

The Future of North American Geoparks

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Introduction

GEOPARKS HAVE PROVEN TO BE HIGHLY SUCCESSFUL IN OTHER PARTS OF THE WORLD, particularly in Europe and China. The greatest strength of the geopark initiative is the attention it brings to earth heritage resources and the resulting socioeconomic development that occurs in rural areas. The future of the North American geoparks has yet to be decided. Because the geopark idea differs from other park concepts in North America, land managers and the public will likely have many questions about the program. This article addresses some of these questions and is intended to help further the discussion about the future of North American geoparks.

What would be the structure of a North American geopark?

A geopark is a destination identity similar in concept to a national heritage area. Geoparks are defined by the underlying geology of the landscape and transcend the boundaries of parks and other protected areas. A geopark operates as a partnership of people and land managers working to promote earth heritage through education and sustainable tourism.

A North American geopark will not be a new category of protected area. The land remains entirely in the hands of local people and existing land management systems. Local, state, or national governments retain control of the public lands within a geopark. Private land remains in the hands of private owners. When an area is designated a geopark, it is managed through a bottom-up partnership approach.

Does a geopark only focus on geology?

A geopark is not just another geology park. A geopark encompasses a large geographical setting that includes not just geological sites, but also natural areas and cultural regions. The literal translation of “geo” is “earth,” and geoparks could also be described as earth-parks. They are areas where the earth’s processes have significantly affected ecosystems and human development.

How does a geopark differ from a World Heritage site?

The geoparks initiative differs from other United Nations Educational, Scientific, and Cultural Organization (UNESCO) programs such as the World Heritage and Man and the Biosphere programs. Countries wishing to join the geoparks initiative do not sign an official convention of any type, nor are sites required to participate. Furthermore, UNESCO does

not have any management jurisdiction over geoparks but serves strictly in the role of providing quality control for the international guidelines and designation criteria.

The majority of World Heritage sites are localities designated for their historical or cultural value. Geoparks typically embrace larger regions and might even include a World Heritage site within its boundaries. The reason for developing a separate initiative for geoparks is that many geoheritage sites of exceptional value do not meet the selection criteria for the World Heritage List.

What are the goals of the geopark initiative?

The geoparks program addresses several issues. First, people in rural areas often suffer from economic losses when traditional industries decline. This creates a need for alternative economic development strategies. Second, locals and visitors alike do not recognize the impact of geological heritage on the existence of ecosystems and the development of cultures. This creates a need for educational programs that employ inventive communication techniques.

Third, geological landforms are often ignored or appreciated only for their shape or aesthetic appeal. The names and histories of geological objects may be limited to colloquialisms and myths. Without an understanding of the science behind geodiversity, many people do not see the importance of geoconservation. People accustomed to protecting living plants and animals may be uninspired by inanimate rocks.

Figure 1. The U.S. contains numerous geological sites of international significance, such as Florissant Fossil Beds National Monument in Colorado. Many of these sites are not primary tourist destinations and can benefit from inclusion in a geopark. Photo by Heidi Bailey.



Why should North America be interested in the geoparks initiative?

Geoparks have the potential to spur economic development while conserving and promoting geological heritage sites. The U.S. contains many landscapes of national and international significance. Many of these sites are not primary tourist destinations (Figure 1). The geoparks initiative provides an opportunity for the U.S. to capitalize on this rich heritage to stimulate tourism in depressed areas.

The U.S. is experiencing an economic downturn. Fuel prices are fluctuating and the cost of living is higher. People will be seeking travel experiences closer to home and they will be attracted to something new. In addition, the growing popularity of geoparks around the world will make sites in the U.S. a draw for international visitors.

The geoparks initiative offers a way to revitalize small towns and jump-start the tourism industry in undervalued areas. And since a geopark is not a type of public land, it does not require a new agency or a large amount of funding to manage it. A geopark is a strategy for marketing and branding a region's existing programs and infrastructure. The goal is to create a new destination identity while promoting geoheritage education and conservation.

What will it cost?

The European Union (E.U.) has invested a significant amount of funds in the European geoparks program. However, the U.S. should not base cost estimates on the European model. The E.U. has needed to purchase land, construct trails, and refurbish buildings to use as visitor centers to jump-start their program. The U.S. is already blessed with an established system of protected areas, trails, and visitor centers.

A U.S. geopark system would enhance programs and infrastructure that are already in place. Costs would include assembling a geopark partnership and management plan, joint marketing and promotional materials, hosting a two-person evaluation team to approve the site as a geopark, sending a representative to meetings or conferences, and periodic reporting.

Who will manage the geoparks program?

In the U.S., the Geological Society of America has volunteered to assist with forming a national geoparks working group of agencies, geologists, nongovernmental organizations, educators, and the tourism industry. This working group would coordinate efforts with UNESCO and oversee the U.S. application process.

