Shun-Ichi UÉNO was born at Ibaraki near Osaka on December 8, 1930, to Masuzo and Yukiko UÉNO. He was rather a weak child and often had to stay away from kindergarten. His father, a zoologist and natural historian, was worried about this and endeavoured to take him along to the open air, mostly for looking for animals and plants on the nearby hills of Ôtsu City where he resided then. This must be one of the reasons why UÉNO junior grew up to be a naturalist.

In the second year of elementary school, his family moved from Ôtsu to Toyonaka near Osaka. It was already in the war time, and he had especially severe middle school days, being mobilized to an aircraft factory and suffering from violent bomb attacks. However, this trying experience made him strong, so did the starving days after the war. In later years, his younger associates and colleagues were frequently astonished at his toughness in the wilds and his endurance to hunger and thirst.

In these great hardships, he developed his interest in living things, above all in beetles. Entering Kyoto University in 1949, UÉNO made up his mind to study systematics of ground beetles. His first target was the Bembidiinae, the Japanese species of which were neatly revised in a modern way within three years. He was, however, intrigued with eyeless species living in caves, and began to explore caves by himself. With the success of his early collectings under the earth, he fell into a bottomless way. He was absorbed in researches of the cave fauna, which was almost unknown before his time, learned everything necessary for caving, and eventually became the only professional biospeologist in Japan. He discovered numerous eyeless animals, most of which were new to science, but his main interest was always in the carabid subfamily Trechinae.

In 1960, UÉNO graduated from Kyoto University with the degree of D. Sc., and two years later moved to Tokyo to become a curator at the National Science Museum. He has worked at the Museum ever since, as curator of reptiles and amphibians at first and as of insects later. During his tenure of office, he has always endeavoured to improve research system and to increase research activities of the Museum; as the director of the Department of Zoology, he has thrown all his energies to reorganizing collection rooms, enlarging the museum library, and establishing graduate school for natural history and biodiversity. Though looking mild, he is determined and daring. Once decided, he somehow attains his goal, not only for himself but for all who share his enthusiasm for natural history. This is partially why almost all the projects initiated by him were materialized.

In 1965, Shun-Ichi UÉNO got married to Yoshiko YAMAMOTO, then an assistant of English Department of Tokyo Woman's Christian College. Ever since, she has helped her husband in brushing up his papers, in reading proofs, and in revising papers by his students. For this reason, her name appears in some of the contributed papers to be given on later pages of this volume. Yoshiko is now Professor of English literature at Tokyo Metropolitan University and is well known in Japan as an eminent scholar of English Renaissance literature and Robin Hood legend.

UÉNO is a very good explorer. As a caver, he has explored thousands of caves and mines. As a mountaineer, he has climbed up many high mountains both at home and abroad. He organized many zoological expeditions to various parts of Asia and Australasia. He can patiently endure all the difficulties encountered during those expeditions. He is equally at ease in a camp of desolate wilderness and in a high-class restaurant in Tokyo, and does not care a bit for getting dirty or soaked, though he is dandy in big cities. As a leader, UÉNO is cautious in everything and seldom risks anything, so that his party has never met serious accident. This does not mean he is coward; he is just careful and always keeps an eye for potential danger.

It is for editing scientific journals and books that UÉNO has a special talent. Editing looks like almost his hobby, though he does not admit it. He edited among others the following important journals: *Memoirs of the College of Science, University of Kyoto, Series B* (1955–1962), *Bulletin of the National Science Museum, Tokyo* (1964–1966) and its *Series A* (1975–1979), *Memoirs of the National Science Museum, Tokyo* (1969–1972), *Annotationes Zoologicae Japonenses* (Zoological Society of Japan; 1971–1983), *Kontyû, Tokyo*, and *Japanese Journal of Entomology* (Entomological Society of

Japan; 1974–1975, 1988–1989), *Journal of the Speleological Society of Japan* (1976–1995), and *Elytra, Tokyo* (Japanese Society of Coleopterology; 1989–1995). UÉNO has read thousands of scientific papers as an editor or as a referee or as a supervisor. Working as an editor, he has seldom rejected contributed papers, unless they infringe upon other's priority; instead, he lends his hand to make the manuscripts acceptable, and sometimes wholly rewrites them, especially those by beginners and amateurs. In this way, he has encouraged inexperienced researchers with the hope that they would become excellent workers in the field of natural history. If he were to claim coauthorship for those articles, as is often practised by certain well-known biologists, his bibliography would double or even triple.

UÉNO is quick at reading manuscripts and proofs. He usually reads manuscripts once or twice and proofs at least once. He is punctual in issuing his journals, and always prints the exact dates of their publication. This is not an enviable task to do, but he fulfilled it admirably. He metamorphosed several journals to more attractive ones, and even now, he is editing two scientific serials despite the heavy pressure of other works.

Needless to say, UÉNO is a member of many scientific societies and other associations, and has repeatedly served on their committees. As the president, he served on the Japan Caving Association in 1982–1987 and again in 1994, the Speleological Society of Japan in 1986–1989, the Japanese Society of Coleopterology in 1989–1992, the Entomological Society of Japan in 1991–1992, and the Association of Japanese Cavers in 1994–1995. He has always endeavoured to reorganize minor societies for the development of respective fields of study, and has already succeeded in realizing coalition of the Coleopterists' Association of Japan with the Japanese Society of Coleopterology, and the merger of the three speleological societies, the Speleological Society of Japan, the Japan Caving Association and the Association of Japanese Cavers, will be realized in the coming summer. He has been the Japanese delegate of the Union Internationale de Spéléologie since 1973, and a commissioner of the International Commission on Zoological Nomenclature since 1982.

In the past two decades, nature was considerably devastated in Japan. The worst of all were wetlands, but broadleaved forests were also extensively cut down. UÉNO was much concerned at this unfortunate situation, especially so due to extinction of some trechine beetles of his own description. In 1976, he was appointed as a member of the wildlife conservation committee of the Environment Agency of the Japanese Government. After that, he has served as a chairperson of various committees, and since 1991 he has been a councilor of that Agency. He has also served on the committee of the World Wide Fund for Nature Japan (WWFJ) since 1987. His deep concern about this problem is clearly shown in his recent writings to be found in the checklist given later.

UÉNO has published more than 450 articles, about five-ninths of which are academic papers. He has described more than 300 new species of mainly ground beetles and more than 40 new higher taxa of the genus-group. His way of describing new taxa are discreet, being always based upon careful comparative study and reexamination of type material. Besides, he exerts every possible effort to find out habitat condition and life mode of the species concerned. To fulfill this requirement, UÉNO has made innumerable trips throughout Japan and her adjacent countries. No other Japanese biologists can compete with him in the scope of investigated areas, especially in view of the fact that his earlier field researches were largely made on foot. He has a very wide knowledge of biological books and periodicals, and is talented in finding out location of relevant literature within a very short time. He is deeply interested in ecology and zoogeography, and has often taught biogeography and other subjects at universities. His lecture is clearcut; his way of speaking is plain but impressive.

After retirement, UÉNO will take an honorary position at the National Science Museum, Tokyo, and will also become a fellow professor at Tokyo University of Agriculture. He will continue his studies on small beetles and other living things and, we hope, editorial works as well. He is planning to make new expeditions to northern Vietnam and southern China, where he will find his element. We all hope he will enjoy good health and continue to be our guiding light.

CONTENTS

Spec. Bull. Jpn. Soc. Coleopterol., Tokyo, (4): 1–30, March 28, 1995

Half a Century of Subterranean Explorations

Shun-Ichi UÉNO

Department of Zoology, National Science Museum (Nat. Hist.),
3–23–1 Hyakunin-chô, Shinjuku, Tokyo, 169 Japan

Prologue

One day in the autumn of 1949, a freshman of Kyoto University was eagerly looking at a glass vial containing four specimens of a small insect. For him, this was the very first time to encounter a Japanese species of an eyeless beetle. This event turned his interest to the fauna of the bottomless underground world, the study of which became the life theme of his long career thereafter.

I was the boy with twinkling eyes, and the insect was an anophthalmic trechine beetle discovered by Riozo YOSII in 1939 and later described by myself under the name *Yosiitrechus ohshimai* (UÉNO, 1951, p. 84, pl. 4, fig. A; now called *Trechiama ohshimai*). This was one of the two species of Japanese blind beetles whose prewar specimens had been preserved to the 1950's, though later inquiries clarified that at least four species of cave-dwelling carabids had already been collected in the 1930's.

Since early childhood, I was always interested in living things, and grown up as a naturalist, more and more fond of insects, especially beetles. When in a high school, my interest was much aroused in ground beetles, mainly under the influence of Nobuyoshi TOSAWA, Masafumi OHKURA and Tsutomu MATSUDA, all of whom were amateur collectors and pioneer workers on carabid taxonomy. My liking for ground beetles continued to the university days, and a revisional study of the Japanese species of the Bembidiinae was taken up for the graduation thesis, which was never printed in its original form due to the unfavourable situation of publication in the 1950's.

All these times, I was attracted to Teiso ESAKI's accounts (1932 a, b) of eyeless beetles from Europe and North America. ESAKI was a leading entomologist of Japan then, and was one of the closest friends of my father's. He often visited our home, and always inspired in me love for insects and other living things. One of his favourites was cave insects, which he himself searched for in several caves of West Japan. He was sorry about unsuccessful results of his own researches, but still hoped that certain eyeless insects, especially trechine and bathysciine beetles, would turn up some day from Japanese caves. He loved insects from his heart, and his vivid presentation of eyeless beetles from European caves fascinated me. However, even ESAKI was skeptical over the prospect of Japanese biospeology, because it was the general belief at that time that highly modified cavernicoles, terrestrial species in particular, could not evolve in such an insular country as Japan, which is geologically recent, largely volcanic and only has rather limited calcareous areas.

This is why I took up the Bembidiinae for my thesis instead of the Trechinae. My study on this subfamily progressed fairly well, as was outlined in a series of five papers in Japanese (Uéno, 1953 a–b, 1954 a–c), but my interest was always drawn towards anophthalmic species of the Trechinae. I wanted to see their natural habitats by myself and to collect new material. Fortunately, I had two classmates coming from Kôchi and another from Tochigi, who were well acquainted with famous caves in their native places. Having known my ardent desire, they invited me to their homelands, and thus, my first cave explorations began.

Early Explorations of Limestone Caves

Early in the spring of 1950, I took a trip to Kôchi in the Island of Shikoku to see the famous limestone cave Ryûga-dô and some other less known caves. This trip was memorable not only as my first cave exploration, but also as my first collecting trip outside the Kyoto–Osaka area. Since only five years had passed after the Japanese defeat of the Second World War, it was not easy to make long travels at that time. Nowadays we can fly from Osaka to Kôchi in only 40 minutes, but in 1950, I had to take a night train at Kyoto, transfer to an Inland Sea ferry in the middle of the night, take another train at dawn, and at last arrived at Kôchi just before noon. It was still in the last days of winter at Kyoto when I started, but the Kôchi Plain was already in the blossoming spring. It looked like a paradise to me.

There I met Jûjirô Ishikawa, one of the pioneer biospeologists in Japan, who informed me that blind beetles had been collected in four different caves. He took me along to Ryûga-dô Cave, which was already protected as a natural monument, and showed me the habitats of *Ryugadous ishikawai* (a trechine) and *Jujiroa nipponica* (a platynine). He also introduced me to two young speleologists, Tetsuo Kawasawa and Masazi Uozumi, who guided me to three other caves that were known to harbour anophthalmic trechines. In those days, modern caving equipments were not yet known in Japan. Only the light we were albe to rely on was heavy acetylene lamp, which was difficult to manage in narrow squeezes or on steep descents. We had neither special coveralls nor good climbing shoes, only wearing, beside ordinary clothing for hiking, a pair of straw-sandals to avoid slipping on wet mud. It was a miracle that we managed to emerge safely from Saruta-dô Cave, an intricate, three-dimensionally developed cave, in which inexperienced explorers could be easily lost.

Anyway, my first cave explorations were successful in every respect. All my worries of entering caves were blown away, and I gained confidence in my ability for cave researches. One month after my return to Kyoto, I went to Shizushi-dô Cave, the type locality of *Trechiama ohshimai*, and obtained a good result. Then, I visited several caves on the Suzuka Mountains east of Lake Biwa-ko. Having examined the specimens thus obtained, I became aware of the fact that contrary to the general belief, Japanese limestone caves were rich in the fauna, which contained many new species. Besides, the trechine beetles I collected showed high endemicity, each species being

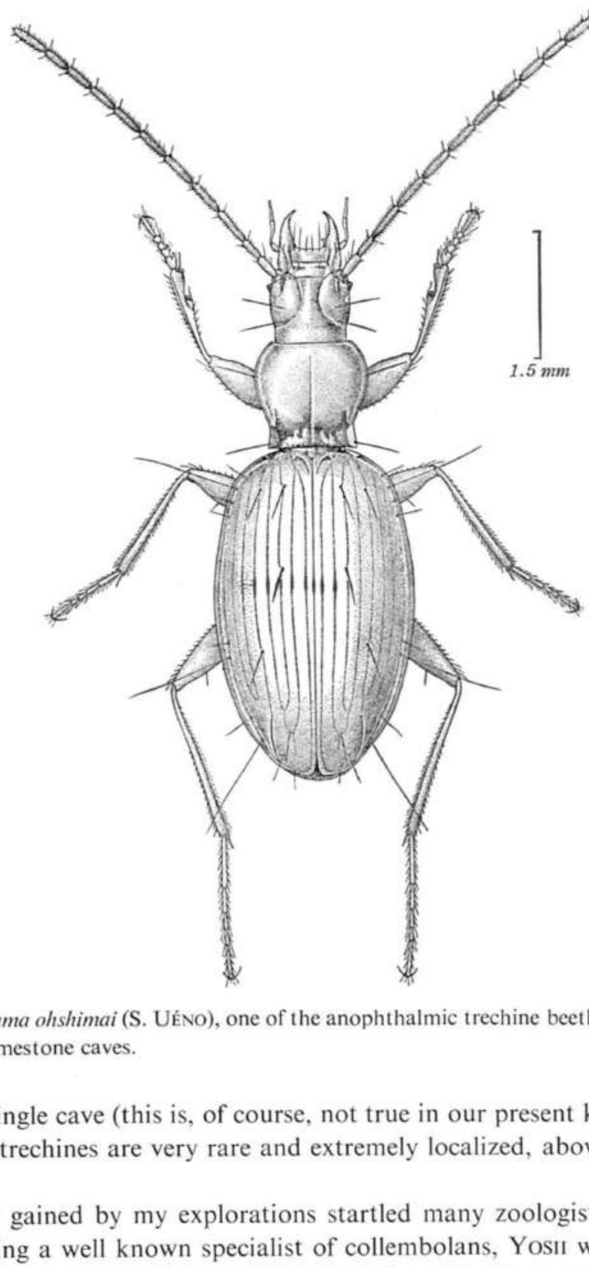

Fig. 1. *Trechiama ohshimai* (S. Uéno), one of the anophthalmic trechine beetles first found from Japanese limestone caves.

restricted to a single cave (this is, of course, not true in our present knowledge, though many Japanese trechines are very rare and extremely localized, above all in the Island of Shikoku).

