

# Characteristics and Types of Caves in South Korea

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## I. Introduction

The research of caves widely deals with geomorphology, meteorology, geology, biology, archaeology and physiochemistry. Most famous caves in Korea are in Dongrong Cave in Yongbyun-Goon in 1929, Sungru Cave in Uljin in 1960s. Lava caves were developed as Gymrung Sa Cave, Manjang Cave and Hupje Cave in Cheju Island. Limestone caves, Gosi Cave, Gosu Cave, Nodong Cave and Chundong Cave, were developed for the commercial purposes. Visiting and researching caves are active in Korea. Caves will more be commercialized than before.

## II. Cave Distribution and Types

Caves are roughly processed, and formed. They are classified into natural caves and artificial caves. Types of caves are classified into limestone caves, lava caves, wave caves, joint caves and so on... In addition, steeper caves are more popular than horizontal caves in Korea. In geologic structure perspective, caves develop in different ways, based on layer, faults, joints or all combination of those. Limestone caves are referred as lime caverns and prevail primarily in carbonate areas. More than 1,000 limestone caves are distributed in all over the country, but they have not been explored completely. Limestone Caves are created by water which penetrates into carbonate rocks and dissolves limestones. Stalactites, stalagmites,

and columns in most limestone caves in Korea.

Lava tubes in igneous rocks become lava caves as a result of volcanic eruptions. Outside of lava caves has hard-crusts, but the inside of caves are empty like pipes.

Wave-cut caves are largely assorted into sea erosion caves and luvio-caves. Most of sea erosion caves were formed by a result of erosion and by sea water and waves which had been made in sea cut flatfom by reverse fault, are made in shale of Paleozoic, had been erosioned by underground water.

In addition, there are joint caves which is created by a result of erosion by thawing and freezing. Most joint caves are largely founded in the joint of granites. Artificial caves were made as deeds of human beings purposes that are for industrial and army purposes.

Summing up these, caves are sorted to former descriptions. Having been spoken about limestone caves, such as Gosu Cave, Gosi Cave Wham Cave, Chodang Cave, Yusun Cave and Gunum Cave, they have a strong correlation between teclonics (Oh. 1993). In case of huge lava caves, there are examples that are Bilaemoc Cave, Manjang Cave, Gumyonsa Cave and Hupjae Cave in Cheju Island. Joint caves, the major example, are as Baggee Cave in Pochun.

### III. Characteristic of Caves

Both limestone caves and lava caves in Korea have been at the completely different. Limestone caves have been mainly distributed in the Ganwon prvince at Chodang Cave, Yusun Cave, Gunum Cave, Yonjee Cave in Samchuck-Gun and at Gumrung Sa Cave Wasan Cave, Hwangum Cave, Gulin Cave, Sorun Cave in Yongwal.

Pseudo-caves have been chiefly shown at Gaema-gowan in North Korea region,

Hapgog area in Hwanhae Do, Chulwon area in Gangwan Province, and so on. Especially, the length of Manjang Cave(lava cave) is nearly 7km. The cave is very characteristic in landforms. Where stragmites grow up, because sea shells of the seashore, which is piled up on the ground, had been penetrated into the tunnel. So there are many pseudo-stratites often developed by weaking about lava cave ceiling. Cave enterences on Cheju Island in Korea are made not gas explosion like the other mations, but collaps of ceiling after lava flowing away. The lava caves are very long and narrow that discovered as the longest caves in the world.

It is mainly characteristic that the most of lava caves in Chejudo are aggregately distributed at Hyupjaeri south-westin Cheju west-north and around Gumrung in Cheju Island east-north.

#### IV. Environmental Point of View

Caves are not only Donrong Cave on Yonbyun area in North Korea, but also Sungru Cave, Gosi Cave, Gumrymgsa Cave and Hupjae Cave in South Korea, are developed as commercial caves. Caves, which are Hwam Cave in Jungsun, Gosu Cave in Danyang, Chodang Cave in Samchuk, Chunho Cave in Junbuk Igsan, and so on, are recently developed as commercial caves.

Caves are absolutely needed to study in multi disciplinary of geography, biogeomorphology, archaeology, and so forth. The more developed are caves, the less are the value of caves. Moments of tourists get not only these caves be closed, but also ecosystems of cave biocenoses be charged.