How will sites apply to become a geopark?

A geopark is created through a bottom-up, grassroots initiative. The people living in an area decide if they want to take on this challenge for the benefit of their communities. A geopark can be established by a volunteer coordination team made up of citizens, managers of public lands, businesses, universities, tourism enterprises, conservation groups, and scientific organizations. This team would create an identity for the area as an internationally significant geoheritage site. This team may already exist in the form of a scenic byway partnership or tourism association.

These local stakeholders work together to define a geopark's boundaries, create a desti-

nation identity, enhance educational programs, link sites to a menu of tourist experiences, and form a network of sustainable visitor services. Once this is in place, a site may choose to apply for membership in the Global Geoparks Network. Representatives of the Geological Society of America and the National Park Service are currently working on a set of guidelines that will outline the membership requirements and set forth application procedures.

What are the benefits?

One benefit is the international prestige that comes with earning UNESCO global geopark status. People living in economically depressed areas profit when tourists and governments recognize the value of these places. This creates an incentive for young people to build a future in their local areas due to increased employment prospects.

A second benefit is the exchange of ideas and resources. Geoparks have the opportunity to join in collaborations with sister sites around the world. For instance, the Vulkaneifel Geopark in Germany and the Hexigten Geopark in China formed a partnership to share research findings, management practices, and training programs.

A third benefit is the protection of geological sites, natural areas, and cultural traditions. When people are made aware of the beauty and fragility of the earth's resources, preservation and conservation programs thrive.

What are the challenges?

Due to differences in land management policies, North America faces a number of challenges in adapting the European model to create a geoparks network. Money for the European Geoparks Network was provided by the European Union in the form of regional development grants. In North America, financial support for protected areas is usually scarce and creative funding methods would need to be developed. It may be difficult to garner political support as public officials are faced with budget cutbacks and other urgent issues.

A second challenge is that communities may initially resist the geopark idea due to preconceptions about the term "park." In the U.S., people strongly identify the term "park" with city, county, state, and national parks. Thus, the term "geopark" may not be appealing to people representing agencies and interests outside of the park system. In addition, people may fear that establishment of a geopark will lead to issues of eminent domain and restrictions on land use.

Why would North America want to be involved with this UNESCO initiative?

The overall goal is to recognize and protect our outstanding geological heritage sites while also creating a new identity for a region as an internationally significant site. The Global Geoparks Network is a cooperative initiative and membership is entirely voluntary. Sites apply for geopark status to gain recognition and support from UNESCO, but other than setting membership guidelines, UNESCO does not have a role in management. Acceptance into the Global Geoparks Network is an accolade that fosters local, regional, and national pride in the host country. Local people benefit from the prestige of achieving geopark status and the mark of quality indicated by the Global Geoparks Network brand.

What are some examples of programs that existing geoparks offer?

Many European geoparks offer programs to promote earth conservation, education, and tourism. Among the most popular are:

- **GeoCulture** The most innovative aspect of a geopark is the focus on culture. Geoparks sell local products, train local guides, and encourage local communities to provide services. Geoparks focus on the relationship of geology to cultural elements, such as the distinctive flavors of regionally produced wine. Trips to castles, monasteries, and other historic buildings are a highlight. Geoparks also celebrate musicians, writers, and artists whose work is inspired by the landscape.
- **GeoRoutes** European geoparks are areas that encompass large landscapes with a shared geological heritage. Visitors are encouraged to explore these landscapes by following routes that link various geological sites. GeoRoutes offer driving tours or walking/cycling trails that focus on the geology and unique landforms of a region. The routes provide an opportunity to promote sustainable tourism in towns located within a geopark.
- **GeoRecreation** Geoparks offer outdoor recreation activities that allow participants to actively celebrate earth heritage by engaging in geology-oriented adventures. Geoparks add a thematic element to ordinary recreational activities such as hiking, mountain biking, kayaking, rafting, rock climbing, horseback riding, and even paragliding. These activities are often referred to as GeoAdventures and may be offered by local tourist providers.
- **GeoKids** Geoparks offer programs for kids with activities related to geology and landscape. For example, older children are involved in geoparks through the Rock Detectives program and younger children are engaged by cartoon characters that go on adventures (Figure 2). These characters introduce geology in storybooks and puppet shows and are quickly becoming important mascots for members of the European Geoparks Network.

What are the greatest strengths of the geopark initiative?

The most appealing aspect of the geopark concept is the inclusion of people as an integral part of the equation. Local history—including extraction and exploitation of geological resources—is respected as part of a region’s heritage. In addition, living culture is embraced along with the natural environment. Too often preservation and conservation programs exclude the needs of the people living in the local area. A geopark seeks to balance both.

The strength of the geopark initiative is in its ability to foster socioeconomic development by drawing international attention to a region. The theme of a geopark is *Celebrating Earth Heritage—Sustaining Local Communities*. Businesses within a geopark integrate their products into the geological heritage of an area. Geoparks create tangible economic benefits for residents by promoting these local products and services.