The results gained by my explorations startled many zoologists including Esaki and Yosii. Being a well known specialist of collembolans, Yosii was particularly interested in the Japanese cave fauna. We both believed in the promising future of the study of Japanese cave animals, and after carefully discussing the matter, decided to plan systematic cave investigations throughout the Japanese Islands. This plan was put into operation in 1951 and was carried on until 1955. To undertake this project, we had to clear up many difficulties. For instance, no one knew exactly where limestone caves were, with the obvious exception of some well known ones, so that we were compelled to locate them by ourselves. Since means of transport were still poor, we had to walk very often for a long distance to reach a destined cave. It was sometimes difficult even to find appropriate lodgings. And, of course, the hardest was to solve financial problems. However, most caves then known were explored and investigated in these five years, and a large number of specimens were collected and amassed at Kyoto University. They were sorted out and sent to specialists of respective groups for taxonomic examination, which resulted in publication of many papers dealing with animals entirely new to the fauna of Japan (cf. UÉNO, 1993). Many of them were named "*uenoi*" for commemorating my achievement, and this name is found in various groups of cave animals, including aquatic snails, pseudoscorpions, spiders, mites, crustaceans, millipedes and insects.

Needless to say, I myself took up the study of carabid beetles, particularly those belonging to the Trechinae. Only eleven species of this subfamily were known from Japan before 1950, one of them (*Trechiama angulicollis* JEANNEL) being endogean and anophthalmic. Though two more anophthalmic species were described by HABU in 1950, the total number of the species known at that time was still very small. By 1955, seventeen species were added to the above number, and moreover, I already became aware of the occurrence of many other species that awaited descriptions. They were diverse and highly differentiated, not only at the species rank but also at the generic or subgeneric level. Unfortunately, however, they were usually so rare that it was difficult to collect adequate number of specimens. To make the matter worse, males were generally fewer than females that were less important taxonomically. Therefore, I had to go to the same locality repeatedly for securing additional specimens.

On the contrary, collembolans were usually abundant and easily collected. This enabled YOSII (1956) to set up a monograph of the cave species much earlier than mine. His work was an important contribution to the Japanese biospeology, and was useful for those who were studying on the cave fauna of Japan.

On the way to caves, I always made collectings on the surface, which greatly enriched my field experience. In the summer of 1950, I was given an opportunity to participate in a biological survey of the Ozegahara Moor in Central Japan, and made investigations for the first time in the alpine zone. Similar opportunities were also given in 1952 and 1953, when surveys of the biota were made on Mt. Ontaké-san of the Northern Japanese Alps. I was fascinated by the unique vegetation and peculiar fauna of the alpine and subalpine zones, and since remarkable trechine beetles occurred there, my interest was divided into two objects, caves and high mountains. This was very fortunate, because a new aspect of the biospeology was opened in later years from the study of the high altitude fauna. I was also interested in the insular fauna after joining in a natural history investigation of the Tokara Group of the northern Ryukyu Islands made in the late spring of 1953.

After all, I was lucky in having unusual opportunities to see various aspects of animal life in my undergraduate days. This was realized with generous support of many senior scholars and friends, to all of whom I have to thank heartily.

Network of Speleologists

Pursuing cave explorations, we often encountered insuperable obstacles. Most difficult was to descend vertical shafts and to surmount overhangs. Our early explorations were practised by two or three persons, or more frequently, only by myself. It was impossible for me to hang on an inflammable rope with a heavy acetylene lamp in one hand. For attaining further development of the Japanese biospeology, it seemed necessary to organize a speleological association and to explore caves as a teamwork.

On October 12, 1956, thirteen zoologists who were interested in cave animals assembled at Kanazawa and decided to establish the Spelaeological Society of Japan, with Masuzo UÉNO as the president. The new society took the next step immediately, calling for an assemblage of members on the 21st of the same month at Akiyoshi, the largest karstic area in Japan. The following five days were devoted to exploring caves in collaboration of scientists and cavers. Having learned from foreign literature, we introduced many new equipments into the exploration, which included a combination suit, canvas boots, a helmet with an electric lamp powered by dry-cell batteries, nylon ropes, and cable ladders with karabiners, all very popular now but unknown then. Since this collaborative exploration was very successful, we at last realized that caves should be explored and investigated by a team, not by an individual biologist.

In the summer of the next year, the Society invited Henri COIFFAIT from Toulouse, France, making a joint exploration of caves mainly in western Honshu and Shikoku (cf. COIFFAIT, 1959, pp. 457–465). We were surprised to see his lightweight ladders with

Fig. 2. New equipments including a combination suit and a helmet with an electric lamp were first introduced into our cave explorations in 1956. (Photo Tetsuo KAWASAWA.)

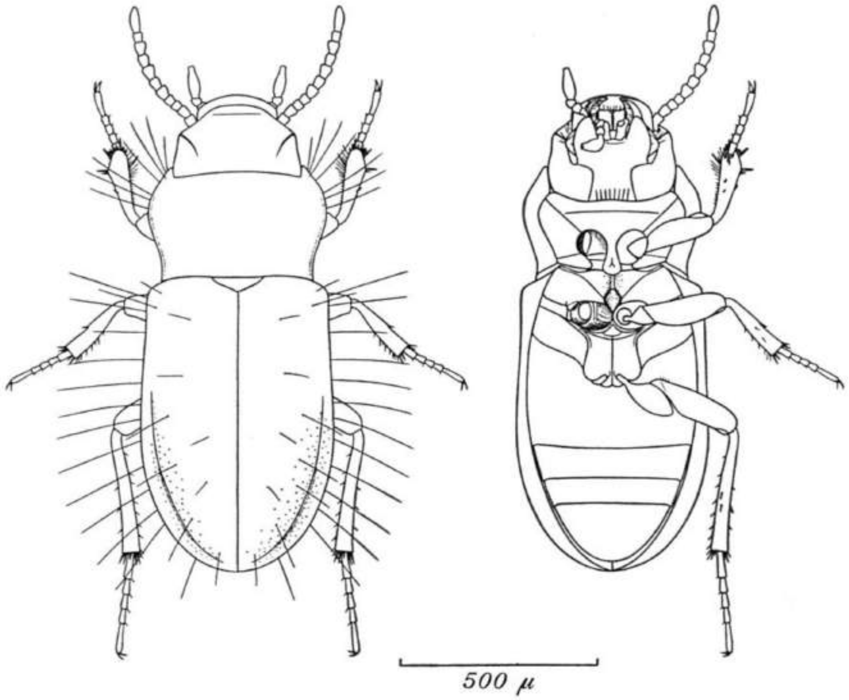

Fig. 3. *Phreatodytes relictus* S. UÉNO, a very strange phreatic beetle which cannot swim though completely aquatic and need not breathe air.

C-rings at each end, the type of which became widely used in later explorations. In several years after that, the Society made a series of cave surveys on the Kitakami Mountains in northeastern Honshu, including the well known exploration of Akka-dô, the longest known limestone cave in Japan. All these projects naturally included investigations of the phreatic fauna, which had rapidly developed since 1950, mainly by the effort of Yoshifumi MIURA and Yoshinobu MORIMOTO. I also examined a large number of wells in various parts of Japan, and wrote an overview of the subterranean water fauna of Japan, with descriptions of a new family, two new genera and two new species of anophthalmic aquatic beetles (UÉNO, 1957).

I received a D. Sc. degree from Kyoto University in the spring of 1960 with the dissertation entitled "The trechids of Japan, with special reference to the problem of cave fauna". This thesis was not published in its original form, as it was too voluminous to be printed in one volume under the situation at that time. I therefore split it up into many shorter papers for publication, some of which had to be completely rewritten because of continuous discoveries of additional species. In 1962, I was appointed as a curator at the National Science Museum and moved from Kyoto to Tokyo. My position was the curator of herpetology and not of entomology, though

Fig. 4. UÉNO standing in front of the entrance to Ryûsen-dô Cave in Northeast Japan. Near the end of the 1950's.

I was permitted to continue my studies in entomology and biospeology.

My activities in biospeology was temporarily reduced by this move and by the preparation of a revisional book on the reptiles and amphibians of Japan. I took up this work, because I was always interested in salamanders as a control for analysing the distributional pattern of trechine beetles and in this connection, became aware of the fact that the Japanese herpetology was more than two decades out of date, at least taxonomically. After the publication of this book (NAKAMURA & UÉNO, 1963), I was able to spare more time for trechine beetles and to resume cave explorations. Unfortunately, however, the Japanese biospeology already passed its first peak, because most zoologists previously interested in cave animals either completed or almost finished their studies on my collection and were losing interest in subterranean inhabitants. Only a small number of speleologists including myself continued their pursuit of cave animals

Then, a break came in 1965, when five students of the exploration clubs of Tokyo University of Agriculture and Tokai University planned a speleological expedition to South Korea and invited Yoshinobu MORIMOTO and me as supervisors. We accepted this invitation, and the monumental expedition was carried into effect in the

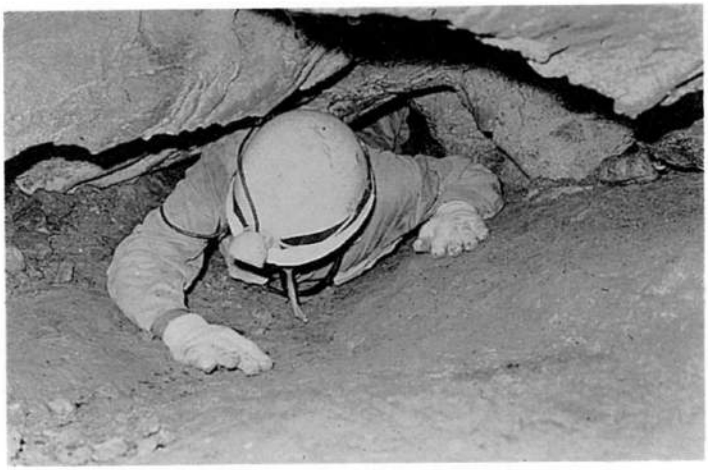

Fig. 5. Only through this tight crawl, can be reached the habitat of *Ryugadous kajimotoi* S. UÉNO, a rare anophthalmic trechine beetle. Kôtoko-dô Cave in the Island of Shikoku. (Photo Tetsuo KAWASAWA.)

spring of 1966 in collaboration with Korean scientists and cavers (cf. UÉNO, PAE & NAGAO, 1966). Though there were many hindrances, this expedition achieved very good results. We explored 23 caves in total and examined groundwaters pumped up from 49 wells, collected various kinds of animals, and clarified an outline of the cave fauna, which was proved to bear a close relationship to that of the northern side of West Japan. Our collection was enthusiastically welcomed by Japanese zoologists, who restored energy to work on their specialties, which resulted in publication of more than two dozens of reports.

In the graduate days, I also climbed up many high mountains for collecting alpine and subalpine carabids. I made the first entomological survey of the northern Hidakas in Hokkaido in the summer of 1960. At that time, there were no climbing routes to reach the highest peak, Mt. Poroshiri-daké, so that six days' hard work was needed to climb up to the cirque just below the summit. There I was surprised to find many specimens of an anophthalmic trechine beetle from beneath heaps of stones accumulated at the edges of a snow-patch, which was indistinguishable from cave forms, at least morphologically (UÉNO, 1961). On the windy ridge above the cirque, I also collected a strange endogean species of microphthalmic trechine beetle from beneath large stones deeply embedded in the ground, which was named later *Masuzoa notabilis* (UÉNO, 1960 b). Occurrence of these trechines in the alpine zone was most unexpected, and it was suggestive of the way how future biospeological investigations would be.

