

A Bibliography of Speleological Works on Korean Subterranean Ecosystems

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韓國의 地下生態系에 대한 洞窟學的 文獻目錄

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적 요

1930년에 평북영변에서 동룡굴이 보고된 이후 현재까지 한국 반도에서 발견된 동굴의 생물과 지질학등에 대해 발표된 문헌들 88편을 연도별로 수록하였다.

The first record on Korean caves is found in Mori's article of Dongryong-gul cave in Yeongbyeong-gun, now in North Korea (Mori, 1930), and the study of cave life began with the reports by Verhoef (1938) and Sato (1939) of *Antrokoreana gracilipes* (Diplopoda) and *Pseudocrangonyx asiaticus* (Amphipoda) respectively, collected from the cave just referred to. During the period of a half century ever since, a number of more caves as well as cave organisms have been uncovered both from limestone areas in the mid-east of the peninsula and lava caves in the southernmost volcanic island, Jeju-do.

As the studies of cave life and geology made much progress world-wide so far it became now even an urgent task to review them in the light of concepts and approaches of modern biology concerning mechanisms of adaptation, regressive evolution and ecological strategies characterizing cave life and those governing cave formations. All the more, enormous extent of exploitation of nature along with extremely rapid industrialization and population growth of the country has come to endanger many subterranean ecosystems, affecting a number of cave animals inhabiting much vulnerable environment which is one of the most non-renewable natural resources.

At this moment it should be of critical importance to make an inventory of the caves and their lives which have been on record. One of the works to be done first, in this endeavor, would be listing publications of Korean caves and the organisms, and it will provide a perspective as well as a foundation upon which any further scientific study or planning of any conservation program could be based. Of the great number of articles published so far, however, the present list includes only those with references, which is very likely to suggest the author's responsibility as well as

reliability of the papers. An exception was allowed, however, for the first record on Korean caves, that is, Mori's paper in 1930 which lists no references. Under this strict policy the number of papers listed here amounted to 63 in biospeology, 23 in physical cave science and 2 in conservation and development, all therefore, 88 in total as they come as following. The phrases in quotation marks indicate English translations by the present writer of the title of papers or periodicals wherein no English ones were available.

I. BIOSPEOLOGY

1. Verhoeff, K. W.: Ostasiatische höhlendiplopoden. Mitt. Höhlen u. Karstforsch., 83-93(1938).
2. Sato, T.: "The *Pseudocrangonyx* of Korea." "Kagaku (Science)". 9(4):205(1939).
3. Aoki, J.I.: Results of the speleological survey in South Korea 1966. V. Damaeid mites (Acari, Cryptostigmata) found in a limestone cave of South Korea. Bull. Natn. Sci. Mus., Tokyo, 9(4):563-569(1966).
4. Choi, K. C.: Preliminary survey on the fauna of Sungyoo cave. "Munhwajae (Cultural Properties)", 2:178-186(1966).
5. Choi, K. C., & J. Namkung.: The reports on the caves in Korea and their faunae. Preliminary survey on the caves of Taeiri area and their faunae. Korean Caving Assoc., 1-24(1966). (In Korean)
6. Imadaté, G.: Results of the speleological survey in South Korea 1966. III. Occurrence of Protura in South Korea. Bull. Natn. Sci. Mus, Tokyo, 9(4):537-540(1966).
7. Suzuki, S.: Four remarkable phalangids from Korea. Annot. Zool. Jap., 39(2):95-106(1966).
8. Ueno, M.: Results of the speleological survey in South Korea 1966. II. Grammarid Amphipoda found in subterranean waters of South Korea. Bull. Natn. Sci. Mus., Tokyo, 9(4):501-535(1966).
9. Ueno, S. I., S. K. Pae, & F. Nagao.: Results of the speleological survey in South Korea 1966. I. General account, with brief descriptions of the caves visited. Bull. Natn. Sci. Mus., Tokyo, 9(4):465-499(1966).
10. Yosii, R: Results of the speleological survey in South Korea 1966. IV. Cave Collembola of South Korea. Bull. Natn. Sci. Mus., Tokyo, 9(4):541-561(1966).
11. Kawakatsu, M., & W. J. Kim.: Results of the speleological survey in South Korea 1966. VI. Freshwater planarians from limestone caves of South Korea. Bull. Natn. Sci. Mus., Tokyo, 10(3):247-258(1967).
12. Kim, H. K.: Chiroptera from Korea. J. Korean Cultural Res. Inst., 10:241-250(1967). (In Korean)
13. Matsumoto, K.: Results of the speleological survey in South Korea 1966. VII. Isopod crustaceans from subterranean waters of South Korea. Bull. Natn. Sci. Mus., Tokyo, 10(3):259-283(1967).
14. Paik, K. Y. & J. Namkung.: Korean spiders of Genus *Cybaeus* (Araneae, Argyronetidae). 2) Two new cave spiders from Korea. Korean J. Zool., 10(1):21-26(1967).
15. Hisamatsu, S.: Results of the speleological survey in South Korea 1966. X. Miscellaneous beetles found in the caves of South Korea. Bull. Natn. Sci. Mus., Tokyo, 11(3):285-291(1968).
16. Imamura, T.: Results of the speleological survey in South Korea 1966. IX. Halacaridae (Acari) found in a limestone cave of South Korea. Bull. Natn. Sci. Mus., Tokyo, 11(3):281-284(1968).
17. Ishikawa, K.: Results of the speleological survey in South Korea 1966. VIII. Mesostigmatid mites (Acarina) from South Korea. Bull. Natn. Sci. Mus., Tokyo, 11(3):275-279(1968).

