

A Study on the Classification Distribution Characteristic of Tour Cave in Northeastern Asia

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Abstracts : The purpose of this study is to grasp the distribution characteristic of tour cave in northeastern Asia. It is examined to use internet homepage to get the status of tour cave in northeastern Asia. First, the total of tour cave is 116 and, in type limestone cave is extremely many. Second, the distribution character by nation has been shown China, Japan and South Korea in sequence. In the type tour cave, China, South Korea and North Korea are more popular with limestone cave while Japan, Taiwan, and Hong Kong have more marine caves. This study mainly relies on the research of internet homepage. Therefore, after this, activated research about tour cave is needed through comparison and analysis with more concrete statistical data and tourist behaviour by nations

key word: Tour Cave, Northeastern Asia, Internet Homepage,

I. Introduction

Caves are very important natural heritages and a place of ecology education because of the interior of these is mystic and has a good scenery. Some of the caves are regards as local, national, ethnic, and world heritages for their historical, ethnical, scenic, and academic significances. And caves are tourism resources for income enlargemet of residents and method of regional development.

The purpose of this study is to grasp the distribution characteristic of tour cave in northeastern Asia. From now on, such study can be utilized as a basic materials to activate tour cave in international tourism environment of northeastern Asia.

Firstly, this study is to examine general classification characteristic and usefulness of cave tourism resources-especially, as the development of tourism resources through document research.

And, after that, it is examined to use internet homepage to get the status of tour cave in northeastern Asia.

II. The Characteristic of Cave

1. Definition and Classification of Cave

Cave can be divided into nature and art. Generally, tour cave means natural cave, which has development and save value as a tour cave. Natural caves classification can be divided into limestone, lava, marine, joint and glacier cave by the origin of formation.

2. The Use of Cave

Historically, the cave is used diversely(Table 1). Recently, it has been managed and operated as an educational sides and tourism resources. Such

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reasons are because of differential characteristics against other natural tourism resources.

The nation and region, which have such natural caves, recognizes the importance of those distributed their natural caves as an important tourism resources and, thus, they are very interested in developing and saving them.

III. The Change of Tourism Environment

1. The Change of International Tourism Environment

International tourism market has been growing rapidly each year and, that condition is predicted to maintain continuously. The growth of international tourism market conducted by developed countries

has a tendency to spread worldwide recently because of economic develop and the improvement of standard of living in developing countries.

Reviewing the number of persons to travel overseas by nations in northeastern Asia, the China is the highest and, the order is followed by Japan, South Korea, Taiwan and HongKong. Comparing to in 1998, in 2003, the number of overseas travelers are increased in the China, South Korea and HongKong while Japan and Taiwan are decreased(Table 2).

In the regard of tourism expenses by nations, Japan is the highest and, the order is followed by China, South Korea, and Taiwan. In the same manner, comparing to those expenses in 1998 and 2003, China and South Korea is increased while Japan and Taiwan is decreased(Table 3).

Table 1. The use of cave

	contents
Ecological use	- a treasury of ecology (geology, geomorphology, biology)
Historical use	- a residential sites - a base of operation and place of refuge in war - a religious site
Academical use	- an estimation of climate change - a biological origin and evolution of organism - an offer of gene
Practical use	- a storage house of special things - a garbage dump - a place of exploratory sports
Tourism resource	- income enlargement - regional tourism development

Table 2. International tourism departures

(unit: thousands)

	nation	1999	2000	2001	2002	2003	
1	Germany	73,400	74,400	76,400	73,300	74,600	▲
2	United Kingdom	53,881	56,837	58,281	59,377	61,424	▲
3	United States	57,318	61,327	59,433	58,050	56,175	▼
4	Poland	55,097	56,677	53,122	45,043	38,730	▼
5	Czech Rep.	39,977	38,177	36,224	34,303	36,074	▼
6	Malaysia	26,067	30,532	36,248	29,866	32,201	▲
7	Italy	18,962	21,993	22,421	25,126	26,817	▲
8	Russian Federation	12,631	18,371	17,939	20,343	20,468	▲
9	China	9,232	10,473	12,133	16,602	20,222	▲
10	Canada	18,368	19,182	18,359	17,705	17,739	▼
11	France	16,709	19,886	19,265	17,404	17,426	▲
12	Netherlands	14,184	13,896	14,214	16,758	16,463	▲
13	Ukraine	7,399	13,422	14,849	14,729	14,795	▲
14	Hungary	10,622	11,065	11,167	12,966	14,283	▲
15	Japan	16,358	17,819	16,216	16,523	13,296	▼
16	Sweden	10,500	10,400	10,500	12,927	12,579	▲
17	Mexico	10,352	11,079	12,075	11,948	11,044	▲
18	Belgium	6,410	7,932	6,570	6,773	7,268	▲
19	South Korea	4,342	5,508	6,084	7,123	7,086	▲
20	Romania	6,274	6,388	6,408	5,757	6,497	▲
21	Turkey	4,758	5,284	4,856	5,131	5,928	▲
22	Taiwan	6,559	7,329	7,153	7,319	5,923	▼
23	Finland	5,314	5,914	5,824	5,857	5,585	▲
24	Denmark	4,744	5,011	4,946	4,935	5,564	▲
25	India	4,115	4,416	4,564	4,940	5,351	▲
26	Austria	3,954	4,660	4,207	3,907	5,060	▲
27	Ireland	3,576	3,783	4,216	4,634	4,929	▲
28	HongKong	4,175	4,611	4,799	4,709	4,428	▲
29	Singapore	3,971	4,444	4,363	4,399	4,221	▲
30	Saudi Arabia	-	-	-	7,896	4,104	▲