Early in the next summer, Hiroyuki MORIOKA and I made the first postwar investigation of the high mountains of Taiwan. The fauna of this subtropical island was investigated by many zoologists in the prewar times, but only one or two of them climbed up high mountains, many of which approach a height of 4,000 m. For this

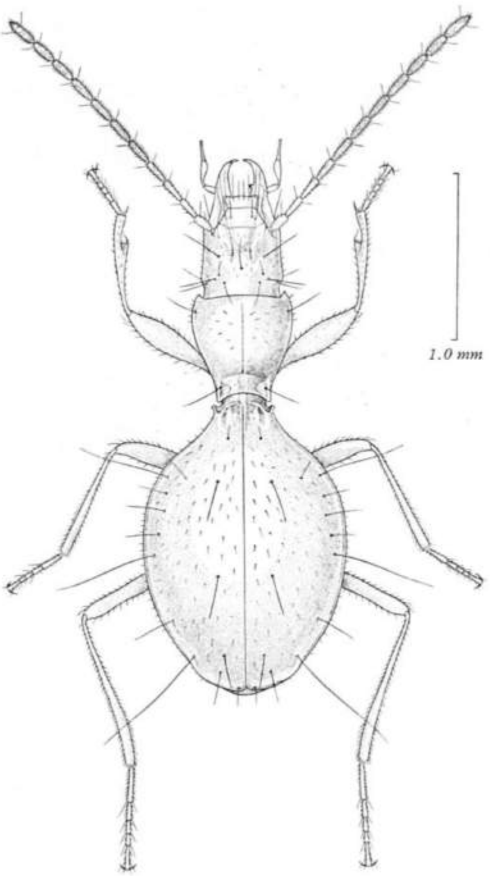

Fig. 6. *Gulaphaenops leptodiroides* S. UÉNO, one of the most strange leptodiroid trechine beetles from a limestone cave in South Korea.

reason, the alpine fauna was almost unknown then, with the exception of that of Mt. Yü-shan, the highest peak of the island. I went up to the summits of four important mountains, and collected various animals specially in the alpine and subalpine zones, which contained many ground-living species new to science. Unfortunately, my searches for subterranean forms were not very successful both on high mountains and in caves, only two specimens of depigmented microphthalmic beetles, a platynine (*Jujiroa*) and a staphylinine (*Quedius*), being obtained in the subalpine zone. However, occurrence of an interesting subterranean fauna in Taiwan was suggested by the discovery of these species. It was amply proved some thirty years later by our systematic investigations.

Fig. 7. Upper part of a snow-patch on Mt. Poroshiri-daké in Hokkaido, at the edges of which were found many individuals of an anophthalmic trechine beetle, *Trechiama borealis* S. UÉNO.

Interlude

Nineteen sixty-seven was an unforgettable year in my long career. In that summer, I joined in a biological survey in Malaysia and Thailand made by Kyoto University. On August 9, I was involved in a car accident near Chantaburi in southeastern Thailand, broke my right arm, underwent an operation, and was confined in a hospital at Bangkok for about a month. After released from the hospital, I continued collectings in northern Thailand with my right arm in a sling, and though I entered some caves there, I was naturally unable to make detailed investigations.

Two months after returning from Thailand, I went to the United States as a visiting scientist at Harvard University. On the way to Cambridge, Massachusetts, I dropped in at Lexington, Kentucky, and met Thomas C. BARR, JR., who took me along to many caves including famous Mammoth Cave. Everything I saw there was considerably different from what I knew in Japan. Above all, I was struck with the abundance of trechine beetles, especially *Neaphaenops*, in contrast to the rareness of their Japanese relatives. It was a great pleasure for me to realize that there were many things which could be learned only by experience.

At Harvard, I concentrated on studying rich collection of trechine beetles from South America under the supervision of Philip J. DARLINGTON, JR. Before the next spring, I sorted out all the specimens and determined them to the species level. Though no new species were included in that collection, I was able to acquire a very good knowledge of the South American trechine fauna, which could not be obtained merely from JEANNEL's useful revision (1962). The Museum of Comparative Zoology collection also contained rich material of Australian species, which were studied at that time by Barry P. MOORE who published their revision later (1972). I was much interested in their striking radiation on one hand, which seemed to me almost comparable to that of marsupials, and in the close similarity between some of them and South American forms on the other.

Before leaving Harvard, I discussed the matter with DARLINGTON. He did not entirely agree with me in considering that the South American trechine fauna might have been derived from the Australian one via the Antarctic Continent. However, I learned from him many important ideas about zoogeography while I was staying at Cambridge, and therefore I owed much to him in developing my own ideas on the distribution of trechine beetles and other things. Thus, my visit to the United States opened a brave new world before me.

Turn of the Japanese Biospeology

Towards the end of the 1960's, our explorations of limestone caves and potholes were drawing to the completion, or most of us believed so. In fact there still remained some caves that had to be explored, and many other caves were in need of repeated investigations for obtaining male specimens from respective trechine populations. At that time, however, I thought that more than 80% of the cave trechines occurring in Japan were already brought to light and that I could concentrate on clarifying the high altitude fauna in the next decade. No one could foresee how unreasonable my expectation was.

In 1968, I was nominated for a member of a joint research project organized by the National Parks Association of Japan and the Japanese National Subcommittee for the Conservation of Terrestrial Animals in the International Biological Program. Since Mt. Fuji-san was selected as one of the research areas, the organizer needed someone capable of executing investigations of the fauna of lava caves, which was considered to be an important component of the nature of the mountain. I was the strong candidate, as there were no other biospeologists who were active in field works, and though not particularly enthusiastic for the research project, I had to accept the responsibility after all. I was reluctant because lava caves were generally considered too young to develop specialized cave animals. This belief was not groundless, as all but one of the lava caves theretofore explored did not harbour any troglobionts comparable to those found in limestone caves.

Once I accepted the task, I made field investigations systematically and energetically, soon finding out that our former supposition was completely erroneous. I already gave several accounts of the process and results of this project (cf. UÉNO, 1971, pp. 203–206, 1987, pp. 593–596; UÉNO & KASHIMA, 1978, pp. 112–119). However, some parts of these accounts will be reproduced below with some modification, since my investigation of the Fuji lava caves carried out from November 1968 to October 1971 is the most momentous event in the history of the biospeology.

Already in the late 1920's and 30's, there were a few biologists who showed in-

Fig. 8. Descent on a thin cable ladder into Motosu-daiichi-fûketsu Cave on the northwestern slope of Mt. Fuji-san. Many lava caves are accessible only through vertical blow holes. (Photo Takanori OGAWA.)

terest in the fauna of the Fuji lava caves. They were interested in lava tubes because these were the only natural caves whose ages could be determined on geological evidences. As cave animals were believed to have become differentiated strictly in caves, and as lava caves in the Fuji area were various in their histories, it was surmised that age difference between old and young caves must be reflected on morphological specialization of cavernicoles. Investigations along this hypothesis were made above all by KUMANO (1943), who explored with his students ten lava caves in five lava flows of different ages. His attempt did not bring about good result, and his collection was lost by the war. However, I commenced my own investigation along the same line as KUMANO's, since his working hypothesis seemed to me to make a good starting point.

To my utmost surprise, my first trip to the western and southwestern sides of Mt. Fuji-san was very fruitful. Many cavernicoles including certain unexpected forms were collected in the caves visited. Encouraged by this success, I extended my cave explorations next to the northwestern side and then to the remaining sides of the volcano. Certain caves were proved either very poor in the fauna or entirely lacking in animal life, whereas some others were well populated, especially by spiders and millipedes. Such a difference seemed to have no direct bearing on the quality and derivation of lava flows, since inhabited and uninhabited caves frequently lay side by side in the same lava flow.

On the other hand, decisive faunal difference was observed between the caves lying in old lava flows 8,000–13,000 years old and those in young ones about 1,100 years old. This appeared to indicate that highly modified troglobionts could be evolved in old lava caves but not in young ones. However, 10,000 years or so did not seem sufficiently long for differentiation of highly modified troglobionts, and besides, all the troglobionts found in Fuji lava caves belong to groups, whose members are widely distributed in the neighbouring areas. If we regard them as having been modified independent of their relatives, we cannot explain the close similarity between lava cave forms and limestone cave ones, unless very unusual parallel evolution could have taken place between them. Thus, I had to seek for other factors than mere age to account for the faunal difference between old and young caves.

Analysing the ecological data amassed during the course of cave explorations, I came to realize that there was a definite difference in environmental conditions between old and young caves. Young caves are mostly composed of bare lava and devoid of soil, and the climate is usually subject to diurnal and seasonal fluctuations because of the porous nature of the rock. On the contrary, old caves are more or less covered with layers of soil and frequently have muddy floors; the climate is usually stable throughout the year as in limestone caves. It is therefore evident that the former is not suited for the habitats of highly specialized cavernicoles, especially of such soil-dependent animals as chthoniid pseudoscorpions and trechine beetles.

When it is created, a lava cave is completely bare. As time goes by, its roof be-

Fig. 9. A tunnel-like passage in Mitsuiké-ana Cave at the western foot of Mt. Fuji-san. This lava cave harbours *Kurasawatrechus fujisanus* S. UÉNO (an anophthalmic trechine beetle), *Nesticus uenoi* YAGINUMA (a nesticid spider), and many other interesting cavernicoles. (Photo Takanori OGAWA.)

comes gradually eroded, forested and finally covered with thick layers of humus and soil. This coating keeps the underground climate stable and protects the environment from substantial changes. On the other hand, the soil gradually percolates into the cave with rain water, accumulates on the floor, and fills up small voids in the rock. For this reason, old caves are always wet and often have shallow pools of groundwater. The presence of soil is also indispensable for the existence of many specialized cavernicoles, since autotrophic microorganisms living in the clay or silt deposits synthesize certain vitamins in the absence of light and serve as the nutrition of young cavernicoles (CAUMARTIN, 1959). After all, habitats suitable for specialized cavernicoles are yielded only in old caves.

It was necessary to see whether the existence of troglobionts in environmentally stabilized lava caves is peculiar to the Fuji area or universally observed. Accordingly, we extended our studies to all the areas where lava caves were known, that is, the Island of Daikon-jima on Lake Naka-umi in western Honshu, Aso Volcano in central Kyushu, the Satsuma Peninsula in southwestern Kyushu, and the Island of Fukué-jima of the Gotôs off the western coast of Kyushu. The results of the explorations accorded well with that obtained in the Fuji area, almost all the old caves examined being inhabited by highly specialized cavernicoles (UÉNO & MORIMOTO, 1970; etc.). It was confirmed beyond doubt that the controlling factor in the lava cave fauna was the environmental conditions, not simply the age of the caves concerned.

In the summer of 1973, my wife Yoshiko and I attended the 6th International Congress of Speleology held at Olomouc, Czechoslovakia, at which I delivered an address on the fauna of the lava caves in the Far East (UÉNO, 1977 a). On this occasion, we took an extended trip through eighteen European countries, visited museums

Fig. 10. Entrance to Kasaishi-no-ana Cave on the Aso Volcanoes in central Kyushu. This lava cave is inhabited by an anophthalmic trechine beetle, *Rakantrechus asonis* S. UÉNO. (Photo Teruo IRIE.)

and institutions, met many friends of mine, and examined types of the Trechinae from Asia, South America and many other parts of the world. This enlarged my knowledge of the global fauna of the subfamily. We also visited the Laboratoire Souterrain at Moulis in the Pyrénées, met active biospeologists of the time including Albert VANDEL and Christian & Lysiane JUBERTHIE, and observed the famous underground laboratory for rearing cavernicoles and undertaking other experiments. They took me to some caves nearby, where I saw for the first time living *Aphaenops*, one of the best known ultra-evolved trechines in the world.

Biospeological importance of lava caves was subsequently recognized by HOWARTH, who discovered many extraordinary troglobionts on the Island of Hawaii (HOWARTH, 1972, 1980), and later by MACHADO (1987, etc.) in the Canary Islands. All the troglobionts discovered by them belong to groups autochthonous to respective island groups and have become differentiated in isolated condition under the tropical or subtropical climates, so that they cannot be directly compared with temperate forms. Their studies are, however, very important in clarifying that a specialized cave fauna can exist wherever there is a suitable environment for colonization and adaptation.

Next problem to be cleared up was to determine whether or not the troglobionts extant in lava caves had evolved after the eruption of lava flows bearing the caves concerned. It was difficult to approach the subject directly from the data obtained by the studies of lava cave inhabitants. Fortunately, however, a new light was shed from a different direction and led us to a new field of biospeology.

Exploration of Mine Adits

In the autumn of 1970, when I was still in an inextricable maze of lava cave problems, an anophthalmic trechine beetle was discovered by Masahisa OHRUI in an abandoned adit of a gold mine on the Izu Peninsula on the Pacific side of Central Japan. After a careful examination, it became apparent that the beetle was a new species closely related to a lava cave inhabitant endemic to the southeastern foot of Mt. Fuji-san (cf. UÉNO, 1972 b). Subsequent investigations made by myself revealed that the adit had an interesting fauna very similar to that of old caves in the Fuji area. Most important was the discovery of an eyeless spider called *Falcileptoneta caeca*, which was common between the two areas.

The location of the gold mine was not very far from the nearest lava flow in the Fuji area, but was still more than 20 km distant in a bee-line. Besides, the geological feature of the intervening area was very intricate and not comparable to relatively simple calcareous terrains or lava fields. If the troglobiontic spiders extant in the two areas became independently differentiated from a common ancestor, they could not be perfectly identical with each other, even though a striking parallelism could have taken place. Therefore, certain underground routes passable for the spider must exist between Fuji and Izu however implausible it seemed to be. This inference

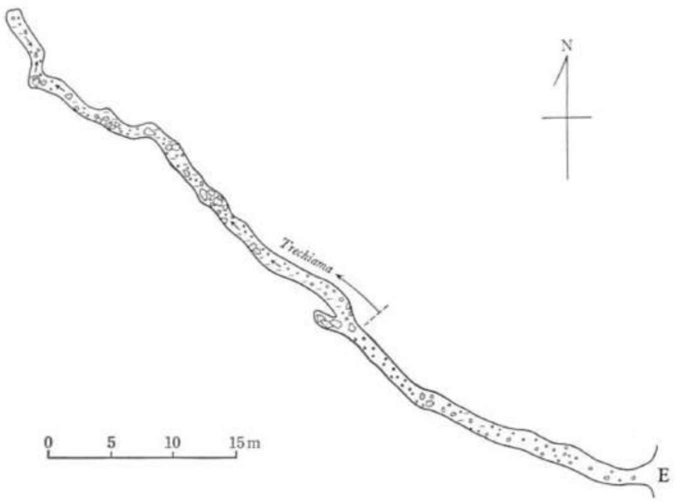

Fig. 11. Sketch map of Karasawabora-no-ana, an old gold mine in the Izu Peninsula, Central Japan. An epoch-making discovery in biospeology was made in this small underground world.

was also supported by the fact that the mine adit was only 100–150 years old, or much younger than the youngest known lava cave in the Fuji area. No troglobiont could have undergone an appreciable morphological modification within such a short time.