18. Maa, T. C.: Results of the speleological survey in South Korea 1966. XII. Streblid and Nycteribiid flies from South Korea. Bull. Natn. Sci. Mus., Tokyo, 11(4):385-396(1968).
19. Murakami, Y., & K. Y. Paik.: Results of the speleological survey in South Korea 1966. XI. Cave-dwelling myriapods from the southern parts of South Korea. Bull. Natn. Sci. Mus., Tokyo, 11(4):363-384(1968).
20. Ueno, S. I., & J. Namkung.: Some cave-dwelling trechids (Coleoptera) from South Korea. Bull. Natn. Sci. Mus., Tokyo, 11(3):245-262(1968).
21. Imaizumi, Y., & M. Yoshiyuki.: Results of the speleological survey in South Korea 1966. XV. Cave-roosting chiropterans from South Korea. Bull. Natn. Sci. Mus., Tokyo, 12(2):255-274(1969).
22. Miura, Y.: Results of the speleological survey in South Korea 1966. XIV. Subterranean harpacticoid copepods of South Korea. Bull. Natn. Sci. Mus., Tokyo, 12(2):241-254(1969).
23. Paik, K. Y., T. Yaginuma., & J. Namkung.: Results of the speleological survey in South Korea 1966. XIX. Cave-dwelling spiders from the southern part of Korea. Bull. Natn. Sci. Mus., Tokyo, 12(4):795-844(1969).
24. Shiba, M.: Results of the speleological survey in South Korea 1966. XVI. Prostigmatid mites (Acarina) from South Korea. Bull. Natn. Sci. Mus., Tokyo, 12(3):607-613(1969).
25. Vandel, A.: Results of the speleological survey in South Korea 1966. XIII. Isopodes terrestres recoltés dans les grottes de Corée. Bull. Natn. Sci. Mus., Tokyo, 12(1):157-159(1969).
26. Watanabe, Y.: Results of the speleological survey in South Korea 1966. XVIII. Staphylinid beetles found in the limestone caves of South Korea. Bull. Natn. Sci. Mus., Tokyo, 12(3):623-631(1969).
27. Yamasaki, T.: Results of the speleological survey in South Korea 1966. XVII. Cave-dwelling camel crickets from South Korea. Bull. Natn. Sci. Mus., Tokyo, 12(3):615-621(1969).
28. Morikawa, K.: Results of the speleological survey in South Korea 1966. XX. New pseudoscorpions from South Korea. Bull. Natn. Sci. Mus., Tokyo, 13(2):141-148(1970).
29. Morimoto, Y.: Results of the speleological survey in South Korea 1966. XXI. Bathynellid crustaceans (Syncarida) from South Korea. Bull. Natn. Sci. Mus., Tokyo, 13(2):149-184(1970).
30. Lee, H. P. & J. Namkung.: Preliminary animal ecological studies on the Korean caves. 1) In the Gosi cave and Yongdam cave. Dongguk Univ. J. Agric. & Forest. Sci., 187-199(1971). (In Korean)
31. Paik, K. Y.: Cave-dwelling spiders from southern parts of Korea. II. Spiders of Simbog-gul cave and Songyoo-gul cave. Theses Coll. Commem 60th Birthday of Prof. Y.H. Choi, 299-313(1971). 299-313(1971).
32. McKenzie, K. G.: Results of the speleological survey in South Korea 1966. XXII. Subterranean Ostracoda from South Korea. Bull. Natn. Sci. Mus., Tokyo, 15(1):155-166(1972).
33. Suzuki, S.: Results of the speleological survey in South Korea 1966. XXIII. Opilionids from the caves of South Korea. Bull. Natn. Sci. Mus., Tokyo, 15(3):453-454(1972).
34. Lee, B. H.: Etude de la faune coréenne des insectes Collemboles. V. Inventaire des grottes de Corée et étude sur les Tomoceridae cavernicoles avec la description d'une nouvelle espèce. Ann. Spél., 29(3):403-418(1974).
35. Namkung, J.: A new species of *Galloisiana* (Grylloblattidae) from Kosudong-gul cave in Korea. Korean J. Entomol., 4(2):91-95(1974).
36. Namkung, J.: A new species of cave dwelling Grylloblattoidea (Grylloblattidae) from Korea. Korean J. Entomol., 4(1):1-7(1974).