Finally, the ecosystems are reached to absolutely effect by former factors. Therefore, among caves which have been ever opened to men and have no value of researching for study, and choosing caves, which are conveniently located for transportation and have a value of landscapes for tours. It is more needed that the

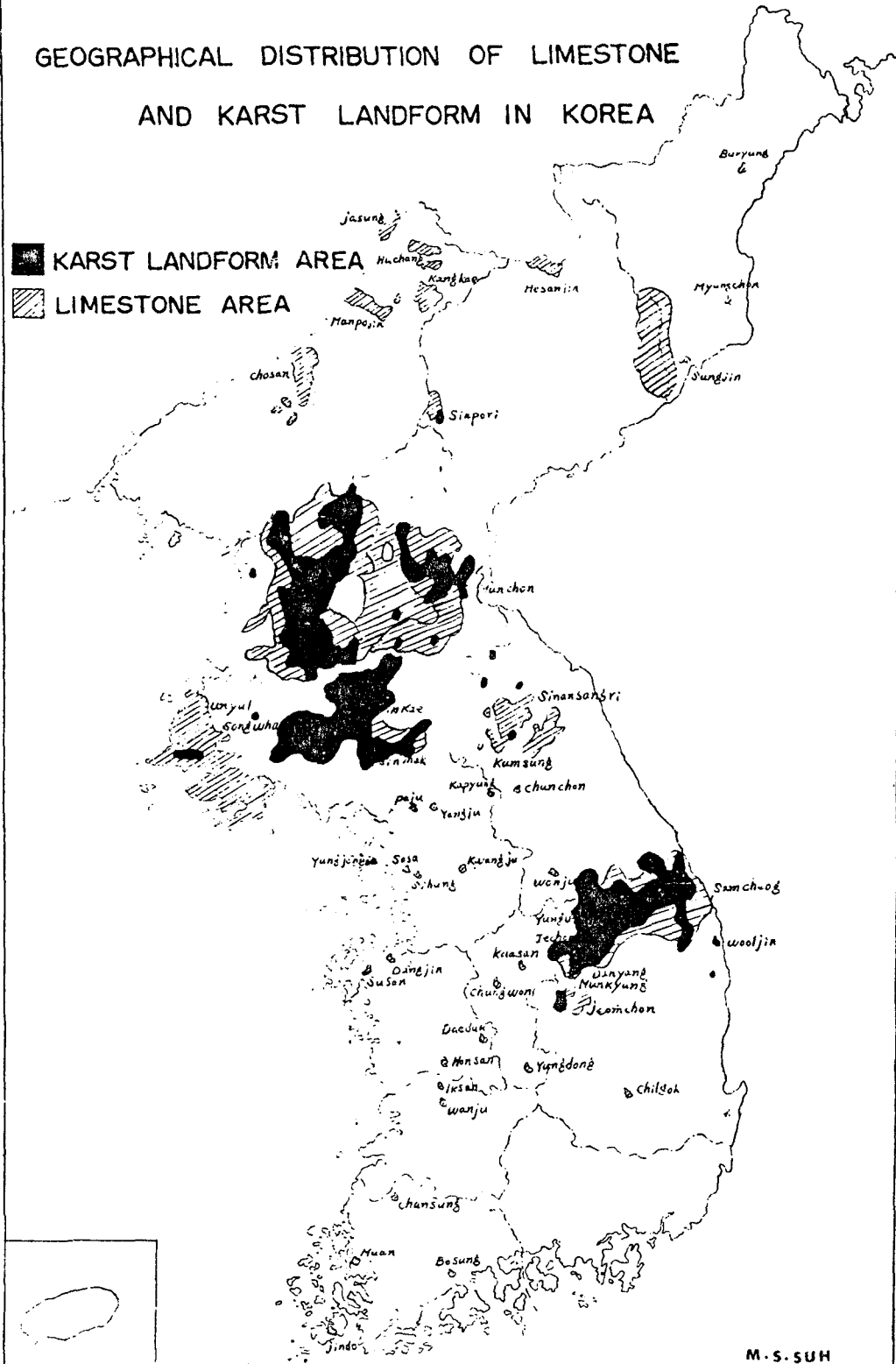
caves are developed to maximize benefits through tourism to use the caves. If the caves will be not known to many peoples, to research for study, caves will be externally treated for guarding the values of ecosystems, and so on.