source: www.knto.go.kr

Table 3. International tourism expenditure

(unit: US\$Million)

	nation	1999	2000	2001	2002	2003	
1	Germany	55,879	52,824	51,810	52,660	64,628	▲
2	United States	61,058	67,043	62,772	60,829	59,664	▼
3	United Kingdom	37,034	38,262	37,931	41,744	48,477	▲
4	Japan	32,772	31,884	26,531	26,656	28,959	▼
5	France	18,710	17,906	18,109	19,708	23,576	▲
6	Italy	16,891	15,685	14,795	16,924	20,528	▲
7	China	10,864	13,114	13,909	15,398	15,187	▲
8	Netherlands	12,027	12,191	11,994	13,132	14,609	▲
9	Canada	11,499	12,438	12,055	11,679	13,252	▲
10	Russian Federation	7,097	8,848	9,285	11,284	12,880	▼
11	Belgium	9,775	9,429	9,782	10,173	12,124	▲
12	Austria	9,151	8,463	8,956	9,470	11,540	▲
13	South Korea	4,881	7,132	7,617	10,465	9,988	▲
14	Sweden	8,022	8,048	6,921	7,301	8,296	▲
15	Spain	5,489	5,476	5,960	6,662	8,285	▲
16	Switzerland	6,744	6,335	6,235	6,672	7,461	▲
17	Australia	6,046	6,107	5,760	6,120	7,329	▲
18	Denmark	4,899	5,101	5,527	6,931	6,651	▲
19	Taiwan	7,398	8,107	7,319	6,956	6,480	▼
20	Norway	4,857	4,558	4,363	5,065	6,408	▲
21	Mexico	4,541	5,499	5,702	6,060	6,253	▲
22	Singapore	3,869	4,538	5,474	6,313	4,925	▲
23	Ireland	2,631	2,525	2,858	3,755	4,736	▲
24	Iran, Islamic Rep. Of	632	668	708	3,750	4,190	▲
25	Saudi Arabia	-	-	-	7,370	4,165	▲
26	United Arab Emirates	-	3,019	3,321	3,654	3,959	▲
27	Thailand	2,474	2,772	2,924	3,303	3,495	▲
28	Kuwait	2,270	2,494	2,843	3,021	3,349	▲
29	Indonesia	2,353	3,197	3,406	3,289	3,082	▲
30	Malaysia	1,973	2,075	2,614	2,618	2,846	▲

source: www.knto.go.kr

2. The Change of Overseas Tourism in South Korea.

Overseas tourism of South Korea has been expanding continuously because of the growth of national gross income, extended leisure time and, the change of recognition about tourism. Especially, the rapid growth of overseas travelers was caused by the Act of Tourism Abroad in 1989.

After that, due to the influence of South Korea's financial crisis in 1998, it has been reduced temporarily. But, after South Korea's economic condition is improved, the number is increasing again. It is predicted that overseas travelers will be increased continuously because the expansion of the number of short term overseas travelers by five-day workweek(Table 4)(Figure 1).

Table 4. Tourism departures of South Korea

(Unit: persons, %)

year	travelers	growth rate
1986	454,974	-6.0
1987	510,538	12.2
1988	725,176	42.0
1989	1,213,112	67.3
1990	1,560,923	28.7
1991	1,856,018	18.9
1992	2,043,299	10.1
1993	2,419,930	18.4
1994	3,154,326	30.3
1995	3,818,740	21.1
1996	4,649,251	21.7
1997	4,542,159	-2.3
1998	3,066,926	-32.5
1999	4,341,546	41.6
2000	5,508,242	26.9
2001	6,084,476	10.5
2002	7,123,407	17.1
2003	7,086,323	-0.5