37. Im, M. S.: Studies on environmental factors and faunae of Kwangcheon-gul cave and Nulgol-gul cave in Pyongchang-gun, Korea. Bull. Acad. Res., Kon Kuk Univ., 19(3):1-8(1975). (In Korean)
38. Im, M. S.: Studies on environmental factors and faunae of Kosudong-gul cave and Yoecheon-gul cave in Danyang-gun, Korea. J. Spel. Soc. Korea, 1(1):17-22 (1975). (In Korean)
39. Oh, Y. K.: A karyotype study in Chiroptera (Bats). Yonsei Med. J., 16:47-53 (1975).
40. Oh, Y. K.: A preliminary study on the effect of the cold on body temperature and heart rate of bat (*Vespertilio superans*). Korean J. Zool., 18:157-159(1975).
41. Suzuki, S.: The harvestmen of family Triaenonychidae in Japan and Korea (Travunoidea, Opiliones, Arachnida). J. Sci. Hiroshima Univ. Ser. B, Div. 1, 26(1):65-101(1975).
42. Szymczakowski, W.: Découverte d'un Bathysciline cavernicole dans l'Extrême-Orient (Colleoptera, Catopidae). Ann. Spél, 30(3):463-466(1975).
43. Ueno, S. I.: The fauna of the lava caves in the Far East. Actes 6e CIS. Olomouc, 1973 (Praha). 5:237-242(1976).
44. Choi, M. C.: The prehistoric fauna in Korea. Thesis Humanity Sci., Kon Kuk Univ., 10:109-128(1977). (In Korean)
45. Oh, Y. K.: Periodic changes of the testis and ductus epididymis in Korean hibernating bats. Korean J. Zool., 20:67-76(1977).
46. Lee, B. H.: General review and checklists of Korean subterranean fauna. I. Invertebrates (except insects) and mammals. Korean J. Zool., 21(3):103-125(1978). (In Korean)
47. Lee, B. H.: General review and checklists of Korean subterranean fauna. II. Insects. Korean J. Entomol., 8(2):1-13(1978). (In Korean)
48. Namkung, J.: "Korean cave fauna." "Munhwajae (Cultural Properties)," 12:141-148(1979). (In Korean)
49. Oh, Y. K.: An ecological study on hibernation in the horseshoe bats (*Rhinolophus ferrumequinum korai*). Korean J. Anat., 12:69-76 (1979).
50. Oh, Y. K. & H. S. Kang: A study of the mechanism on hibernation. Yonsei, Med. J., 20:17-32(1979).
51. Choi, M. C.: The paleolithic age in Korea. J. Acad. Affairs, 24(1):29-46(1980).
52. Im, G. Y.: A study for the density of creatures and preservation about Yeongchun Nam cave and No-Dong cave. J. Spel. Soc. Korea, 5(6):20-22(1980). (In Korean)
53. Namkung, J.: Studies on cave spiders of Korea (1). Historical review and a list of caves and spiders. Korean J. Plant Protection, 19(2):113-124(1980). (In Korean)
54. Namkung, J.: A study for preservation of the fauna and cave environment at Kosudong-gul cave in Korea. In: A report on the conservation of Kosudong-gul cave at Danyang, Korea (Natural monument No. 256). Korean Assoc. Cons. Cavern, 9:47-96(1980). (In Korean)
55. Min, K. H.: Microfungal flora and its pollution in Kosudong-gul cave. In: A report on the conservation of Kosudong-gul cave at Danyang, Korea (Natural monument No. 256). Korean Ass. Cons. Cavern, 9:99-131(1980). (In Korean)
56. Namkung, J.: A flora and the environment of lava cave system in Jeju Island. J. Spel. Soc. Korea, 6(7):17-27(1981). (In Korean)
57. Namkung, J.: The taxonomy of the Grylloblattodea and their distribution in Korea. In: Biol. Notoptera, (Ed.) H. Ando, Kashiyo-Insatsu Co., Nagano, Japan. 29-42(1982).
58. Im, M. S.: A studies on environmental factors and faunae of Jangam cave and Jeekyeong