Five years prior to the discovery of the mine fauna on the Izu Peninsula, Kintaro BABA discovered an anophthalmic trechine beetle, which was in every respect troglobiontic, from narrow fissures of shale about 2 m below the surface (UÉNO, 1972 a). In our present concept, the habitat of this beetle is typically upper hypogean, but at that time I was unable to distinguish it from the endogean domain, although I was much surprised at its unusual depth. The realization that artificial cavities could harbour specialized fauna directed my eyes once again to the importance of BABA's discovery. Similar environment under the earth might well be the original habitat of terrestrial troglobionts found in the mine adit.

It was, however, not easy to dig deep holes into the ground for seeking minute animals of considerable rarity. An easier way to obtain the same result seemed to me to be the faunal investigation of artificial cavities already dug by someone else, and it was mine adits of various kinds that seemed most abundant. Besides, there were several previous records suggestive of a promising future of this project. In the autumn of 1954, Shigeru NOMURA explored an abandoned mercury mine in eastern Kyushu and found that its fauna was very similar to those of nearby limestone caves. Though lying in a calcareous area, the adit itself was dug into a small hill mainly composed of chert. In the following year, I myself paid a visit to that area and examined the adit in question and two other adits of another mine, all of which were found rich in specialized fauna. All the adits harboured anophthalmic trechine beetles, to which the new names *Rakantrechus andoi* and *R. nomurai fodinarum* were given (UÉNO, 1959, 1960 a). However, biospeological importance of these discoveries was neglected at that time, mainly because those adits lay either in calcareous terrains or in their vicinities. Only when a rich troglobiontic fauna was found out in the gold mine on the Izu Peninsula widely distant from any calcareous areas, I woke to a realization that I had been stupid enough to overlook such an obvious clue for probing into the real nature of the so-called cavernicoles. Standing on a solid ground, I renewed my study of mine fauna with the hope of pursuing the origin of terrestrial cave animals.

As in the case of the faunal study of Fuji lava caves, our exploration of mine adits progressed systematically and rapidly, but at first the results were not so good as expected. I had to endure repeated disappointment and almost gave up the whole plan. However, a favourable light was shed at the beginning of 1975, when a dead body of an anophthalmic trechine beetle was found floating on the surface of a pool of groundwater in an abandoned adit of a manganese mine on the Minoo Hills to the north of Osaka. With the aid of Yoshiaki NISHIKAWA, I made repeated investigations of the adit, and by the end of that year, became thoroughly convinced that the beetle was a regular inhabitant of that seemingly deserted artificial cavity. It was described in the next year under the name of *Trechiama nagahinis* in the first volume of the new journal of the reorganized Speleological Society of Japan (UÉNO, 1976), the first convention of which was held at Akiyoshi on October 26, 1975.

The discovery of *T. nagahinis* inspired NISHIKAWA to further efforts towards clarification of mine fauna, and he soon located several abandoned adits rich in specialized cavernicoles in the vicinities of Kyoto and Osaka. Fertile adits were also found out in the Island of Shikoku, and by the end of the 1970's, we were fully aware of the fact that specialized hypogean faunas are found in various kinds of artificial cavities including mine adits, underground shelters, conduits, prospecting adits at dam sites, and so on. The age of the cavities is not significant with the faunas, since highly specialized troglobionts are found in old adits 100 or more years old as well as in very young ones that were dug only 2 or 3 years before. Moreover, their existence is not directly dependent on the nature of rocks into which the cavities in question are dug; igneous and metamorphic rocks are equally suitable to sedimentary ones. However, most favourable are such clastic rocks as mudstones, shales, schists and breccias. This means that manganese and antimony mines are usually favourable for the existence of specialized cavernicoles, which is not very fortunate for biospeologists, since old adits lying in these loose fissured rocks are apt to entail dangers of collapse. Tuff mines are also frequently, but not always, good for habitats of specialized cavernicoles. On the other hand, pure granite is always devoid of specialized fauna; this was one of the main reasons why our investigation of mine fauna was not successful at the beginning. It is apparent at present that the sterility of granitic cavities is mainly ascribed to ecological causes. When eroded, pure granite only produces pure sand, so that granitic cavities are usually devoid of clay or silt indispensable for the existence of many terrestrial cavernicoles. The situation is similar to that observed in young lava

Fig. 12. *Yamautidius compositus* S. UÉNO, an anophthalmic trechine beetle so far known only from the abandoned adit of the gold mine called Uéki-kôzan in the Island of Shikoku.
(Photo Toshiki MOHRI.)

caves which are almost always bare and very clean.

On the occasion of the 7th International Speleological Congress held at Sheffield, England, in Septembler 1977, I made an address on the biospeological importance of non-calcareous caves (UÉNO, 1977 b), emphasizing the importance of pursuing investigations of non-calcareous artificial cavities and pointing out the logical deduction that the so-called troglobionts are nothing but such animals as live deep in the earth or in fissures of rocks beneath the soil.

We, of course, tried more direct method of finding out terrestrial troglobionts from their supposed natural habitats alongside of the faunal investigation of mine adits. This was a laborious and time-consuming task; its progress was slow and expected results were not gained for some time. Here again, NISHIKAWA displayed tireless activities, and after 1976, our flair became more and more developed for locating extra-cave habitats of anophthalmic trechine beetles. Our investigations rapidly progressed above all in the northern part of the Kinki District, or in the vicinities of Kyoto and Osaka, and already in 1980, I was able to publish a monograph of the anophthalmic trechine beetles belonging to the group of *Trechiama ohshimai*, in which quite a new aspect of biospeology was first introduced into science.

In this monograph, I recognized twenty-two species, of which six were then known only from caves of some kind (two of the six were later found in extra-cave habitats), thirteen were obtained from the underground habitats we specially looked for, and the remaining three were taken from both inside and outside caves. Thus, it was proved beyond all reasonable doubt that the so-called troglobiontic trechines were not confined to caves but widely occurred in narrow spaces on or near the bedrock beneath thick layers of the soil. At that time, I regarded this habitat as the lowest zone of the endogean domain, though it was unusually deep and loose than ordinary endogean environment.

Digging into the Earth

Before 1970, only a small number of endogean species of anophthalmic trechine beetles were recorded in the Japanese Islands. This was rather strange, since one of those species (*Trechiama angulicollis* JEANNEL) had been discovered as early as in the 1920's. They were invariably known from isolated individuals accidentally found out from beneath large stones. Searching for natural habitats of hypogean species, however, I often came across endogean trechines, usually from beneath large stones deeply embedded in the soil and also from soil layers below. Many of them were short-legged and crawled about on the undersurfaces of stones, but there were others which were long-legged and usually ran about on the clayey soil under stones, not on the surfaces

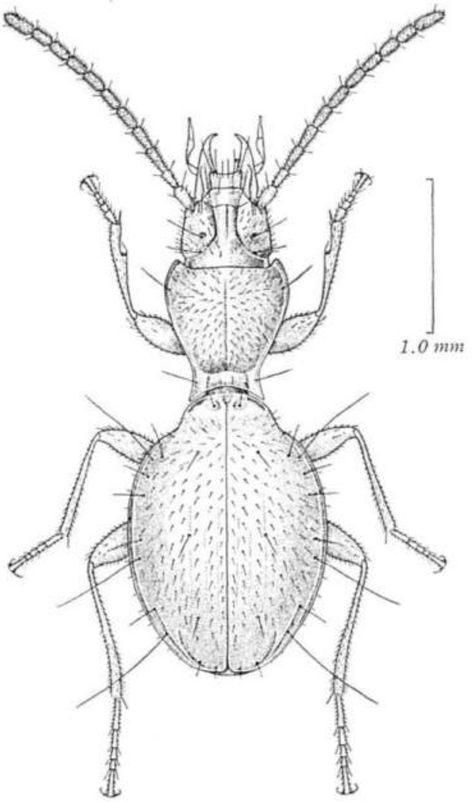

Fig. 13. *Suzuka masuzoi* S. UÉNO, an endogean anophthalmic trechine beetle showing the highest modification of the articulation of fore and hind bodies.

Fig. 14. Schematic cross section of a colluvium showing the habitat of anophthalmic trechine beetles and other troglobionts. UHZ – upper hypogean zone; S – soil layer.

of the stones themselves.

If soil layers were not compact because of inclusion of numerous stones of various sizes, these long-legged forms, including *T. angulicollis*, were also found in deeper places, sometimes 2 m or more below the surface, and were regularly found near the bedrock. It was inferred from this fact that they were originally the inhabitants of the deep zone near the bedrock and only temporarily emerged from there. This inference seemed reasonable, since long-legged anophthalmic trechines were sometimes met from under small stones, when the water level of gullies became higher than usual after heavy rains. Taking these matters into account, I concluded then that if we could locate such spots as the overlying soil mantle was relatively thin, we should be able to save the labour of excavation to a considerable extent.

After making futile attempts along this line, we finally came to realize that eyeless animals were most easily dug out from colluvia deposited under steep slopes at the sides of gullies or narrow streams. As they were particularly frequent along the courses of trickling waters, seepages made good starting points for excavation. Usually the thickness of the soil mantle was 50 cm or more, which means that we had to remove several tons of soil and rock debris before reaching the habitats of anophthalmic trechine beetles. In such places as the mantle was thin, however, they were found at a depth of only 10–20 cm, always in spaces between soil layer and bedrock, which form a pe-

Fig. 15. Excavation of an upper hypogean habitat of *Trechiama murakamii* S. UÉNO, an anophthalmic trechine beetle, at the Gazatta-dani in the Island of Shikoku.

culiar environment named the upper hypogean zone. In other words, it was not the depth but the environment similar to the interior of caves that delimited their habitats.

With the discovery of the new method of locating extra-cave habitats of cavernicoles, our investigations made a marvelous progress. A large number of eyeless depigmented animals were brought to light by my own efforts with unfailing collaborations of many friends of mine. Anophthalmic trechines were found almost anywhere in the mainland of Japan excluding the northern and eastern parts of Hokkaido. They were usually nonexistent in pure granitic terrains and alluvial plains, but even on granitic hills, certain species like *Trechiama angulicollis* and *T. instabilis* were found in a kind of oasis suitable for their existence. It was indubitable that anophthalmic trechines and many other terrestrial cave animals distributed in temperate regions had originated in the upper hypogean zone.

The upper hypogean fauna existed also in such areas as had been immersed by Pleistocene transgressions. Anophthalmic trechines were widespread, for instance, in the Hokuriku District and the Mogami-gawa drainage area in northeastern Honshu, both of which had been immersed in the early Pleistocene. Moreover, a distinctive species, *Trechiama terraenovae*, was discovered on the Miura Peninsula, which had not been in existence in the Second Interglacial and had become a part of an alluvial plain through the Third Glacial (UÉNO, 1988). Since no long-legged anophthalmic trechines have ever been found in low plains less than 100 m high, colonization by ancestral *terraenovae* does not seem to have taken place either in the Third Glacial or in the Last Interglacial. In all probability, that colonization must have been effected

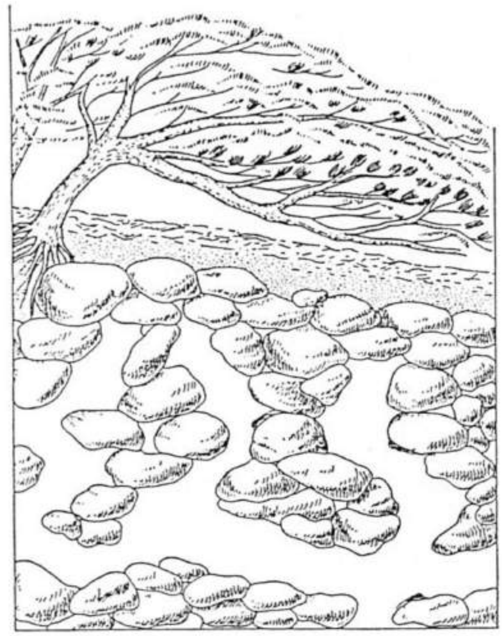

Fig. 16. Schematic cross section of a micro-cavern harbouring *Masuzoa ussuriensis* LAFER, a microphthalmic trechine beetle of cursorial habit, on Mt. Oblachnaya of the Sikhote-Alin in the Russian Far East.

sometime in the Last Glacial after the upheaval of the apical part of the peninsula. All these evidences seem to indicate that colonization of the upper hypogean zone and subsequent speciation of so-called troglobionts usually took place after the Last Interglacial Age, or in other words, to suggest that their speciation must have progressed much more rapidly than it is generally considered.