source: www.knto.go.kr

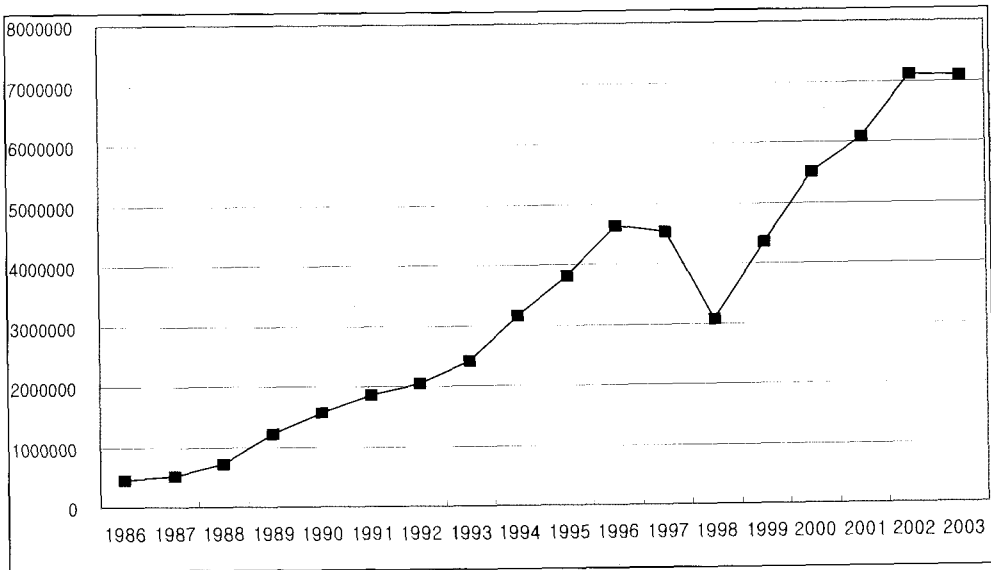


Figure 1. Overseas travelers of South Korea

source: www.knto.go.kr

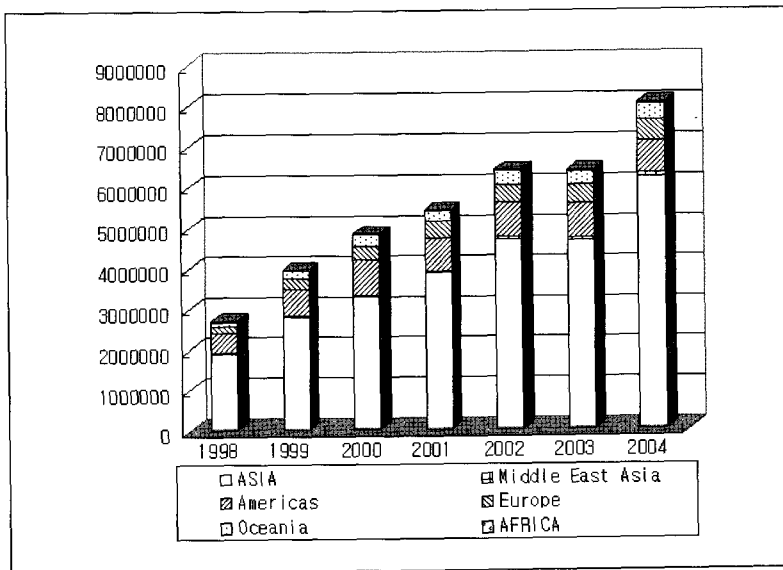


Figure 2. Overseas travelers of South Korea by continents

source: www.knto.go.kr

nation	1998	1999	2000	2001	2002	2003	2004
ASIA	1,915,864	2,808,541	3,326,240	3,891,676	4,721,598	4,697,845	6,245,177
Middle East Asia	21,488	24,060	31,132	37,203	46,021	58,542	78,755
Americas	499,769	673,481	845,517	813,604	836,790	817,728	777,109
Europe	171,236	278,966	369,287	394,645	439,777	465,980	536,757
Oceania	96,393	167,542	262,330	283,369	356,421	342,655	423,773
AFRICA	17,181	21,183	25,260	18,240	20,791	19,174	26,081

In the status of traveling abroad in South Korea by continents, Asia is the most and, it is followed by the U.S.A, Europe, Australia, and Africa in order(Figure 2).

The Korea National Tourism Organization has conducted research on the actual condition about tourist, who travel abroad. In this research, their preference type of tourism is city sightseeing, shopping, visiting places of nature beauty and historic interest. It tells us there are many portions to tour through cities and natural tourism resources(Table 5).

Table 5. Preference type in overseas travel (unit: %)

classification	1997	1999	2001	2003	
City sightseeing	61.9	66.8	90.5	91.6	▲
Shopping	—	—	93.3	88.5	▼
Natural landscape impression	70.5	63.7	86.7	85.7	▲
Industry inspection	24.2	28.0	8.3	6.3	▼
Climbing/Camping/Hiking	7.3	6.4	8.6	5.5	▼
Cultural heritages visiting	52.9	47.4	59.0	49.0	▼
Amusement/Health seeking	19.6	15.8	27.7	46.7	▲
Casino	4.1	2.8	2.3	3.9	▼
Festival participation	19.8	17.8	19.8	22.8	▲
Golf	3.0	3.1	3.2	2.4	▼
Swimming/Sea bathing	18.5	19.5	11.6	12.5	▼
Hot spring bathing	13.0	11.2	14.4	10.2	▼
Ski	1.1	0.3	0.7	0.4	▼
The others	—	—	0.5	0.8	▲

source: www.knto.go.kr

Regarding the preference abroad traveling nation in the northeastern Asia, Japan is the most and, it follows China, HongKong in order((Table 6).

Table 6. Preference nation of abroad traveling (unit: %)

nation	1997	1999	2001	2003	
U.S.A	42.7	43.5	32.5	28.0	▼
Japan	27.6	31.4	25.9	27.3	▼
China	20.1	22.8	19.3	22.6	▲
Australia	43.8	39.4	24.6	22.2	▼
France	26.2	27.4	17.8	19.4	▼
Canada	26.0	28.1	19.0	17.4	▼
U.Kingdom	18.6	17.8	11.7	13.6	▼
Swizeland	—	—	15.5	11.9	▼
Italy	23.7	26.9	11.4	10.6	▼
Hawaii	—	—	—	9.3	▲
HongKong	9.8	11.0	9.2	8.7	▼
Newzeland	20.1	21.8	9.9	8.5	▼
Thailand	5.6	5.8	6.2	7.1	▲
Germany	14.3	12.5	6.3	6.5	▼
Guam/Saipan	10.5	9.1	9.0	6.0	▼

source: www.knto.go.kr

IV. Distribution of Tour Caves in the Northeastern Asia

Homepages, which are examined to find references. are the individual nation's operating homepage of the ministry of tourism. In the case of Mongolia and North Korea, due to they don't operate such internet homepages, Hana Tour travel agency homepage is referred to for Mongolia while Korea National Tourism Organization homepage is referred to for North Korea(Table 7).