## V. Conclusion

The characteristics of caves in Korea display many different types. Geologically faulted and folded beds consist of significant shapes of cave interiors : curved, vertical, multi-level subterranean. Lava caves in Cheju present as huge numbers, huge sizes, long length and calcite formations.

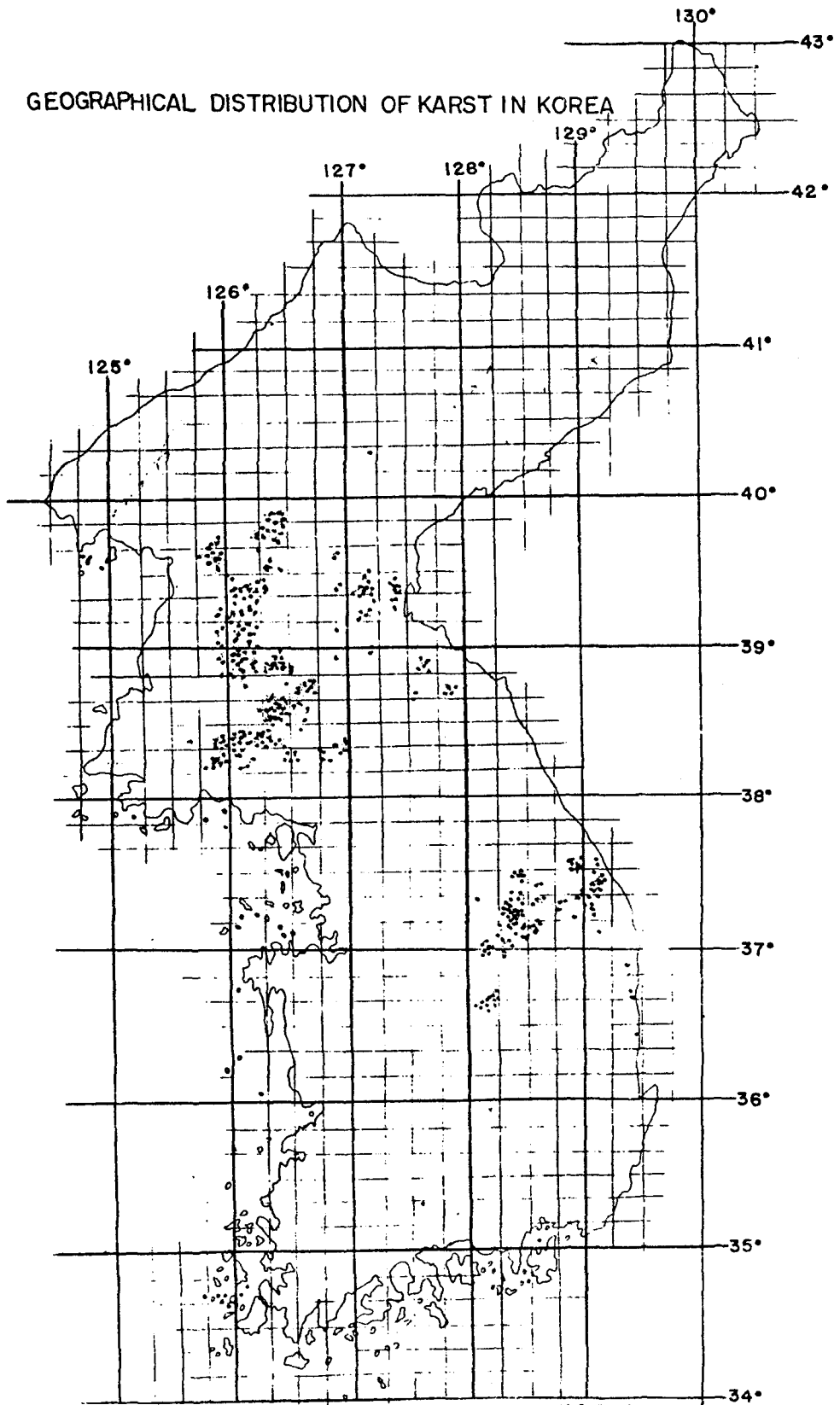
# GEOGRAPHICAL DISTRIBUTION OF LIMESTONE AND KARST LANDFORM IN KOREA

 KARST LANDFORM AREA  
 LIMESTONE AREA



M. S. SUH

# GEOGRAPHICAL DISTRIBUTION OF KARST IN KOREA



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