Why would geoparks be attractive to tourists?

To create a high level of interest as a tourism destination, geoparks intermingle earth science

Figure 2. Young children join characters such as Willi Basalt and Fiora Eocene on geologic adventures through the geoparks. Images courtesy of Marie-Luise Frey.



themes with cultural and natural themes. For instance, wine tasting tours offer a glimpse into the effect of minerals on the flavor of wine. A nature center program reveals how the habitat of a favorite animal is directly influenced by the shapes of landforms. An art exhibit demonstrates the ways that elements of the landscape are reflected in different artistic periods. Geoparks are attractive to tourists because of their focus on the relationship between people and the landscape.

Are the U.S. and Canada moving toward a system of geoparks?

In 2005, researchers from the U.S. toured several Chinese earth heritage sites to see if members of the Global Geoparks Network differed from other geological parks in China. The researchers found that “sites designated as World Geoparks were vastly superior in terms of protecting geological heritage, balancing economic and tourism development, and educating the public” (Partin, Robinson, and Meade, 2006:16).

In 2007, a meeting at the U.S. State Department Office of UNESCO Affairs first brought together representatives of the Geological Society of America, the National Park Service, and the Bureau of Land Management to discuss the geopark initiative. The core working group met again in 2008 and in 2009 the George Wright Society hosted a panel discussion on geoparks at its biennial conference.

Currently, the U.S. is in the process of gaining further information, garnering support, and drafting program guidelines. As a U.S. geoparks program will look slightly different from other national systems, several U.S. government agencies and scientific organizations are researching and discussing the benefits of inclusion in the global initiative.

Representatives from Canada attended the First International Conference on Geoparks that was held in Beijing in 2004. Since that time, Canada has been engaged in a similar process of gaining further information and garnering support.

What types of sites would apply?

Geoparks are large regions unified by the outstanding geology of the landscape. An example of a region that might apply for geopark status is the Gold Belt Tour National Scenic Byway in Colorado. The area encompasses world-famous fossil sites, the remnants of extinct volcanoes, a gold mining district, crystalline basement rocks, layered sedimentary rocks, uplifted mountains and ridges, and deeply eroded canyons.

Sites of geological interest such as the Gold Belt Byway attract only a small portion of the tourist population visiting the surrounding area. By creating a new identity that links the geology to the cultural and ecological attractions in an area, the region has an opportunity to

attract a larger amount of tourists. In addition, visitors to geoparks around the world will be made aware of the site.

What are the application requirements?

Although U.S. and Canadian guidelines have not yet been developed, the requirements will likely be similar to UNESCO's. A summary of the international guidelines follows.

Setting and size A geopark must have well-defined boundaries and encompass a large enough area to sustain local economic development. Geological sites may include rocks representative of historic earth processes, mineral resources, fossils, individual landforms, or entire landscapes. Sites with a relationship to geology and landscape themes may also be included. These include places of ecological, archaeological, historical, or cultural significance.

Management A geopark is managed by a partnership entity such as a scenic and historic byway association. Core areas within a geopark are managed as parks, forests, wilderness areas, wildlife refuges, or other existing public land designations. Sites within a geopark must have management and interpretive plans to protect the resources and to make geological features accessible to the public.

Economic development Geoparks partner with local people to encourage culturally and environmentally sensitive tourism. Members of a geopark promote local products and sponsor cultural events centered on earth heritage. Geoparks have the potential to create new jobs by stimulating the growth of small businesses and training local people as guides or other service providers.

Education Members of a geopark must offer educational programs to universities, school children, and the public. Geoparks provide field trips to students and create resource materials for teachers. Sites within a geopark communicate earth science concepts to the public through interpretive centers, tours, trails, and media.

Protection and conservation The people and governments of a nation protect geological resources in accordance with existing traditions and legislative requirements. Quarrying or mining sites are operated according to existing national or international regulations. Geoparks work with local craftspeople to create casts, imprints, and other products to discourage the collecting and unsustainable trade of geological objects.

Reporting and periodic review Members of the Global Geoparks Network provide updates about the ongoing work of the geopark in order for UNESCO to publish educational and tourism information about the site. In addition, each site receives a review every four years to ensure the geopark is continuing to fulfill membership guidelines.

Conclusion

The United States is viewed internationally as a leader in site protection and park management. Thus, UNESCO and the Global Geoparks Network are eager for the U.S. to join this global conservation initiative. It is important to note that while the UNESCO World Heritage program is governed by a binding international treaty, the geoparks initiative is not. If the U.S. approves a geoparks program, participation at the local level is entirely voluntary

and private property rights are honored. The next step for the U.S. is to initiate discussion with sites that are interested in the program and to develop a set of guidelines.

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