Table 7. Internet homepage address

nation	Internet Homepage
China	http://www.cnta.com
HongKong	http://www.discoverhongkong.com
Macao	http://www.macao.or.kr
Taiwan	http://www.tourtaiwan.or.kr
Mongolia	http://www.hanatour.co.kr
Japan	http://www.jnto.go.jp
North Korea	http://www.knto.go.kr
South Korea	http://www.knto.go.kr

Table 8. The typical distribution of tour cave

type	number	%
limestone cave	62	53.4
lava cave	8	6.9
marine cave	24	20.7
joint cave	3	2.6
glacier cave	1	0.9
artificial cave	18	15.5
total	116	100.0

1) The Character of Tour Cave by Type.

Tour cave distributed in northeastern Asia is all 116 and, in it's type, limestone cave is the most as 62. Next one is marine cave (24), artificial cave (18), lava cave (8), joint cave (3), and glacier cave (1) in order(Table 8)(Figure 3)(Figure 4)(Figure 5)(Figure 6)(Figure 7)(Figure 8)(Figure 9).

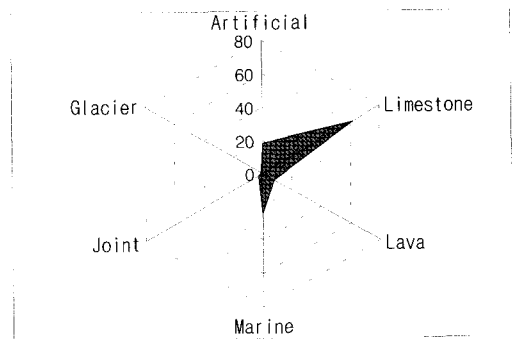


Figure 4. The typical character of tour cave

Figure 3. Distribution of tour cave in northeastern Asia

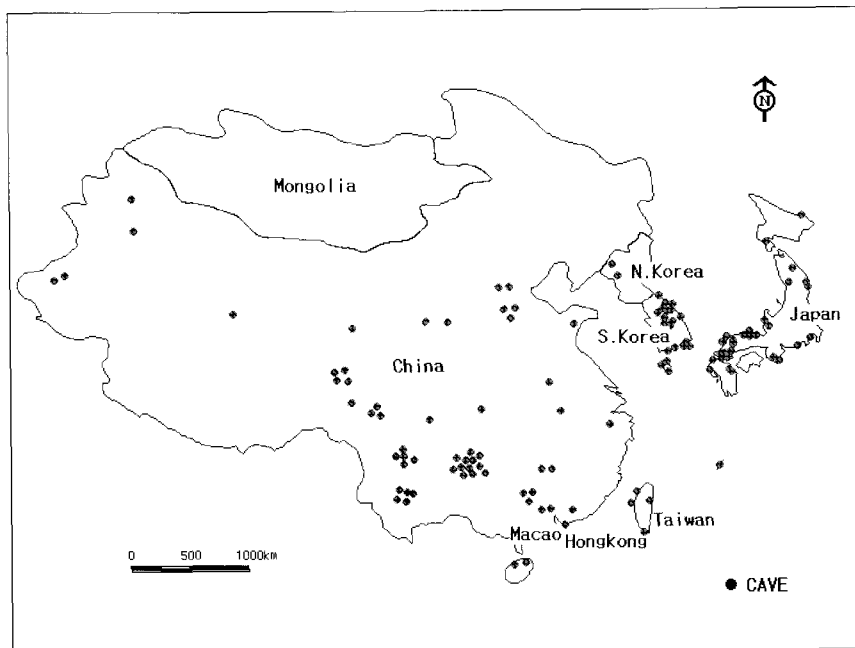


Figure 5. Distribution of tour limestone cave in northeastern Asia

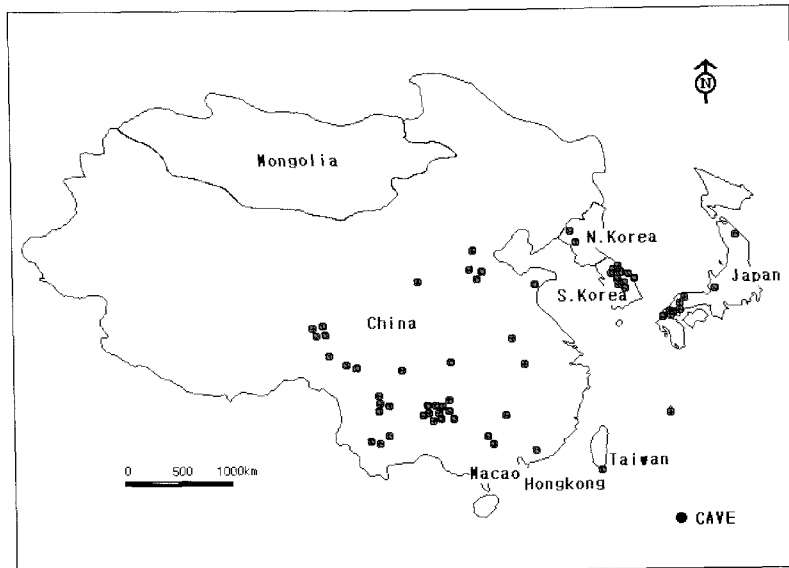