In October 1985, the Zoological Society Prize of Japan was awarded me for the painstaking and time-consuming study on the derivation of terrestrial cave animals (UÉNO, 1985, 1987). My exploits were widely recognized in Japanese scientific societies, though there were still many problems that had to be clarified. Most important was to confirm if similar upper hypogean faunas were widespread in other Asian countries. This was not an easy task to carry out, because it appeared considerably difficult to locate appropriate places for excavation in such denuded dry areas as most parts of eastern China or in such granite-prevailing country as South Korea. I failed in finding out rich upper hypogean fauna in the Russian Far East, though a depigmented microphthalmic trechine, *Trechiama sichotanus*, was dug out from a typical upper hypogean layer (UÉNO & LAFER, 1992). Perhaps the Primorye Territory is too northern to develop a highly specialized terrestrial subterranean fauna. However, I was surprised to find a very peculiar habitat and habit of a depigmented microphthalmic trechine, *Masuzoa ussuriensis*, in the alpine zone of Mt. Oblachnaya on the Sichote-Alin. This unique species dwells in thick heaps of stones or rock debris, and spends a cursorial life on wet walls of a kind of micro-cavern formed by wide spaces among rock debris (cf. UÉNO, 1994). Its habitat cannot be said typically upper hypogean, but looks like a miniature of caves in an ordinary sense, and the mode of life of this species is similar to that of aphaenopsoid trechines in limestone caves. I have never seen any similar habitat of a trechine beetle in my long career of field investigations.

Before visiting the Russian Far East in 1991 and 1992, I organized zoological expeditions to the high mountains of Taiwan from 1989 to 1991. I climbed up many

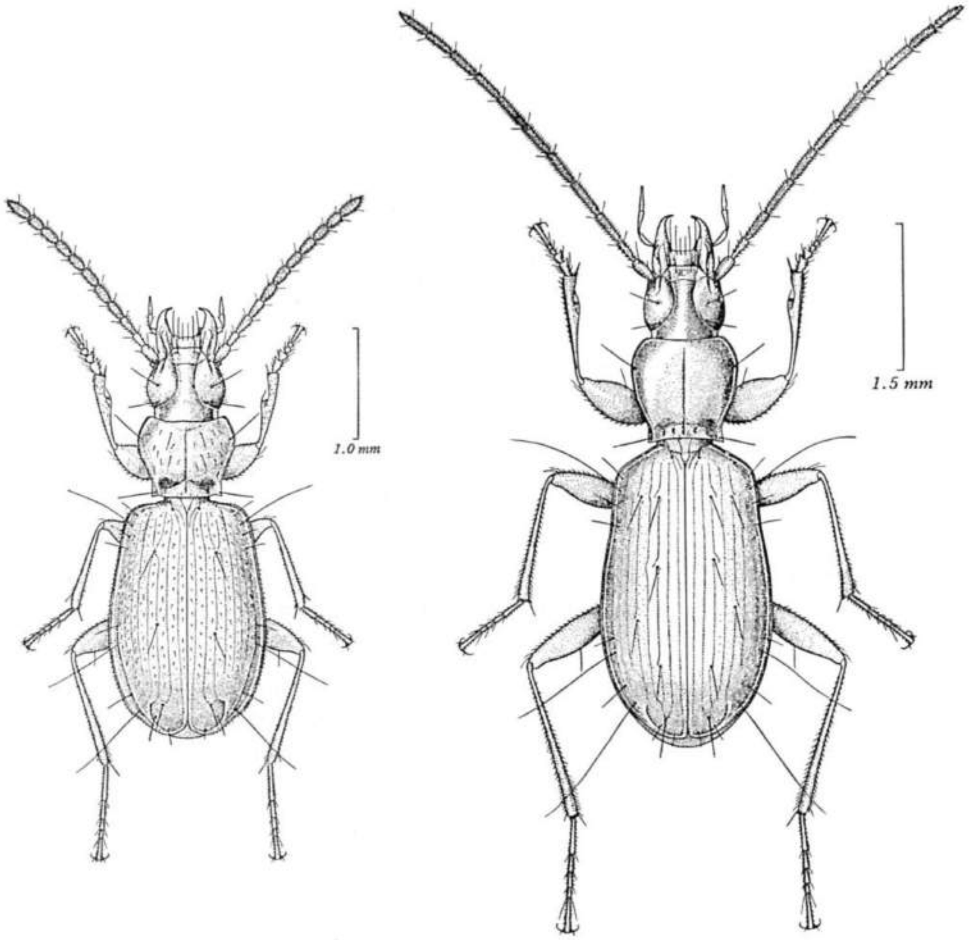

Fig. 17. Two anophthalmic trechine beetles from high mountains of Taiwan. Left: *Masuzonoblemus tristis* S. UÉNO, an endogean species endemic to the subalpine zone (3,580 m in altitude) of Mt. Hsüeh Shan. Right: *Trechiama hamatus* S. UÉNO, an upper hypogean species known only from the subalpine zone (2,870 m in altitude) of Mt. Neng-kao-pei-feng.

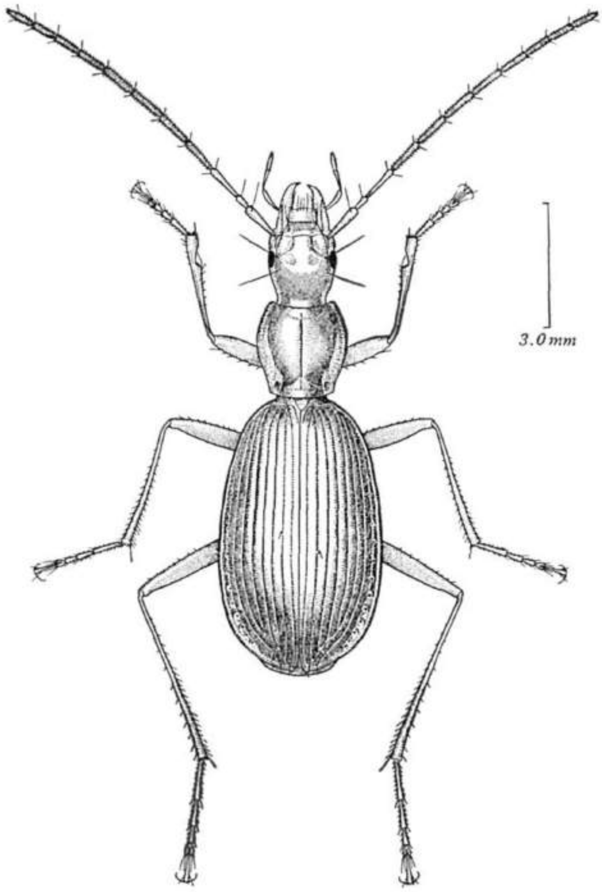

Fig. 18. *Jujiroa parvicollis* S. UÉNO et A. SAITO, a microphthalmic platynine carabid beetle known from the upper hypogean zone of Mt. Cho-she-ta Shan in central Taiwan.

high mountains, some of which had never been visited by entomologists before. Though many interesting arthropods were collected by our investigations, the most important discovery from the biospeological viewpoint was that a true upper hypogean fauna similar to that of Japan did exist in the subalpine zone of many high mountains. We dug out four anophthalmic species of *Trechiama* (UÉNO, 1990, 1991, etc.) and seven microphthalmic species of *Jujiroa* (UÉNO & SAITO, 1991), almost all from the typical upper hypogean zone. Besides, we discovered two endogean anophthalmic species of trechine beetles, also in the subalpine zone, which formed a new genus, *Masuzonoblemus*, with relatives known only from Northeast Japan (UÉNO, 1989, etc.). Lying at the northern periphery of the tropical zone, the Island of Taiwan is surmounted with high mountains, many of which exceed 3,000 m in height. This makes its fauna very rich and very much complicated. Limestone caves are known on low hills at the southern

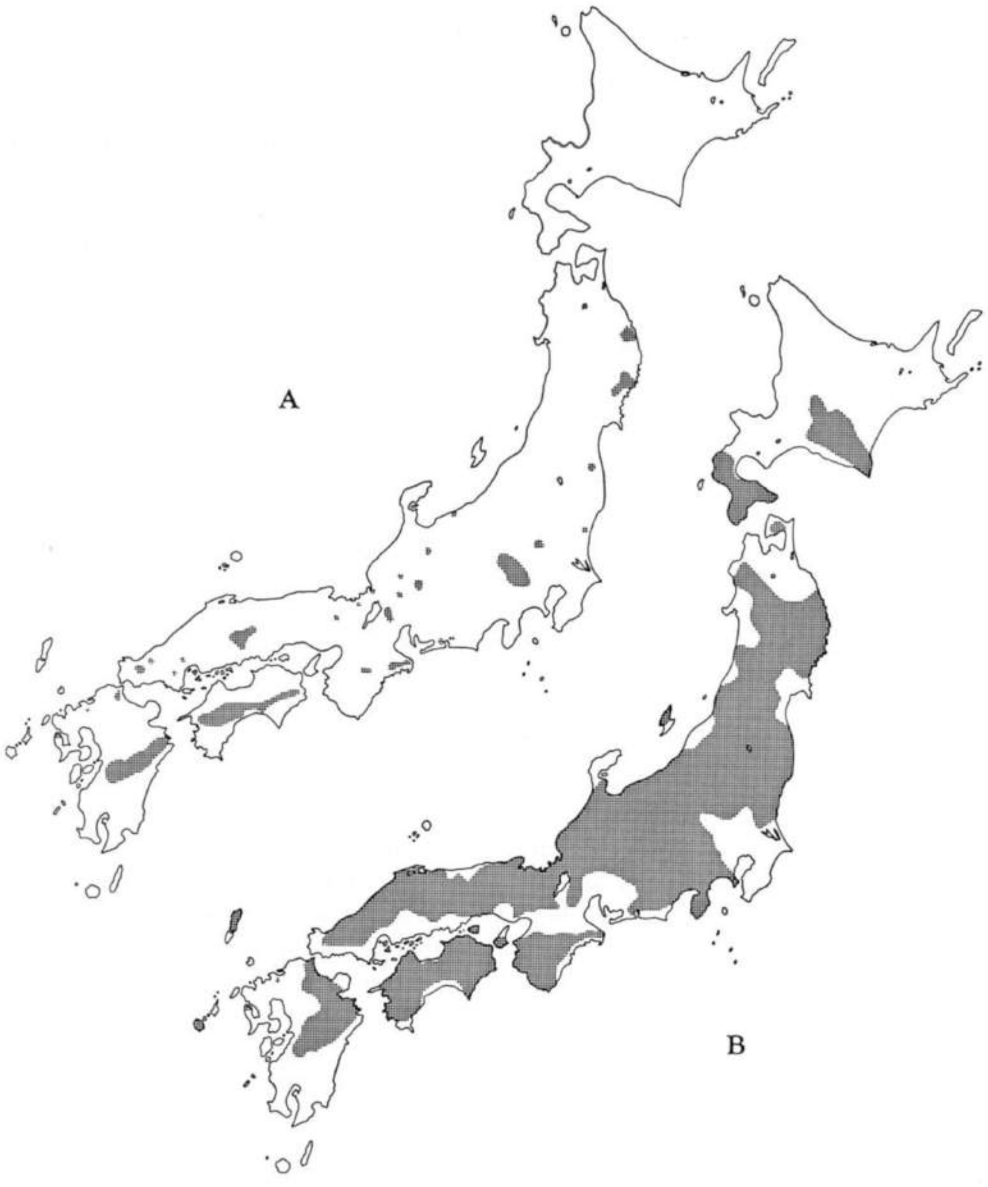

Fig. 19. Map showing the distribution of anophthalmic trechine beetles in Japan. Map A is based solely on the species known from limestone caves. Map B is drawn from our present knowledge enlarged by the discoveries of mine and upper hypogean faunas.

part of the island, but do not harbour any terrestrial animals of deep biospeological interest. Specialized forms occur at higher elevations, usually more than 2,000 m in altitude and sometimes above 3,000 m in height. Most of them live in the upper hypogean zone along narrow streams on rather gentle slopes.

My pursuit of the upper hypogean fauna is still on the way even in Japan. About half a dozen new species of anophthalmic trechine beetles are being discovered every year, and the total number of the known species well exceeds 300 at present. As was noted before, only eleven species of the Trechinae were recorded from Japan when I started for my study of the subfamily. The number was brought up to about 130 when my explorations of natural caves attained to the end of the first phase. It multiplied with the progress of our faunal investigations of artificial cavities and the upper hypogean zone, and now amounts to more than thirty times the original figure. Thus, "digging into the earth" has become one of the most important things to do for biospeological studies. It has broadened the scope of biospeology to a considerable extent. By doing this, we can fill in wide blanks in our knowledge about the distribution of terrestrial cavernicoles, and can analyse their phylogeny on a much sounder basis than before. It is, however, a very laborious work to excavate a trench 1–2 m wide, 2–3 m long and 1–2 m deep for collecting several specimens of minute eyeless animals. Very few scientists are willing to follow up this line of study. I myself cannot foresee how far and how long I shall be able to continue this hard work. Nevertheless, I cannot help hoping that someone will succeed me in pursuing the study of the upper hypogean fauna, as I am confident that this is a fruitful way to seek for the origin of terrestrial cave animals.

Epilogue

Looking back upon bygone days, I cannot help feeling that Fortune has been always smiling on me. I was born to Masuzo UÉNO, who was a leading zoologist and pioneer biospeologist in Japan. I learned from him all the elementary knowledge about biology and how to write scientific papers. Entering Kyoto University, I met Riozo YOSII, who first showed me Japanese specimens of an anophthalmic trechine beetle and always encouraged my study on cave animals. Through the undergraduate days, my investigations of the fauna of limestone caves were like stepping into an untrodden path. No one ever tried to perform such a quixotic act as to examine all the caves extant in Japan. Almost every organism I came across in those caves was new to science, and naturally, trechine beetles were no exceptions. It is seldom that a specialist in a group of animals is given the opportunity to work over an entirely new fauna in his or her home ground. I was very fortunate to have been given such an opportunity. Besides, cave explorers, not to speak of cave biologists, were extremely rare in the 1950's, so that I was much prized by local people who willingly offered lodgings and helped my cave explorations.

