

단 보

A Study on the Possibility as a Site for Geopark in Korea: Byeonsanbando National Park

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국내 지구공원 적지 가능성 연구: 변산반도 국립공원

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Abstract: The UNESCO's earth science division has developed the geoparks program to recognize earth scientific heritage sites worldwide. To respond to this movement, I suggest Byeonsanbando National Park (BNP) as the first geopark in Korea and provide, at the same time, a line of evidence supporting the designation of geopark. BNP has the best qualifications with geological, geomorphological, ecological, and cultural resources. In Chaeoseokgang and Jeokbyukgang, there are many geological and geomorphological resources attracting the scientific importance. In addition, BNP has a total of 844 species of wild plants and 550 species of wild animals. Cultural properties abound in BNP, including Koryo bronze bell of Naesosa and Taeungjon hall of Kaeamsa. To be designated a geopark by UNESCO, a management plan of geotourism will be required in addition to the geological, geomorphological, ecological and cultural resources, which should be prepared by the Korea National Parks Service and related local government authority. If the above-mentioned conditions are met completely, Korea would enter the global network of geoparks for the first time.

Keywords: Geopark, Byeonsanbando National Park, geotourism

요 약: 유네스코의 지구과학분과는 세계적으로 지구과학적 유산을 알리기 위해 지구공원 프로그램을 개발해왔다. 본인은 한국에서 최초의 지구공원으로 변산반도국립공원을 제안하며 지구공원의 지정을 가능케하는 증거들을 제시하고자 한다. 변산반도 국립공원은 지질학적, 지형학적, 생태적, 문화적 자원들을 보유하고 있다는 장점이 있다. 채석강과 적벽강에는 과학적 흥미를 유발하는 많은 지질 및 지형학적 자원들이 부존되어 있다. 게다가, 변산반도 국립공원은 844종의 야생식물과 550종의 야생동물을 보유하고 있는 생태계의 보고이다. 내소사의 고려 동종과 개암사의 대웅전을 포함해서 문화유산도 풍부하다. 유네스코의 지구공원으로 지정되기 위해서는 환경부산하의 국립공원관리공단과 관련 지방자치단체 주도하에 지질, 지형, 생태, 문화자원외에도 지질관광의 운영계획도 요구된다. 상기한 조건들이 충분히 충족되면, 지구공원의 전지구적 네트워크가 한국에서 최초로 구축되리라 생각된다.

주요어: 지구공원, 변산반도 국립공원, 지질관광

Introduction

It is well known that UNESCO's division of earth sciences supports member states in the areas of both sustainable management and development of the

Earth's mineral and energy resource as well as hazard mitigation. As a continuation of existing national and international agenda for the conservation of nature, UNESCO's earth science division has organized the geoparks program to recognise earth heritage sites worldwide (Baxter, 2000; Pretes, 2002; Hudson, 2004; Dowling and Newsome, 2006).

This program has the two objectives of improving the value of sites which consider as key witnesses to

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the Earth's history while creating employment and local economic development. At present, it is reported that UNESCO's geopark is awarded to approximately twenty territories every year.

The requisites for UNESCO's geopark generally include the following criteria. First, it should be a territory with sites of scientific importance, not for geological grounds but also by its ecological or cultural value. Second, it should have a management plan to encourage sustainable socio-economic development based on geotourism. Third, it should provide methods for protecting and promoting geological heritage with a teaching plan for geoscientific disciplines. Fourth, it should be proposed by public authorities, local communities and private interests acting together. Fifth, it should be part of a global network in respect of earth scientific heritage conservation and sustainable development (Frey, 2000; Komoo et al., 2003).

In this paper, I suggest Byeonsanbando National Park (BNP) as a site for the first Geopark in Korea and provide a theoretical basis to support the designation of Geopark.

Outline of the Byeonsanbando National Park

Byeonsanbando National Park stretches 35 km and through five townships along the coast (Fig. 1 and 2). Established as a national park in 1988, it is the only national park in the country that has both a seashore and mountain in it. The park is divided in two large sections. The shore area is called Oebyeonsan, and inland is called Naebyeonsan. The main tourist attractions at Oebyeonsan are Chaeseokgang and Byeonsan Beach. Chaeseokgang is named because the sedimentary rocks have been formed by the waves of the ocean over a very long time, and resemble hundreds of thousands of stacked books. Byeonsan Beach has such very fine sand that it is picked as one of the three most famous beaches on the west coast. Many tourists are also attracted to the pine forest along the beach perimeter. On the other side is Naebyeonsan, which has the Jikso Waterfall and