Figure 6. Distribution of tour lava cave in northeastern Asia

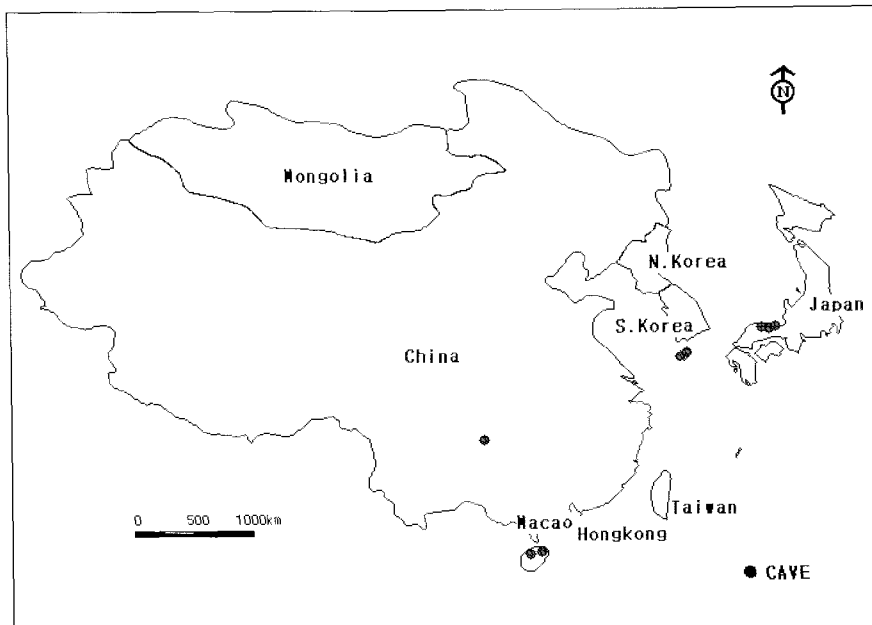


Figure 7. Distribution of tour marine cave in northeastern Asia

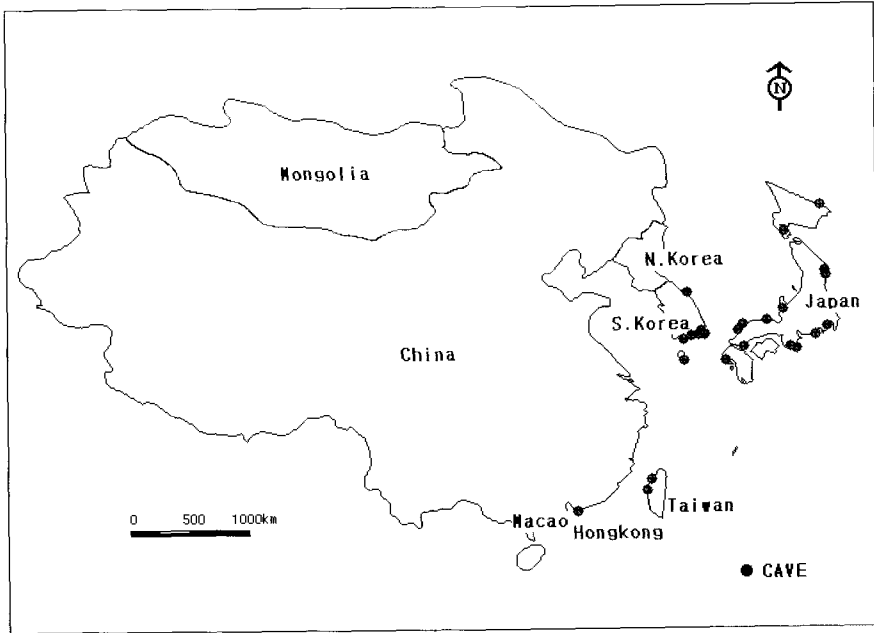


Figure 8. Distribution of tour joint&glacier cave in northeastern Asia

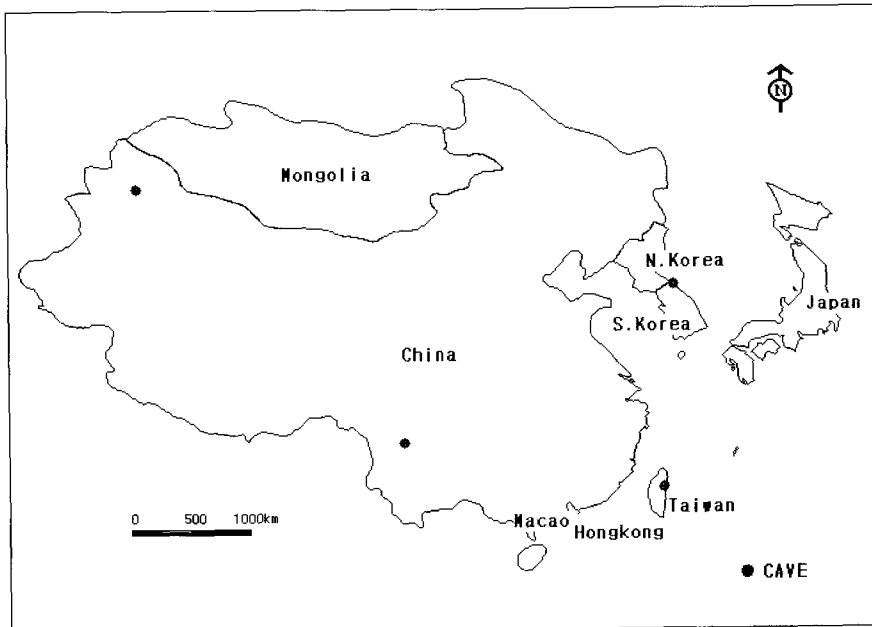
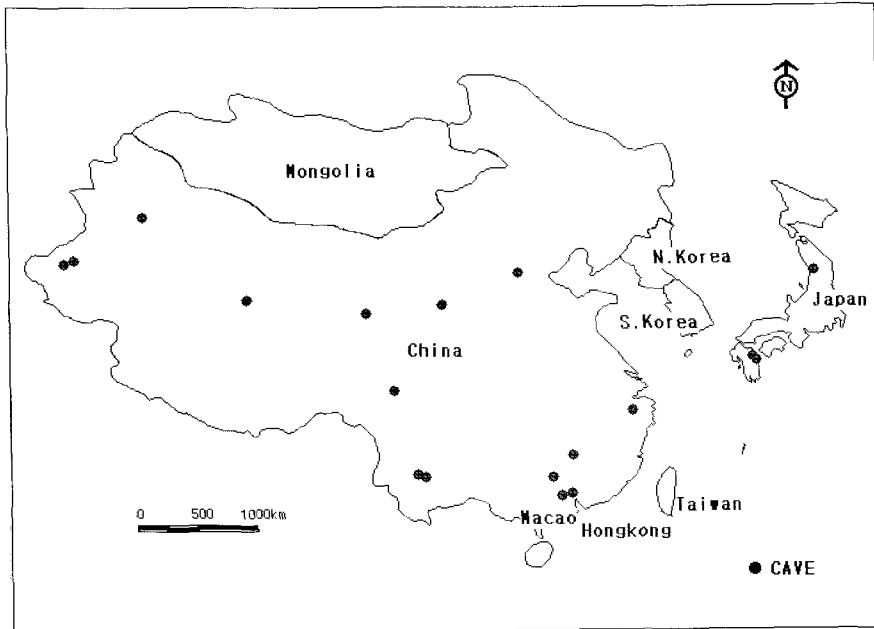


Figure 9. Distribution of tour artificial cave in northeastern Asia



2) Distribution of Tour Cave by Nation.

In nations, China has the most with 59 tour caves. And, the order is showed as follow: Japan (30), South Korea (20), Taiwan (4), North Korea (2), and HongKong (1)(Table 9).

In the type of tour cave by nations, China, South and North Korea has more limestone caves while Japan, Taiwan, and HongKong has more marine caves. Especially, in case of Japan, lava caves are not found many in spite of geographic traits of volcanic island.

3) Regional Distribution by Nation

In the regional distribution by nation of tour cave in the northeastern Asia, just start China first. Guangxi Zhuangzu Government has 12, which is the most and, Guangdongsheng, Guizhou, Sichuan, Yunnan has 5 each(Table 10).