cave. J. Spel. Soc. Korea, 8(9):15-23(1983). (In Korean)

59. Sohn, P.: Early man at Turubong cave #9. Lab. Prehistory, Yonsei Univ., pp.108(1983).

60. Lee, B. H. & K. H. Park.: Some Entomobrvidae including six new species and one cave form (Collembola) from Korea. Korean J. Zool., 27(3):177-188(1984).

61. Kang, H. S., Y. K. Oh, B. P. Cho & Y. D. Lee: An electron microscopic study on the hypothalamus of the hibernating bat, I. Fine structure of the nerve cell. Korean J. Electron Microscopy, 15:10-18(1985).

62. Oh, Y. K.: An electron microscopic study on fertilization of the sperm and the ovum in the Japanese greater horseshoe bat, *Rhinolophus ferrumequium nippon*. Maeji Nonchon, 1:353-388(1985).

63. Lee, B. H. & K. H. Park.: Three new species of Onychiuridae (Collembola) from a Korean cave. Korean J. Syst. Zool., 2(1):11-20(1986)

II. PHYSICAL CAVE SCIENCE

1. Mori, T.: "The great scenery of the limestone cave, Dongryong-gul." The Chosen, 177:63-78(1930). (In Japanese)

2. Suh, M. S.: Karst topography of Korea. Commemoration Papers Celebrating Sixtieth Birthday of Mr. Jisan. pp. 67-78 (1966). (In Korean).