Gaemsa Temple as two of its many attractions. Naebyeonsan is especially famous for its waterfalls, valleys and lush woodlands. The greatest charm that keeps tourists coming to the Byeonsanbando National Park is that they can enjoy the ocean as well as the mountains here. This park is a unique peninsula nature park where mountain and coast create the beautiful scenery. Byeonsanbando National Park is situated in the southwestern coast of Korea. The 156 km² area includes the coastal and adjacent mountain regions. Oebyeonsan area that has the coast and sea view, together with Naebyeonsan area, with some mountain peaks (altitudes of 400~500 m) create a grand sight. The great sights produced by the coasts and mountains are not the only merits of this park. Diverse ecosystems and the cultural resources of historically famous temples are located here also. Around 40 km of the coast is in the form of a peninsula. The hills and beaches along the coast are most attractive. The special attraction of the area results from a combination of the white sands, the clear water and the cliffs, which obviously were formed by the erosion of the sedimentary rock by the salty water and which resemble a pile of 10,000 books. Chaeseokgang refers to a rocky cliff and the sea around it, situated in the Gyeokpohang and Dalkibong areas on the Byeonsan Peninsula. In Naebyeonsan area, there are about 10 peaks (400 m in height) including Ongnyeobong, Gwaneumbong, Sinseonbong, Uisangbong (508 m, the highest peak). This area also has Bongnae valley and Gamaso valley. Jikso falls and Seonnyeotang at Bongnae valley area the main tourist attractions (<http://www.npa.or.kr/pyonsan>; Korea National Park Service, 1999; Ko, 2003).

Possibility as a Geopark of Byeonsanbando National Park

As mentioned above, UNESCO's Geopark have the following condition; 1) be a territory encompassing one or more sites of scientific importance, not just for geological reasons but also by virtue of their archaeological, ecological or cultural value; 2) have a