In case of Japan, Hyogo, Yamaguchi province has 4 each, which is the most. Subsequently, Hokkaido, Miyagi, Oita, Okayama, Shimane, Wakayama province has 2 each(Table 12). In case of South Korea, Kangwon province has 7, which is the most, and, Chungch^대ngbuk and Kyungsangnam province has 4 each, and Jeju province has 3(Table 14).

Table 9. Distribution of tour cave by nations

nation	type	number	%	%
China	limestone	39	66.1	50.9
	lava	3	5.1	
	marine	-	-	
	joint	1	1.7	
	glacier	1	1.7	
	artificial	15	25.4	
subtotal		59	100.0	
HongKong	limestone	-	-	0.9
	lava	-	-	
	marine	1	100.0	
	joint	-	-	
	glacier	-	-	
	artificial	-	-	
subtotal		1	100.0	
Taiwan	limestone	1	25.0	3.4
	lava	-	-	
	marine	2	50.0	
	joint	1	25.0	
	glacier	-	-	
	artificial	-	-	
subtotal		4	100.0	
Japan	limestone	10	33.3	25.9
	lava	3	10.0	
	marine	14	46.7	
	joint	-	-	
	glacier	-	-	
	artificial	3	10.0	
subtotal		30	100.0	
North Korea	limestone	2	100.0	1.7
	lava	-	-	
	marine	-	-	
	joint	-	-	
	glacier	-	-	
	artificial	-	-	
subtotal		2	100.0	
South Korea	limestone	10	50.0	17.2
	lava	2	10.0	
	marine	7	35.0	
	joint	1	5.0	
	glacier	-	-	
	artificial	-	-	
subtotal		20	100.0	
total		116	100.0	100.0