3. Hong, S.H.: A study for the geographical distribution and its character of our natural cave. "Ann. Rep." Acad. Res. Center, Kon Kuk Univ. 20:47-85(1976). (In Korean)

4. Kim, H. M.: A study of the speleological geology and the black-coating on speleothem of the Seongryu cavern, the 155th natural monument, Korea. Univ. Jour., Nat. Sci. Ser., Pusan Nat'l.Univ., 24:33-41(1977). (In Korean)

5. Suh, M. S.: A study on caverns and the speleothems in Korea. Commemoration Papers Celebrating Sixtieth Birthday of Professor Min Jai Lee. pp. 374-396(1977). (In Korean)

6. Suh, M. S.: A study on the pisolites of limestone caverns in Korea. Geography, 16:79-84(1977). (In Korean)

7. Park, D. W. & K. S. Oh.: Physical geography of Imgye region. In: A report on the scientific survey of estimated area of the Imgye reservoir & Jeoncheon river (1977). Korean Assoc. Cons. Nature, 13:41-57(1978). (In Korean)

8. Suh, M. S. & N. Kaksima.: Preliminary study on some secondary cave minerals in Korea. J. Applied Geography, 4:27-31(1978). (In Korean)

9. Kang, S. S.: Karst topography in Chungbuck. J. Spel. Soc. Korea, 4(5):14-26(1979). (In Korean)

10. Suh, M. S.: A study of natural geography about Kosudong-gul cave in Korea. Korean Assoc. Cons. Cavern, 9:5-43(1980). (In Korean)

11. Lee, S. J.: A study about formation and distribution of parasitic cave in Jeju Island. 6(7):8-14(1981). (In Korean)

12. Ogawa, T.: A report of investigation about Manjang Cave in Jeju Island. J. Spel. Soc. Korea, 6(7):38-48(1981). (In Korean)

13. Shin, Y. Y.: Microtopography system of Manjang cave. J. Spel. Soc. Korea, 6(7): 55-61(1981). (In Korean)

14. Hong, S. H.: A report of lava cave in Jeju Island. J. Spel. Soc. Korea, 7(8):31-36(1982). (In Korean)

15. Kim, H. M.: Discovery of a Shale cave, Habcheon, Korea. Univ. Jour., Nat. Sci. Ser., Pusan Nat'l. Univ., 34:399-404(1982). (In Korean)
16. Moon, S. D.: A study on the classification of geomorphological types in the Jechon basin. J. Spel. Soc. Korea, 7(8):19-25(1982). (In Korean)
17. Suh, M. S. & N. Kashima.: Speleo-Minerals from the Jieog San and Hoaam Ri regions. J. Regional Development, 11:59-65(1982). (In Korean)
18. Hong, S. H.: The analysis of geomorphological structure about lava caves in Korea. Caving Study, 1(1):17-26(1983). (In Korean)
19. Kang, H. S.: A research of caving survey. J. Spel. Soc. Korea, 8(9):66-72(1983). (In Korean)
20. Matzmodo & Ochmisi: Report of geological investigation of lava cave in Jeju Island. Caving Study, 1(1):66-68(1983). (In Japanese)
21. Ogawa, T.: Report of investigation about Manjang cave. Caving Study, 1(1):50-60(1983). (In Korean)
22. Suh, M. S.: A study on the binary appearance in pseudo limestone cavern. J. Geography, 10:291-304(1983). (In Korean)
23. Kashima, N. & M. S. Suh.: Hyeobjae cave system, a pseudo-calcareous cave on Jeju Island, South Korea. J. Spel. Soc. Japan, 9:23-30(1984). (In Japanese)

III. CONSERVATION AND DEVELOPMENT

1. Shin, M. S.: Study about the protection and tourist development of our caves. J. Spel. Soc. Korea, 3(3):12-21(1978). (In Korean)
2. Lee, S. H.: The meaning about tourist development of lava cave in Jeju Island. J. Spel. Soc. Korea, 6(7):57-61(1981). (In Korean)

SUMMARY

A list of publications concerning biology and geology of Korean caves has been prepared, which includes 88 papers published since the discovery of Dongryong-gul cave in 1930 as the first cave record from the peninsula.

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