

Academic Resource Value of Caves

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1. Introduction

A cave is a natural hole which is formed under the ground. Unlike the ground environment, its stratum has been formed since early times and exists under the ground as it is. Thereby the cave is a site that we can investigate the structure and array state of the geology in itself.

2. Natural Learning Place

The ground surface is continuously changed because of natural and artificial actions including the atmosphere. On the other hand, an underground cave is always dark, is seldom changed in temperature and humidity and further no environmental destroy by human beings. Therefore, it has completely preserved the original appearance when the stratum was formed.

Although the cave exists under the ground, the cave's inside may be environmentally damaged or destroyed if earthquake activities or crustal activities occur in the region. This implies that the internal environment of the cave may be changed physically or chemically.

However, the cave's inside has been preserved under the condition that it is always dark and constant in temperature and humidity. Thereby the geological and geographical environment in the cave might be seldom changed. Collapse and dropping of strata by a cave-in of bedrocks of forming strata may just extend the scale of this cave widely and result in forming a so-called plaza cave.

Accordingly, in the cave, we can observe the array of strata compacted early times,

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the sediment state, the rock material and component of the strata, various landforms and things, and micro-landforms as they are.

Also, the underground water stream of seepage resulting in forming cave flows out along the stratigraphic surface, makes various micro-landforms by a physical agency which causes lateral erosion, and also grows cave creatures by chemical activities including the component of the rock stratum's materials.

The most academic value of the cave is that the ecology of the cave, or underground water living creatures can be observed as they were. The cave's inside is constant in temperature and humidity, the subterranean of anticancer, and seldom affected from the ground surface. Thereby, there are underground water living creatures which characterize long feelers, and blind and tiny bodies. In addition, we can observe cases(*Galloisiana biryongensis*) that insects which had inhabited only on the ground in several ten million years ago still live in the cave. This can be thought because the underground environment have reduced the evolution of living creatures.

Also, paintings on the cave wall, and the bare ground or bone fossils in the bottom are still discovered and excavated. This represents that the cave was used for a dwelling site of our ancestors. Therefore, the cave is highlighted for an academic observation site of all natural science fields.

3. Tourism and Cultural Value

The cave is a frightful and dark and mysterious underground world. Therefore, it is an underground pandemonium of making us thrill and also grows splendid second creatures such as soda straws, stalactites, stalagmites, and stone pillars as if it is an underground palace. Thanks to this, the cave is also used for a tourist resource which we can see the real facts of the silent and gloomy and majestic subterranean escaping from the complicated ground world.

The cave is also a sanctuary of arts. This may be heard for an exaggeration. But the cave may be regarded as an exhibition hall of composite art of treasuring various art works. The cave reminds us of a dark, gloomy, frightful, and unknown world, and the subterranean world with perpetual mysteries as they were. Our ancestors,

however, had kept the close relationship with this cave from old times.

The cave was used for prehistoric dwelling sites, thereafter refuges, meditation places, warehouses, and operation bases, etc. Our ancestors in the far past had lived around the cave's entrance to protect from coldness on the ground. These days, numerous wall paintings of leaving on the cave's wall demonstrate the fact. Stonewares and bone fossils being discovered around the cave's entrance are cases which support it. There are many animal paintings on the cave walls where the ancestry had lived. They are colored very realistically and preserve the original splendor until now.