After moving to Tokyo at the beginning of the 1960's, I was often aided by serendipity. I was the first to have recognized several momentous facts in the field of biospeology. For the first time in the world, I realized clearly that the lava cave fauna is very important for pursuing the origin of terrestrial cavernicoles, that the vital factor to control the animal life is not the mere physical ages of lava caves but the environmental condition changing with passage of time, and that the so-called troglobionts have not evolved in lava caves themselves but secondarily colonized from adjacent areas. If I were not furnished, or rather forced to take, the opportunity to make biological explorations of the Fuji lava caves, my recognition of the real nature of cavernicoles might have been delayed considerably. Besides, I had the advantage of geographical position to make repeated explorations in the Fuji area, one of the best fields for the study of lava cave problems.

My investigation of artificial cavities that followed the biological exploration of lava caves was started off with OHRUI's timely discovery of an interesting specialized fauna in an abandoned adit of a gold mine. Existence of such a fauna was not expected till the end of the 1960's, even though some troglobiontic animals had been reported from a mercury mine in eastern Kyushu. With the success of this project, I became confident of my working hypothesis that terrestrial cavernicoles should occur anywhere under the earth so far as environmental condition allows their existence. To follow up this line of investigations, BABA's discovery of an anophthalmic trechine beetle (*Trechiama echigonis*) from the depth of about 2 m gave me a substantial clue to looking for their underground habitats. In carrying on this painstaking work, I was aided by many colleagues and friends, who did not avoid getting muddy and soaked with sweat. We still continue at this hard work and are obtaining new knowledge from time to time.

Beside biospeological studies mainly in Japan, I participated in many expeditions to foreign countries. I visited Southeast Asia and China many times, which included the Philippines and northern Vietnam. I visited Mexico once, with Robert W. MITCHELL. I organized expeditions twice to New Zealand, Australia and Tasmania, three times to the Himalayas including Nepal, West Bengal and Sikkim, three times to Taiwan, and twice to the Russian Far East. In all these expeditions, I endeavoured to collect trechine beetles, particularly on high mountains, and accumulated a large number of materials, which furnished a satisfactory basis for my study of the Far Eastern Trechinae. Though I described new species from foreign countries from time to time, it is not the purpose of my collecting trechine beetles in remote countries merely to describe new species or subspecies. My chief interest has always been in clarifying a general sketch of their distribution in connection with the origin and the routes of past dispersal of the Far Eastern species. I am convinced now that the extant trechine fauna of Australia and Tasmania is composed of a single phyletic group of the Trechini, which has a close relationship to South American forms, whereas that of New Zealand is composed of two phylogenetically different groups, one of which is remotely related to Australo-Tasmanian genera but the other has a close relationship to the Far Eastern ones. I am convinced now that the trechine fauna of the eastern Himalayas has a close relationship to that of East Asia including China, Taiwan and Japan, but that of the western Himalayas lacks some important elements and is different in this respect from the eastern fauna. All these conclusions have been employed, either directly or indirectly, for analysing distributional patterns of the Far Eastern forms, and have furnished important auxiliary bases for my discussion. My only regret is that I have been unable to seize an opportunity to investigate the fauna of caves and mountains in North Korea, which must be essential for clarifying the trechine fauna of East Asia.

I am not certain in which subject I have had deeper interest, systematics of the Far Eastern Trechinae or biospeology. Perhaps the former has been my principal theme, since in the first place, I was lured into caves by trechine beetles, not by beautiful stalactites and stalagmites. In any case, investigations on these subjects come very expensive, and because of their rareness, trechine beetles may be the most expensive insects in Japan. Fortunately, my studies have been supported by grants-in-aid, mostly from the Ministry of Education, Science and Culture, Japan, but still I have had to defray considerable amount of money from my own pocket for undertaking field investigations. Needless to say, financial problems have been more difficult in making long-term expeditions to remote countries. Here again, expenses have usually been granted from the same ministry, but the money granted has not always been sufficient for covering our needs.

My principle of pursuing the systematics of trechine beetles is to make field investigations at any cost, to examine their natural habitats and mode of life, and to draw a conclusion from my own observations. Actually, I have seen almost all the known localities of flightless trechines in the Far East, and have visited many others in the world. I could never have accomplished this, were it not for the deep understanding and invaluable help of my beloved wife, Yoshiko, to whom I wish to express my warmest appreciation in closing this brief history.

References

CAUMARTIN, V., 1959. Quelques aspects nouveaux de la Microflore des cavernes. *Annls. Spéléol., Moulis*, **14**: 147–157, pl. 5.

COIFFAIT, H., 1959. Énumération des grottes visitées 1950–1957 (Neuvième série). *Biospeologica*, LXXVII; *Arch. Zool. exptl. gén., Paris*, **97**: 209–465.

ESAKI, T., 1932 a. The animals in caves. *In*: Zoku Dôbutsu-no-kyôi. *Kagakugahô Sôsho, Tokyo*, **10**: 188–193. (In Japanese.)

——— 1932 b. Introduction to the study of cavernicolous animals. *Rigakkai, Tokyo*, **30**: 481–488. (In Japanese.)

HABU, A., 1950. On some cave-dwelling Carabidae from Japan (Coleoptera). *Mushi, Fukuoka*, **21**: 49–53, pls. 8–10.

HOWARTH, F. G., 1972. Cavernicoles in lava tubes on the Island of Hawaii. *Science, Washington D. C.*, **175**: 325–326.

——— 1980. The zoogeography of specialized cave animals: a bioclimatic model. *Evolution, Lawrence*, **34**: 394–406.

JEANNEL, R., 1962. Les Tréchides de la Paléantarctide occidentale. *Biol. Amér. austr., Paris*, **1**: 527–655.

MACHADO, A., 1987. Nuevos Trechodinae y Trechinae de las Islas Canarias (Coleoptera, Carabidae). *Fragm. ent., Roma*, **19**: 323–338.

MOORE, B. P., 1972. A revision of the Australian Trechinae (Coleoptera: Carabidae). *Aust. J. Zool.*, Suppl. Ser. 18: 1–61.
KUMANO, M., 1943. The animals of the lava caves around Mt. Fuji. *Hakubutsugaku Zasshi, Tokyo*, **39** (73): 51–56. (In Japanese.)
NAKAMURA, K., & S.-I. UÉNO, 1963. Japanese Reptiles and Amphibians in Colour. ix+214 pp., 42 col. pls. Hoikusha, Osaka. (In Japanese, with English title.)
UÉNO, S.-I., 1951. Carabid-beetles found in limestone caves of Japan. *Ent. Rev. Japan, Osaka*, **5**: 83–89, pl. 4.
——— 1953 a. The Coleoptera of Japan [13]. *Shin Konchû, Tokyo*, **6** (12): 37–43. (In Japanese.)
——— 1953 b. Ditto [14]. *Ibid.*, **6** (13): 46–51. (In Japanese.)
——— 1954 a. Ditto [15]. *Ibid.*, **7** (3): 41–46. (In Japanese.)
——— 1954 b. Ditto [16]. *Ibid.*, **7** (4): 54–59. (In Japanese.)
——— 1954 c. Ditto [17]. *Ibid.*, **7** (5): 44–49. (In Japanese.)
——— 1957. Blind aquatic beetles of Japan, with some accounts of the fauna of Japanese subterranean waters. *Arch. f. Hydrobiol., Stuttgart*, **53**: 250–296, 3 pls.
——— 1959. A new troglobiontic trechid found in the mines of central Kyushu. *Mem. Coll. Sci. Univ. Kyoto*, (B), **26**: 285–290.
——— 1960 a. A new species-group of the genus *Rakantrechus* (Coleoptera, Harpalidae). *Ibid.*, (B), **27**: 37–44.
——— 1960 b. Alpine trechids from Hokkaido, Japan. II. A new type of Trechina found on the Hidaka Mountain Range. *Ibid.*, (B), **27**: 139–144.
——— 1961. Ditto. III. Occurrence of *Trechiama* in Hokkaido. *Ibid.*, (B), **28**: 331–336, pl. 1.
——— 1971. The fauna of the lava caves around Mt. Fuji-san. I. Introductory and historical notes. *Bull. natn. Sci. Mus., Tokyo*, **14**: 201–218, pls. 1–4.
——— 1972 a. A new endogean *Trechiama* (Coleoptera, Trechinae) from the northern side of Central Japan. *Annot. zool. japon., Tokyo*, **45**: 42–48.
——— 1972 b. A new anophthalmic *Trechiama* (Coleoptera, Trechinae) found in an old mine of the Izu Peninsula, Central Japan. *Ibid.*, **45**: 111–117.
——— 1976. A new anophthalmic *Trechiama* (Coleoptera, Trechinae) from the Minoo Hills, Central Japan. *J. speleol. Soc. Japan*, **1**: 1–7.
——— 1977 a. The fauna of the lava caves in the Far East. *Proc. 6th int. Congr. Speleol., Olomouc 1973*, **5**: 237–242.
——— 1977 b. The biospeleological importance of non-calcareous caves. *Proc. 7th int. speleol. Congr., Sheffield 1977*, 407–408.
——— 1980. The anophthalmic trechine beetles of the group of *Trechiama ohshimai*. *Bull. natn. Sci. Mus., Tokyo*, (A), **6**: 195–274.
——— 1985. The derivation of terrestrial cave animals. *Zool. Sci., Tokyo*, **2**: 852.
——— 1987. The derivation of terrestrial cave animals. *Ibid.*, **4**: 593–606.
——— 1988. Discovery of an anophthalmic *Trechiama* (Coleoptera, Trechinae) on the Miura Peninsula, Central Japan. *Kontyû, Tokyo*, **56**: 45–51.
——— 1989. Discovery of an eyeless trechine beetle (Coleoptera, Trechinae) in Taiwan. *Elytra, Tokyo*, **17**: 135–142.
——— 1990. The *Trechiama* (Coleoptera, Trechinae) of the Island of Taiwan. *Ibid.*, **18**: 19–29.
——— 1991. A new anophthalmic *Trechiama* (Coleoptera, Trechinae) from the upper hypogean zone of central Taiwan. *Ibid.*, **19**: 265–271.
——— 1993. A bibliography of the biospeology of Japan 1916–1992. *Ann. speleol. Res. Inst. Japan, Iwaizumi*, (11) (Suppl.): 1–179.
——— 1994. Presumable derivation of the Hokkaido species of the trechine genus *Masuzoa* (Coleoptera, Trechinae). *Mem. natn. Sci. Mus., Tokyo*, (27): 147–154.
——— & N. KASHIMA, 1978. An Introduction to Speleology. Exploring the Underground World

in Darkness. *Blue Backs*, B–361. 233 pp. Kodansha, Tokyo. (In Japanese.)

UÉNO, S.-I., & G. Sh. LAFER, 1992. A new locality of *Trechiama sichotanus* (Coleoptera, Trechinae). *Elytra, Tokyo*, **20**: 143.

——— & Y. MORIMOTO, 1970. The fauna of the insular lava caves in West Japan. I. General account. *Bull. natn. Sci. Mus., Tokyo*, **13**: 443–454, 1 folder, pl. 1.

———, S. K. PAE & F. NAGAO, 1966. 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**: 465–499, 3 folders, pls. 1–8.

——— & A. SAITO, 1991. Occurrence of *Jujiroa* (Coleoptera, Carabidae) on the high mountains of Taiwan. *J. speleol. Soc. Japan*, **16**: 1–28.

YOSII, R., 1956. Monographie zur Höhlencollembolen Japans. *Contr. biol. Lab. Kyoto Univ.*, (3): i+1–109+*1–22*, 50 pls.

Spec. Bull. Jpn. Soc. Coleopterol., Tokyo, (4): 31–70, March 28, 1995

Checklist of Writings by Shun-Ichi UÉNO

The following checklist seems almost complete, though several ephemeral articles may be overlooked. Titles are arranged in chronological order. New English titles are given to all the articles entirely written in Japanese, and original Japanese titles are added to translated ones to avoid future confusion. Newspaper accounts and anonymous articles are omitted.

Shun-Ichi UÉNO

1949

1. Mass hibernation [of some insects]. *MDK News, Nishinomiya*, **2**: 17. (In Japanese.) [31. III. 1949.]
   集団越冬. MDK ニュース, **2**: 17.
2. Does *Neozephyrus taxila japonica* [sic] feed on *Alnus multinervis*? *MDK News, Nishinomiya*, **2**: 17. (In Japanese.) [31. III. 1949.]
   ミドリシジミはヒメヤシャブシを食するか. MDK ニュース, **2**: 17.
3. On the distribution of *Rupa japonica* JEDLIČKA. *MDK News, Nishinomiya*, **2**: 17. (In Japanese.) [31. III. 1949.]
   Rupa japonica JEDLIČKA の分布に就いて. MDK ニュース, **2**: 17.

