the Connecticut River Valley in ways that are both accessible and engaging to a variety of people. Awaiting the outcome of the most recent NEH grant application (submitted in January 2013) before more serious work can continue, team collaborators are voluntarily working on preliminary concepts. Team member and artist Will Sillin has started collecting historic geologic tours within the study area. Over the next few months this researcher will coordinate with Will Sillin to brainstorm further ideas for both planning and interpretation related to the historic tour guides. An important part of this work will include conceiving ideas for future public art installations which can help enrich the visitor experience (Borrup 2006). Help for planning the artwork will be supported by grants and be aided by guides (Korza 2007). Art for the trackway could support three different purposes: 1. Explaining concepts of natural history, 2. Conveying found connections between nature and the arts, and 3. Inspiring entirely new expressions of art in response to the story. The first purpose will help visitors understand more about natural history and science through art installations. To that end an example might be an explanation of how fossil dinosaur tracks were formed. This could be an idea for one interpretive artwork along the trackway.



Fig. 1. Sketch showing how fossil dinosaur tracks are made from a dinosaur three-toed footprint in the sediment, track-bearing layer buried over time with the sediment hardening to rock, then the rock splitting apart with exposure to erosion at the seam of the original track-bearing layer, thus forming a negative mold and a positive cast.



Fig.2. The Dinosaur Tracks at the Nash site, where both negative molds and positive casts are viewable, could be more readily understood with the help of interpretive art as in Fig. 1.

Second more connections to the tracks and natural history in 19th century art, poetry and literary references will be studied and gathered to weave into public displays for the trackway, (as well as for the web site and for planned special events). Such interpretations through art installations can convey information, ideas, and insights. A third direction for trackway art will be to inspire artists to conceive new works in creative response to this history. When funding comes forward, there will be opportunities to develop the trackway more systematically. Preliminary ideas, the identification of resources, and the compilation of useful materials fuel this early conceptual stage. Hopefully, the Department of Landscape Architecture & Regional Planning will assist this project through greenway studios when new funding is secured.

Case Studies

To help plan for the trackway, this researcher has started compiling case studies which can offer ideas and lessons (Bischoff, 2008). As one example, the 1.28 mile “Walkway over the Hudson,” in Highland NY, <http://www.walkway.org/> offers an example of branding, utilizing the stylized image of its historic railroad bridge as a logo which appears on the designed entrance gates to the walkway. The logo also appears on Tee shirts, as well as on artistic metal plates on the benches

along the deck of the walkway, among many other places. The logo is also used with the developed “talkway” program developed to deliver innovative interpretive information. Visitors can take advantage of several daily use activities, including:

- Audio-Visual programs – “Talkway” Over the Walkway
- Bike riding
- Bird watching
- Dog walking
- Jogging
- Roller skating, in-line skating
- Picnicking
- River traffic observation
- Scenic Views
- Self-guided tours
- Train spotting
- Walking



Fig. 3. The Bridge Logo on the Designed Gate of the Walkway over the Hudson



Fig. 4. The benches along the walkway artistically integrate the bridge logo (as seen in the gate) on the footing of the bench on an artistic cast metal plate.

Conclusion

With the rich history to a variety of geologic sites the inventory of resources in the valley includes the likes of the Amherst College collection at the Beneski Museum of Natural to the Nash Dinosaur Tracks and Rock Shop. Through a comprehensive inventory of all the resources and sites the ‘trackway’ greenway plan will knit the pieces together so the rich, multifaceted story can unfold. With this rich, unique, and significant history, the trackway plan will make the history of the tracks themselves come alive, as well as their continually evolving interpretation.

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