Table 10. Regional distribution of tour cave in China

region	type	number	(%)
Anhui	L(2), A(1)	3	5.1
Beijing	L(1), A(1)	2	3.3
Chongqing	L(2), A(1)	3	5.1
Fujian	L(1)	1	1.7
Gansusheng	A(2)	2	3.3
Guangdongsheng	L(2), A(3)	5	8.5
Guangxi Zhuangzu	L(11), L(1)	12	20.3
Guizhou	L(4), J(1)	5	8.5
Henan	L(2), A(1)	3	5.1
Hubei	L(1)	1	1.7
Hunan	L(1)	1	1.7
Jiangsu	L(1)	1	1.7
Shaanxi	L(1)	1	1.7
Shandong	L(4)	4	6.8
Sichuan	L(5)	5	8.5
Xinjiang	L(1), A(3)	4	6.8
Yunnan	L(3), A(2)	5	8.5
Zhejiang	A(1)	1	1.7
total		59	100.0

L-limestone, L-lava, M-marine, J-joint, G-glacier, A-artificial

Table 11. Regional distribution of tour cave in Taiwan

region	type	number	(%)
Hualien	J(1)	1	25.0
Pintung	L(1)	1	25.0
Taitung	M(2)	2	50.0
total		4	100.0

L-limestone, L-lava, M-marine, J-joint, G-glacier, A-artificial

Table 12. Regional distribution of tour cave in Japan

region	type	number	(%)
Fukuoka	L(1)	1	3.3
Gifu	L(1)	1	3.3
Hiroshima	L(1)	1	3.3
Hokkaido	M(2)	2	6.7
Hyogo	L(3), M(1)	4	13.4
Ishikawa	M(1)	1	3.3
Iwate	L(1)	1	3.3
Kanagawa	M(1)	1	3.3
Miyagi	M(2)	2	6.7
Oita	A(2)	2	6.7
Okayama	L(2)	2	6.7
Okinawa	L(1)	1	3.3
Saga	M(1)	1	3.3
Shimane	M(2)	2	6.7
Shizuoka	M(1)	1	3.3
Wakayama	M(2)	2	6.7
Yamagata	A(1)	1	3.3
Yamaguchi	L(3), M(1)	4	13.4
total		30	100.0

L-limestone, L-lava, M-marine, J-joint, G-glacier, A-artificial

Table 13. Regional distribution of tour cave in North Korea

region	type	number	(%)
Pyeonganbuk-do	L(1)	1	50.0
Pyeongannam-do	L(1)	1	50.0
total		2	100.0

L-limestone, L-lava, M-marine, J-joint, G-glacier, A-artificial

V. Conclusion

Tour cave, as a typical natural tourism resources, has very high resourceful value cause it has been shown the differentiated characters against the other tourism resources. Especially, considering the development of tourism market and

Table 14. Regional distribution of tour cave in South Korea

region	type	number	(%)
Chungcheongbuk-do	L(4)	4	20.0
Gyeongsangbuk-do	L(1)	1	5.0
Gyeongsangnam-do	M(4)	4	20.0
Jeju-do	L(2), M(1)	3	15.0
Jeollanam-do	M(1)	1	5.0
Gangwon-do	L(5), M(1), J(1)	7	35.0
total		20	100.0

L-limestone, L-lava, M-marine, J-joint, G-glacier, A-artificial

the preference of tourist in northeastern Asia, the possibility of tourism development is rather high.

In this study, tour cave, which is distributed in the northeastern Asia, is researched and, the summary of its distribution characters by type, nation and region as follows;

First, the total of tour cave is 116 and, in type limestone cave is extremely many.

Second, the distribution character by nation has been shown China, Japan and South Korea in sequence. In the type tour cave, China, South Korea and North Korea are more popular with limestone cave while Japan, Taiwan, and Hong Kong have more marine caves.

In South Korea, currently, limestone cave of inland area and erosion cave of seaside are developed as a tourism resources. In addition, there are lots of natural caves are distributed in nationwide. For that reason, the possibilities of tourism development are very high. More differentiated development strategies about tour caves can be utilized as a good tourism resources for domestic tourist as well as foreign tourist.

This study mainly relies on the research of internet homepage. Therefore, after this, activated research about tour cave is needed through comparison and analysis with more concrete statistical data and tourist behaviour by nations.

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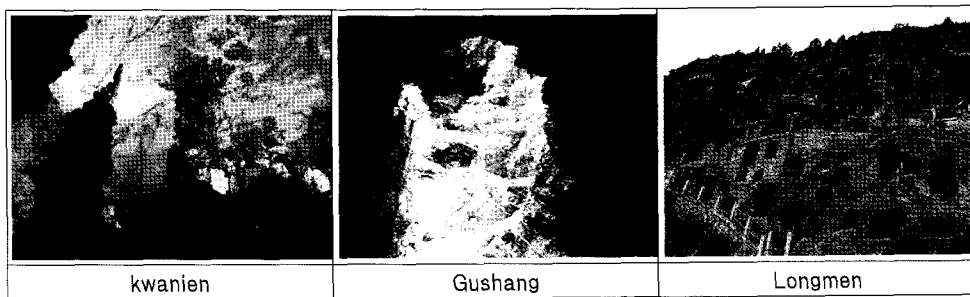
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<http://www.cnta.com>