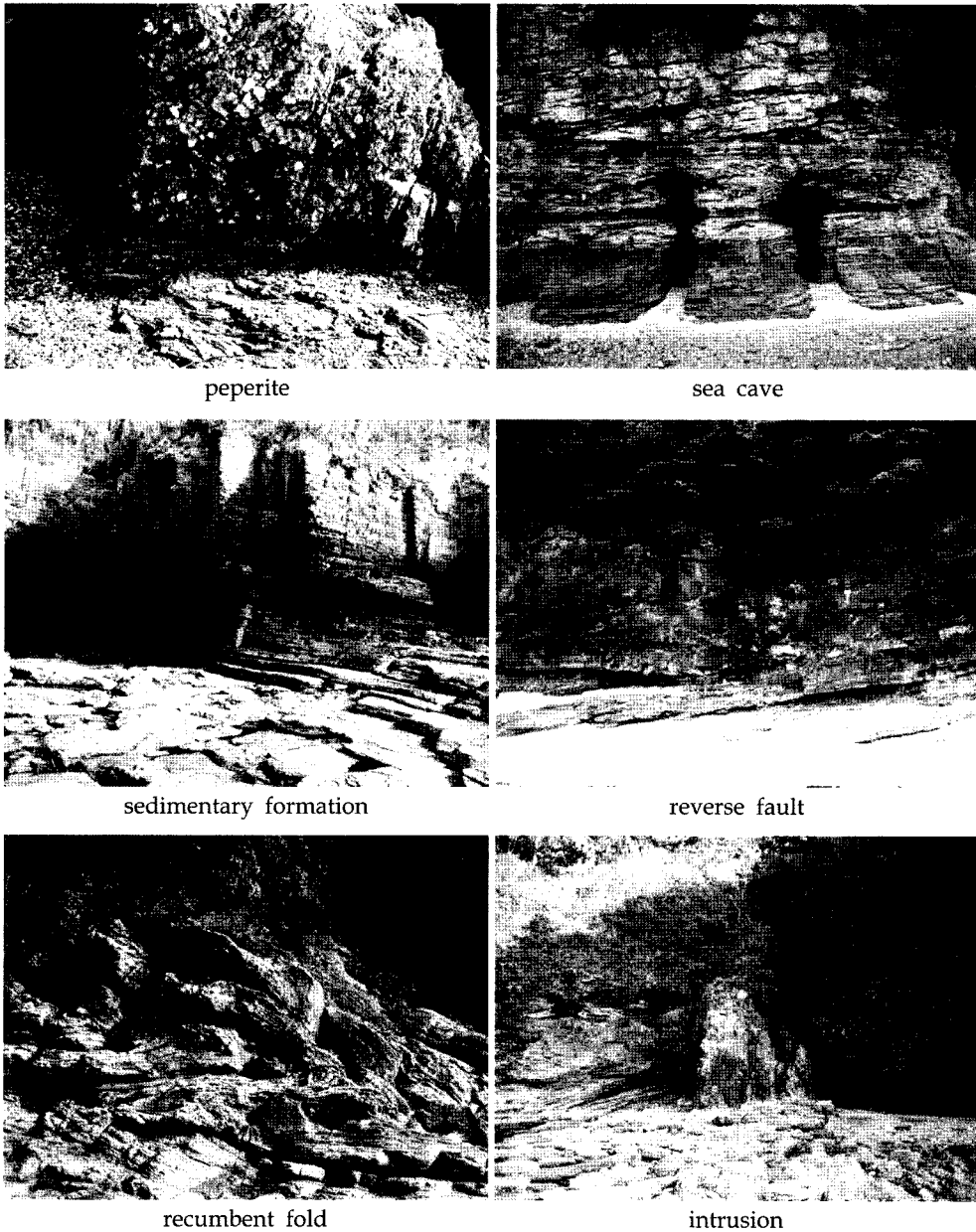


Fig. 3. Geological and geomorphological resources in Byeonsanbando National Park.

National Park Service, 1999).

In terms of the second condition, the management plan of geotourism has the following conditions. These are 1) to promote the activation of developing user-oriented geotourism sites, 2) the monitoring on demographical characteristics of geotourists, behavioral characteristics of geotourists within geotourism site and the analysis for developing geotourism program

and event. And, the Korea National Parks Service and related local government authority should cooperate to prepare the management plan on geotourism.

In terms of the third condition, the support of geological engineering dealing the estimation of weathering degree and development of conservation techniques for the object of geotourism will improve the activation of geotourism for conserving and

enhancing geological heritage. The natural interpretation program operated by the Korea National Parks Service will provide a means for teaching geoscientific disciplines and broader environmental issues.

In terms of the fourth conditions, the consortium among the public authorities, local communities and private interests should be organized to improve doubling the effect of geotourism.

Finally, if the above-mentioned conditions are satisfied, the global network of demonstrating and sharing best practice in respect of Earth heritage conservation and integration into sustainable development strategies will be constructed.

Summary and Conclusion

UNESCO's division of earth sciences provides member states with support in the areas of both sustainable management and development of the Earth's mineral and energy resources. As a logical extension of existing national and international initiatives for the conservation of nature, UNESCO's earth science division has devised the Geoparks program to recognize Earth heritage sites worldwide. I suggest Byeonsan Peninsula National Park as the first Geopark in Korea and provide the evidences supporting the designation of Geopark.

Byeonsanbando National Park has the best qualifications consisting of geological and geomorphological, ecological and cultural resources. In Chaeseokgang and Jeokbyukgang, there are many geological and geomorphological resources such sedimentary formations, peperite, columnar joint, sea cave, head land, reverse fault, intrusion etc. These resources have the scientific importance for geological and geomorphological reasons.

Byeonsanbando National Park has a total of 844 species of wild plants, 125 families, 444 genera, 738 species, 1 subspecies, 93 varieties, and 12 kinds, making it an important area to understand geographical distribution of Korea's wild plants. And, there are a total of 550 species of wild animals, including mammals, birds, insects, amphibians, reptiles, and

fresh water fish.

Cultural properties abound in Byeonsanbando National Park, including Koryo bronze bell of Naesosa (treasure No. 277), Taeungjon hall of Kaeamsa (treasure No. 292). There are also historic sites such as Yuchon and Chinso pottery kilns sites, which produce prototype celadon and inlaid celadon of Koryo porcelain.

In order to designate the Geopark, The management plan of geotourism will be needed in addition to the geological and geomorphological, ecological and cultural resources. These plans must include the promotion of the activation of developing user-oriented geotourism sites, the monitoring on demographical characteristics of geotourists, behavioral characteristics of geotourists within geotourism site and the analysis for developing geotourism program and event. And the Korea National Parks Service and related local government authority should cooperate to prepare the management plan on geotourism.

And, the support of geological engineering dealing the estimation of weathering degree and development of conservation techniques for the object of geotourism will improve the activation of geotourism for conserving and enhancing geological heritage. The natural interpretation program operated by the Korea National Parks Service will provide a means for teaching geoscientific disciplines and broader environmental issues. The consortium among the public authorities, local communities and private interests should be organized to improve doubling the effect of geotourism (Heo et al., 2004; Heo et al., 2005; Heo and Kim, 2005).

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