1951

4. A new classification of the so-called Carabidae — JEANNEL's system. *Mushi-no-kuni, Mizukaido*, **6** (1–2): 2–3. (In Japanese.) [1. VI. 1951.]
   歩行虫科の新分类体系の紹介. 蟲の國, **6** (1–2): 2–3.
5. My dreams [in the Japanese entomology]. *MDK News, Nishinomiya*, **4** (3): 8. (In Japanese.) [31. X. 1951.]
   私の夢. MDK ニュース, **4** (3): 8.
6. An interesting dytiscid beetle found in the Kabuto-yama area near Kôbé. *MDK News, Nishinomiya*, **4** (3): 8. (In Japanese.) [31. X. 1951.]
   甲山地区の興味深いゲンゴロウ. MDK ニュース, **4** (3): 8.
7. Carabid-beetles found in limestone caves of Japan. *Ent. Rev. Japan, Osaka*, **5**: 83–89, pl. 4. [27. XII. 1951.]
8. Answering Mr. YOSHIZAKA's inquiry [on the Japanese species of *Scarites*]. *MDK News, Nishinomiya*, **4** (5): 5. (In Japanese.) [31. XII. 1951.]
   吉阪氏に答える [日本産のヒョウタンゴミムシ類について]. MDK ニュース, **4** (5): 5.
9. Nara, my favourite collecting place. *MDK News, Nishinomiya*, **4** (5): 9. (In

Japanese.) [31. XII. 1951.]
私の好きな採集地 — 奈良. MDK ニュース, **4** (5): 9.

10. My favourite insects — Insects living in stalactite caves. *MDK News, Nishinomiya*, **4** (5): 10. (In Japanese.) [31. XII. 1951.]
私の好きな虫 — 鍾乳洞に棲む虫. MDK ニュース, **4** (5): 10.

1952

11. A list of adephagous beetles from Toyonaka City and its vicinities. *MDK News, Nishinomiya*, **5** (1): 2–3. (In Japanese.) [29. II. 1952.]
豊中市附近産飽食亜目甲蟲類目録. MDK ニュース, **5** (1): 2–3.
12. The Coleoptera of Japan [2]. *Shin Konchû, Tokyo*, **5** (8): 43–50. (In Japanese.) [Coauthored with T. NAKANE; 25. VII. 1952.]
日本の甲虫 [2]. 新昆蟲, **5** (8): 43–50. [中根猛彦と共著.]
13. *Dytiscus validus*, an aquatic beetle not in my line. *MDK News, Nishinomiya*, **5** (2): 12. (In Japanese.) [30. IX. 1952.]
ゲンゴロウモドキ —私の苦手の虫—. MDK ニュース, **5** (2): 12.
14. A list of adephagous beetles from Toyonaka City and its vicinities (2). *MDK News, Nishinomiya*, **5** (3): 8. (In Japanese.) [31. X. 1952.]
豊中市附近産飽食亜目甲蟲類目録 (2). MDK ニュース, **5** (3): 8.
15. New cave-dwelling trechids of Japan (Coleoptera, Harpalidae). *Mushi, Fukuoka*, **24**: 13–16, pl. 2. [15. XI. 1952.]
16. On a cave-dwelling sphodrid found in Japan (Coleoptera, Harpalidae). *Mushi, Fukuoka*, **24**: 17–19. [15. XI. 1952.]
17. The Coleoptera of Japan [6]. *Shin Konchû, Tokyo*, **6** (1): 55–60. (In Japanese.) [25. XII. 1952.]
日本の甲虫 [6]. 新昆蟲, **6** (1): 55–60.

1953

18. *Apotomopterus dehaani tosanus* NAKANE, IGA et UÉNO, n. subsp. (p. 93, fig. 1 A–b, A–8) and *Dyschirius* (*Dyschiridius*) *igai* NAKANE et UÉNO, n. sp. (pp. 97–98, fig. 18). *In* NAKANE, T., New or little known Coleoptera from Japan and its adjacent regions. IX. — Caraboidea II. —. *Scient. Rept. Saikyo Univ., Kyoto*, (Nat. Sci. & Liv. Sci.), **1**: 93–102. [28. II. 1953.]
19. The Coleoptera of Japan [8]. *Shin Konchû, Tokyo*, **6** (4): 47–52. (In Japanese.) [Coauthored with T. NAKANE; 25. III. 1953.]
日本の甲虫 [8]. 新昆蟲, **6** (4): 47–52. [中根猛彦と共著.]
20. A letter from Tosa. *MDK News, Nishinomiya*, **6**: 24. (In Japanese.) [31. III. 1953.]
土佐だより. MDK ニュース, **6**: 24.

21. The Coleoptera of Japan [10]. *Shin Konchû, Tokyo*, **6** (7): 43–49. (In Japanese.) [Coauthored with T. NAKANE; 25. VI. 1953.]
 日本の甲虫 [10]. 新昆蟲, **6** (7): 43–49. [中根猛彦と共著.]

22. The Coleoptera of Japan [11]. *Shin Konchû, Tokyo*, **6** (10): 39–43. (In Japanese.) [25. VIII. 1953.]
 日本の甲虫 [11]. 新昆蟲, **6** (10): 39–43.

23. Studies on the Japanese Trechinae (I) (Coleoptera, Harpalidae). *Ent. Rev. Japan, Osaka*, **6**: 30–34, pl. 7. [23. IX. 1953.]

24. The Coleoptera of Japan [12]. *Shin Konchû, Tokyo*, **6** (11): 38–45. (In Japanese.) [25. IX. 1953.]
 日本の甲虫 [12]. 新昆蟲, **6** (11): 38–45.

25. The Coleoptera of Japan [13]. *Shin Konchû, Tokyo*, **6** (12): 37–43. (In Japanese.) [25. X. 1953.]
 日本の甲虫 [13]. 新昆蟲, **6** (12): 37–43.

26. The Coleoptera of Japan [14]. *Shin Konchû, Tokyo*, **6** (13): 46–51. (In Japanese.) [25. XI. 1953.]
 日本の甲虫 [14]. 新昆蟲, **6** (13): 46–51.

27. A collecting trip to the Tokara Group of the Ryukyu Islands. *Shin Konchû, Tokyo*, **7** (1): 24–29, 4 pls. (In Japanese.) [Coauthored with S. MIYAMOTO & T. NAKANE; 25. XII. 1953.]
 吐噶喇採集記. 新昆蟲, **7** (1): 24–29, 4 図版. [宮本正一・中根猛彦と共著.]

1954

28. A collecting trip to the Tokara Group of the Ryukyu Islands (2). *Shin Konchû, Tokyo*, **7** (2): 28–34, 4 pls. (In Japanese.) [Coauthored with S. MIYAMOTO & T. NAKANE; 25. I. 1954.]
 吐噶喇採集記 (2). 新昆蟲, **7** (2): 28–34, 4 図版. [宮本正一・中根猛彦と共著.]

29. The Coleoptera of Japan [15]. *Shin Konchû, Tokyo*, **7** (3): 41–46. (In Japanese.) [25. II. 1954.]
 日本の甲虫 [15]. 新昆蟲, **7** (3): 41–46.

30. A list of adephagous beetles from the Ozegahara Moor, with the descriptions of new species. *Scient. Res. Ozegahara Moor*, 718–726. Japan Soc. Promot. Sci., Tokyo. [28. II. 1954.]

31. Aquatic and semi-aquatic beetles of the Ozegahara Moor waters. *Scient. Res. Ozegahara Moor*, 741–743. Japan Soc. Promot. Sci., Tokyo. (In Japanese, with English summary.) [28. II. 1954.]
 尾瀬ヶ原の水棲及び水辺甲虫相. 尾瀬ヶ原 — 尾瀬ヶ原総合学術調査団研究報告, 741–743. 日本学術振興会, 東京.

32. The Coleoptera of Japan [16]. *Shin Konchû, Tokyo*, **7** (4): 54–59. (In Japanese.) [25. III. 1954.]

日本の甲虫 [16[. 新昆蟲, **7** (4): 54–59.

33. The cave fauna of the Kashiwagi area [in Nara Prefecture, Central Japan]. *Nara-ken Sôgô-bunka-chôsa Hôkokusho*, (Yoshino-gawa Ryûiki), 238–239. Nara Prefecture Board of Education, Nara. (In Japanese.) [28. III. 1954.]
柏木附近の洞窟動物相. 奈良県綜合文化調査報告書, (吉野川流域), 238–239. 奈良縣教育委員會, 奈良.

34. The Coleoptera of Japan [17]. *Shin Konchû, Tokyo*, **7** (5): 44–49. (In Japanese.) [25. IV. 1954.]
日本の甲虫 [17]. 新昆蟲, **7** (5): 44–49.

35. The Coleoptera of Japan [18]. *Shin Konchû, Tokyo*, **7** (6): 50–55. (In Japanese.) [25. V. 1954.]
日本の甲虫 [18]. 新昆蟲, **7** (6): 50–55.

36. Studies on the Japanese Trechinae (II) (Coleoptera, Harpalidae). *Mem. Coll. Sci. Univ. Kyoto*, (B), **21**: 29–37. [20. X. 1954.]

37. A note on *Orectochilus regimbarti odaiensis* KAMIYA (Gyrinidae). *Kansai Shizen-kagaku Kenkyûkai Kaishi, Osaka*, (8): 6. (In Japanese.) [31. XII. 1954.]
ヤマトオナガミズスマシについて. 関西自然科學研究会会誌, (8): 6.

1955

38. Carabidae [part]. *Coloured Illustrations of the Insects of Japan*, **1**: 90–110, pls. 33–40. Hoikusha, Osaka. (In Japanese, with English book title.) [Coauthored with M. OHKURA; 15. I. 1955.]
おさむし科 [部分]. 原色日本昆虫図鑑, [上]: 90–110, 図版 33–40. 保育社, 大阪. [大倉正文と共著.]

39. On the genus *Trephionus* H. W. BATES. *Opusc. ent., Lund*, **20**: 37–48, pl. 1. [15. III. 1955.]

40. New cave-dwelling anchomenids of Japan. *Opusc. ent., Lund*, **20**: 56–64, pl. 1. [15. III. 1955.]

41. A new subgenus and two new species of the tribe Bembidiini (The Carabidae-fauna of Mt. Hiko, III). *Mushi, Fukuoka*, **28**: 43–47, pl. 7. [Coauthored with A. HABU; 30. III. 1955.]

42. Studies on the Japanese Trechinae (III) (Coleoptera, Harpalidae). *Publ. Seto mar. biol. Lab., Shirahama*, **4**: 337–351. [30. V. 1955.]

43. Marine insects of the Tokara Islands. VII. New species and new subspecies of the subfamily Trechinae (Coleoptera, Harpalidae). *Publ. Seto mar. biol. Lab., Shirahama*, **4**: 403–413. [30. V. 1955.]

44. Two new species of the genus *Nebria* (Coleoptera, Carabidae). *Ent. Rev. Japan, Osaka*, **6**: 45–50, pls. 10–11. [25. VI. 1955.]

45. Carabidae [part], Scaritidae, Paussidae, Harpalidae, Brachinidae. *Coloured Illustrations of the Insects of Japan*, **1** (enl. & rev. ed.): 22–45, pls. 5–12. Hoikusha, Osaka. (In Japanese, with English book title.) [Coauthored with M. OHKURA; 10. VII. 1955.]
おさむし科 [部分], ひょうたんごみむし科, ひげぶとおさむし科, ごみむし科, ほそくびごみむし科. 原色日本昆虫図鑑, [上] (増補改訂版): 22–45, 図版 5–12. 保育社, 大阪. [大倉正文と共著.]

46. Limestone caves along the Kintetsu Line. *Hikari*, **10** (3): 54–55. Kinki-nippon Tetsudô Sômu-kyoku, Osaka. (In Japanese.) [20. VII. 1955.]
近鉄沿線の鍾乳洞. ひかり, **10** (3): 54–55. 近畿日本鉄道総務局, 大阪.

47. Studies on the Japanese Trechinae (IV) (Coleoptera, Harpalidae). *Mem. Coll. Sci. Univ. Kyoto*, (B), **22**: 29–34. [20. XII. 1955.]

48. Studies on the Japanese Trechinae (V) (Coleoptera, Harpalidae). *Mem. Coll. Sci. Univ. Kyoto*, (B), **22**: 35–50. [20. XII. 1955.]

49. *Minypatrobus darlingtoni* (new genus and new species), a notable addition to the carabid-fauna of Japan. *Mem. Coll. Sci. Univ. Kyoto*, (B), **22**: 51–56. [20. XII. 1955.]

50. Catopides des grottes du Japon. Description d'un nouveau *Nemadus*. *Notes biospéol., Paris*, **10**: 161–162. [Coauthored with H. COIFFAIT; 26. XII. 1955.]

1956

51. L'évolution souterraine [par René JEANNEL; translated and annotated]. *Kagaku, Tokyo*, **26**: 237–243. (In Japanese, with French title.) [1. V. 1956.]
地下における動物の進化 [訳注; René JEANNEL 原著]. 科学, **26**: 237–243.

52. New halophilous trechids of Japan (Coleoptera, Harpalidae). *Mem. Coll. Sci. Univ. Kyoto*, (B), **23**: 61–68. [30. XII. 1956.]

53. New cave-dwelling trechids of *Kurasawatrechus*-group (Coleoptera, Harpalidae). *Mem. Coll. Sci. Univ. Kyoto*, (B), **23**: 69–78. [30. XII. 1956.]

1957

54. Itinerary and an outline of the biological results obtained of the cooperative speleological survey of the Akiyoshi area (1956). *Nippon Dôkutsu Sôgô-kenkyû Ryakuhô*, (1) [Akiyoshi-chihô (1956)]: 6–7. Spelaeol. Soc. Japan, Kyoto. (In Japanese.) [23. II. 1957.]
調査班の概要. 日本洞窟総合研究略報, (1) [秋吉地方 (1956)]: 6–7. 日本洞窟地下水研究會, 京都.

55. A nerillid archiannelid found in Akiyoshi-dô Cave. *Nippon Dôkutsu Sôgô-kenkyû Ryakuhô*, (1) [Akiyoshi-chihô (1956)]: 10. Spelaeol. Soc. Japan, Kyoto. (In Japanese.) [23. II. 1957.]

秋芳洞産のホラアナゴカイ．日本洞窟総合研究略報，(1) [秋吉地方 (1956)]: 10. 日本洞窟地下水研究會，京都.