<http://www.discoverhongkong.com>

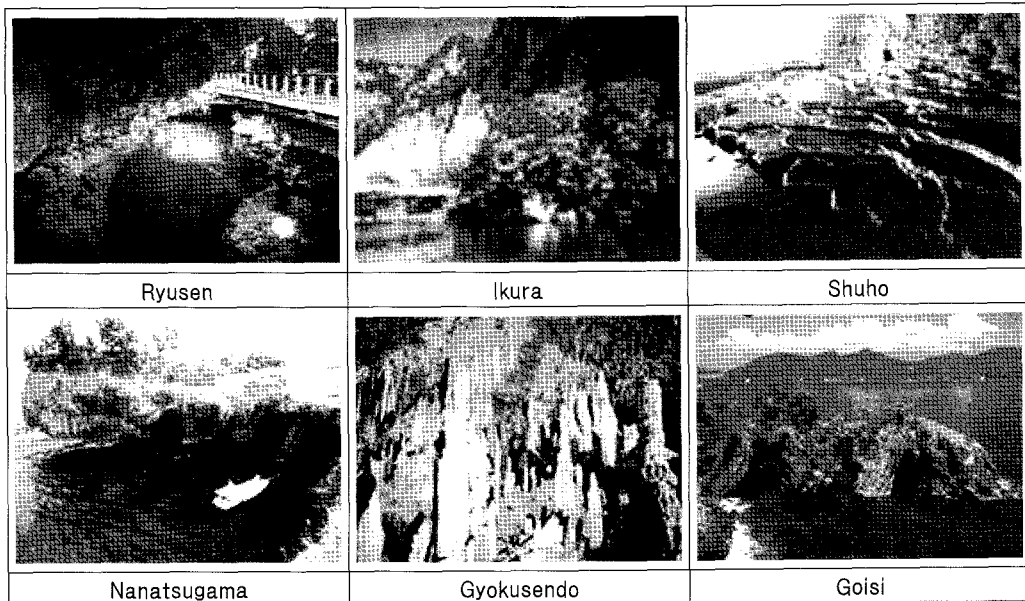
<http://www.macao.or.kr>

Appended Figures



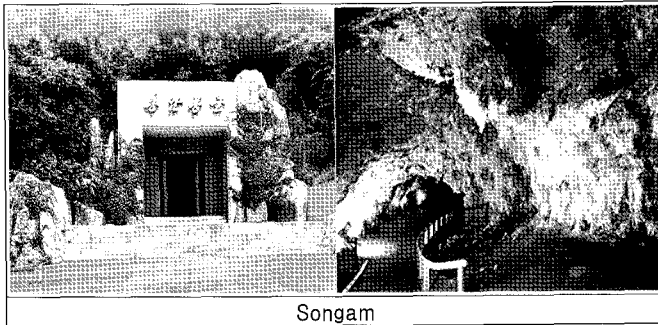
[Tour caves of China]

Source: www.hanatour.co.kr.



[Tour caves of JAPAN]

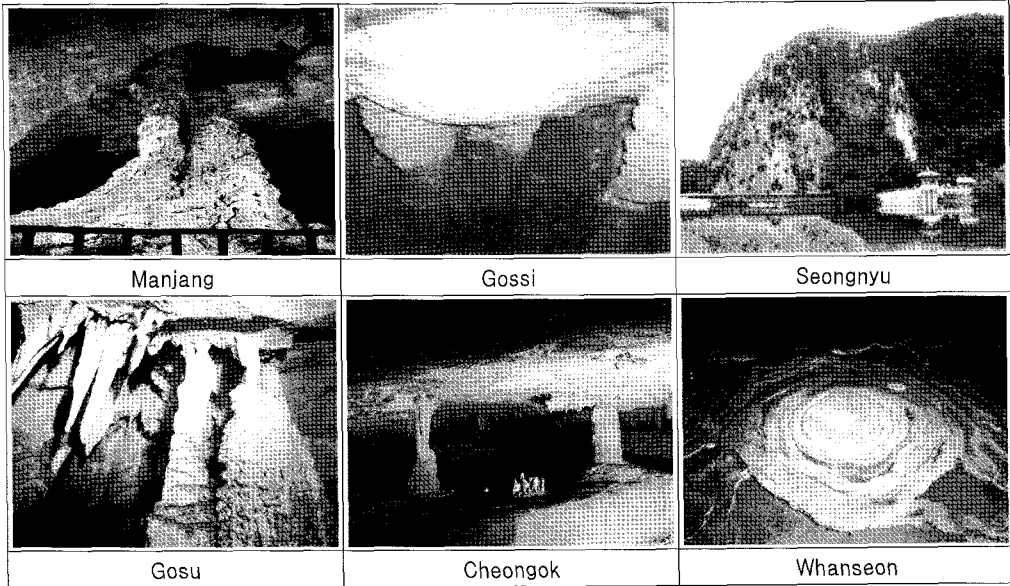
Source: www.jnto.go.jp



Songam

[Tour caves of North Korea]

Source: www.knto.go.kr



[Tour caves of South Korea]

Source: www.knto.go.kr