56. A cave-dwelling grylloblattid from the Akiyoshi area. *Nippon Dôkutsu Sôgô-kenkyû Ryakuhô*, (1) [Akiyoshi-chihô (1956)]: 18. Spelaeol. Soc. Japan, Kyoto. (In Japanese.) [23. II. 1957.]
秋吉地方の洞窟性ガロアムシ類．日本洞窟総合研究略報，(1) [秋吉地方 (1956)]: 18. 日本洞窟地下水研究會，京都.

57. Cave-dwelling beetles of the Akiyoshi area. *Nippon Dôkutsu Sôgô-kenkyû Ryakuhô*, (1) [Akiyoshi-chihô (1956)]: 18–19. Spelaeol. Soc. Japan, Kyoto. (In Japanese.) [23. II. 1957.]
秋吉地方の洞窟性甲虫類．日本洞窟総合研究略報，(1) [秋吉地方 (1956)]: 18–19. 日本洞窟地下水研究會，京都.

58. Blind aquatic beetles of Japan, with some accounts of the fauna of Japanese subterranean waters. *Arch. f. Hydrobiol., Stuttgart*, **53**: 250–296, 3 pls. [30. IV. 1957.]

59. Studies on the Japanese Trechinae (VI) (Coleoptera, Harpalidae). *Mem. Coll. Sci. Univ. Kyoto*, (B), **24**: 179–218, pl. 1. [25. XII. 1957.]

1958

60. Two new trechids of *Kurasawatrechus*-group found in the limestone caves of Japan (Coleoptera, Harpalidae). *Jpn. J. Zool., Tokyo*, **12**: 123–131. [25. III. 1958.]

61. The cave beetles from Akiyoshi-dai Karst and its vicinities. I. A new species of the genus *Trechiama*. *Mem. Coll. Sci. Univ. Kyoto*, (B), **25**: 39–48. [15. X. 1958.]

62. The cave beetles from Akiyoshi-dai Karst and its vicinities. II. *Uozumitrechus*, a new group of the genus *Rakantrechus*. *Mem. Coll. Sci. Univ. Kyoto*, **25**: 49–61. [15. X. 1958.]

63. The cave trechids from the central part of the Chûgoku District, Japan. I. A new species of *Trechiama* from the Taishaku limestone area. *Mem. Coll. Sci. Univ. Kyoto*, (B), **25**: 181–184. [30. XII. 1958.]

64. The cave trechids from the central part of the Chûgoku District, Japan. II. The geographical races of *Trechiama yokoyamai* S. Uéno. *Mem. Coll. Sci. Univ. Kyoto*, (B), **25**: 185–197. [30. XII. 1958.]

65. A remarkable new cave trechid from eastern Kyushu of Japan (Coleoptera, Harpalidae). *Mem. Coll. Sci. Univ. Kyoto*, (B), **25**: 199–203. [30. XII. 1958.]

1959

66. The cave trechids from the central part of the Chûgoku District, Japan. III. The group of *Trechiama oni* S. UÉNO. *Mem. Coll. Sci. Univ. Kyoto*, (B), **26**: 29–36. [25. VII. 1959.]

67. New cave trechids from the Gokasé-gawa drainage area of Kyushu. *Mem. Coll. Sci. Univ. Kyoto*, (B), **26**: 37–44. [25. VII. 1959.]

68. The geckos found in the limestone caves of the Ryu-Kyu Islands. *Mem. Coll. Sci. Univ. Kyoto*, (B), **26**: 45–52, pl. 1. [Coauthored with K. NAKAMURA; 25. VII. 1959.]

69. A new troglobiontic trechid found in the mines of central Kyushu. *Mem. Coll. Sci. Univ. Kyoto*, (B), **26**: 285–290. [15. XI. 1959.]

70. Two new *Paratrechiama* from Kumamoto Prefecture in Kyushu. *Mem. Coll. Sci. Univ. Kyoto*, (B), **26**: 291–298. [15. XI. 1959.]

71. New cave trechids from the eastern foot of the Suzuka Mountain Range, Japan. *Mem. Coll. Sci. Univ. Kyoto*, (B), **26**: 299–304. [15. XI. 1959.]

72. A new *Trechiama* from the Japanese Alps. *Mem. Coll. Sci. Univ. Kyoto*, (B), **26**: 305–309. [15. XI. 1959.]

73. The green plants growing in Akiyoshi-dô Cave, southwestern Japan. *Mem. Coll. Sci. Univ. Kyoto*, (B), **26**: 315–322. [Coauthored with K. IWATSUKI; 15. XI. 1959.]

1960

74. Occurrence of *Yamautidius* in two limestone caves of western Shikoku (Coleoptera: Harpalidae). *Trans. Shikoku ent. Soc., Matsuyama*, **6**: 67–75. [30. I. 1960.]

75. A record of *Trechus ephippiatus* from a limestone cave of Shikoku (Coleoptera: Harpalidae). *Trans. Shikoku ent. Soc., Matsuyama*, **6**: 75. [30. I. 1960.]

76. A new species-group of the genus *Rakantrechus* (Coleoptera, Harpalidae). *Mem. Coll. Sci. Univ. Kyoto*, (B), **27**: 37–44. [25. VII. 1960.]

77. A new *Paratrechiama* from eastern Kyushu, Japan (Coleoptera, Harpalidae). *Mem. Coll. Sci. Univ. Kyoto*, (B), **27**: 45–48. [25. VII. 1960.]

78. A new blind trechid found in a lava cave of Japan. *Mem. Coll. Sci. Univ. Kyoto*, (B), **27**: 49–58. [25. VII. 1960.]

79. A synopsis of the genus *Kusumia* (Coleoptera, Harpalidae). *Mem. Coll. Sci. Univ. Kyoto*, (B), **27**: 121–132. [20. XI. 1960.]

80. Alpine trechids from Hokkaido, Japan. I. The Japanese representative of the subgenus *Trechus*. *Mem. Coll. Sci. Univ. Kyoto*, (B), **27**: 133–137. [20. XI.

1960.]

81. Alpine trechids from Hokkaido, Japan. II. A new type of Trechina found on the Hidaka Mountain Range. *Mem. Coll. Sci. Univ. Kyoto*, (B), **27**: 139–144. [20. XI. 1960.]

1961

82. Biospeology. *Shizen, Tokyo*, **16** (8): 11–19. (In Japanese.) [1. VIII. 1961.]
洞窟生物学. 自然, **16** (8): 11–19.

83. Alpine trechids from Hokkaido, Japan. III. Occurrence of *Trechiama* in Hokkaido. *Mem. Coll. Sci. Univ. Kyoto*, (B), **28**: 331–336, pl. 1. [20. XII. 1961.]

84. Alpine trechids from Hokkaido, Japan. IV. Two new species of the subgenus *Epaphius*. *Mem. Coll. Sci. Univ. Kyoto*, (B), **28**: 337–345. [20. XII. 1961.]

1962

85. Primitive trechids of the subgenus *Epaphiopsis*. *Mem. Coll. Sci. Univ. Kyoto*, (B), **29**: 41–74. [26. V. 1962.]

86. Several limestone caves recently investigated in Gifu Prefecture, Central Japan. *Dôkutsu Kenkyû-kai Kaihô, Nagoya*, (7): 1–2. (In Japanese.) [15. VII. 1962.]
岐阜県下で新しく調査された石灰洞. 洞窟研究会会報, (7): 1–2.

1963

87. A redescription of *Kusumia yoshikawai* S. UÉNO (Coleoptera, Harpalidae). *Bull. natn. Sci. Mus., Tokyo*, **6** [for 1962]: 112–114. [22. IV. 1963.]

88. Japanese Reptiles and Amphibians in Colour. ix+214 pp., 42 col. pls. Hoikusha, Osaka. (In Japanese, with English title.) [Coauthored with K. NAKAMURA; 1. VII. 1963.]
原色日本両生爬虫類図鑑. ix+214 pp., 42 原色図版. 保育社, 大阪. [中村健児と共著.]

1964

89. The cave fauna of the Island of Okinoérabu-jima. *Rept. scient. Res. Tokara and the Amami Islands of the Ehime Univ., Matsuyama*, (1) (Suppl.): 1–2. (In Japanese.) [1. VI. 1964.]
沖永良部島の洞窟動物. 愛媛大学トカラ・奄美群島総合学術調査報告, (1) (補遺): 1–2.

90. Notes on carabid beetles from the Amami Group of the Ryu-Kyu Islands. *Kontyû, Tokyo*, **32**: 249–263. [20. VII. 1964.]

1965

91. Nerillidae sp. [Archiannelida]. *New Illustrated Encyclopedia of the Fauna of Japan*, **1**: 488. Hokuryu-kan, Tokyo. (In Japanese, with English book title.) [30. I. 1965.]
    あっかほらあなごかい [原始環虫綱]. 新日本動物圖鑑, [上]: 488. 北隆館, 東京.
92. A revision of the cave trechids of the genus *Ryugadous* (Coleoptera, Trechinae). *Bull. natn. Sci. Mus., Tokyo*, **8**: 1–16. [27. II. 1965.]
93. Occurrence of a new *Kurasawatrechus* (Coleoptera) in an endogean habitat. *Bull. natn. Sci. Mus., Tokyo*, **8**: 17–21, pl. 1. [Coauthored with K. BABA; 27. II. 1965.]
94. Vertebrata – Reptilia. *New Illustrated Encyclopedia of the Fauna of Japan*, **3**: 531–548. Hokuryu-kan, Tokyo. (In Japanese, with English book title.) [20. VII. 1965.]
    脊椎動物 爬虫綱. 新日本動物圖鑑, [下]: 531–548. 北隆館, 東京.
95. On "*Trechus imaicus* JEANNEL" (Coleoptera, Trechinae). *Bull. natn. Sci. Mus., Tokyo*, **8**: 343–349. [30. X. 1965.]

1966

96. The New Caledonian trechodines of the genus *Sporades* (Coleoptera, Trechinae). *Bull. natn. Sci. Mus., Tokyo*, **9**: 27–36. [26. II. 1966.]
97. The anurans collected by the Kyoto University Pamir-Hindukush Expedition 1960. *Res. Kyoto Univ. scient. Exped. Karakoram & Hindukush, Kyoto*, **8**: 327. [Coauthored with K. NAKAMURA; 1. III. 1966.]
98. The fauna of limestone caves in Hachiman-chô of Gujô-gun, Gifu Prefecture, and its adjacent areas. *Gifu-ken Gujô-gun Hachiman-chô Fukin no Shônyû-dô Chôsa Hôkoku-sho* [for 1964], 5–6. Japan Caving Association, Matsuyama. (In Japanese.) [19. III. 1966.]
    岐阜県郡上郡八幡町付近の鍾乳洞の動物相. 岐阜県郡上郡八幡町付近の鍾乳洞調査報告書 [1964], 5–6. 日本ケイビング協会, 松山.
99. Underground waters of the Yamagata and Yamané areas and an outline of their faunas. *Iwaté-ken Dôketsu-gun Gakujutsu-chôsa Hôkoku-sho*, 5–6. Japan Caving Association, Matsuyama. (In Japanese.) [Coauthored with Y. MORIMOTO; 26. III. 1966.]
    山形, 山根地域の洞窟地下水とその動物相の概観. 岩手県洞穴群学術調査報告書, 5–6. 日本ケイビング協会, 松山. [森本義信と共著.]
100. Underground waters of the Iwaizumi and Akka areas and an outline of their faunas. *Iwaté-ken Dôketsu-gun Gakujutsu-chôsa Hôkoku-sho*, 7–9. Japan Caving Association, Matsuyama. (In Japanese.) [Coauthored with Y.

MORIMOTO; 26. III. 1966.]
岩泉，安家地域の洞窟地下水とその動物相の概観．岩手県洞穴群学術調査報告書，7–9．日本ケイビング協会，松山．[森本義信と共著．]

101. *Trechus apicalis* (Coleoptera, Trechinae) in the northern Kuriles. *Bull. natn. Sci. Mus., Tokyo*, **9**: 69–74. [15. VI. 1966.]

102. A presumptive prototype of the *Trechoblemus* complex (Coleoptera, Trechinae). *Bull. natn. Sci. Mus., Tokyo*, **9**: 75–83. [Coauthored with A. YOSHIDA; 15. VI. 1966.]

103. A cave survey in South Korea. *Shizen, Tokyo*, **21** (8): 5–9. (In Japanese.) [1. VIII. 1966.]
韓国の洞窟調査．自然，**21** (8)：5–9.

104. Cave explorations in South Korea. *Kagaku Asahi, Tokyo*, **26** (9): 20–25. (In Japanese.) [1. IX. 1966.]
韓国の"ほらあな"探検．科学朝日，**26** (9)：20–25.

105. The subterranean staphylinid beetles of the genus *Quedius* from Japan. *Bull. natn. Sci. Mus., Tokyo*, **9**: 321–337. [Coauthored with Y. WATANABE; 20. IX. 1966.]

106. 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**: 465–499, 3 folders, pls. 1–8. [Coauthored with S. K. PAE & F. NAGAO; 20. XII. 1966.]

1967

107. Animals living in caves. *Cosmos*, **6** (3): 18–21. Japan Weather Association, Tokyo. (In Japanese.) [1. III. 1967.]
洞くつの動物．*Cosmos*，**6** (3)：18–21．日本気象協会，東京．

108. Animals of caves and underground waters. *Encyclopedia of Science and Technology*, **4**: 362–365, 375–376. Gakken, Tokyo. (In Japanese, with English book title.) [1. VIII. 1967.]
洞窟と地下水の動物．原色現代科学大事典，**4**：362–365, 375–376．学研，東京．

109. Animals living in the alpine zone. *Encyclopedia of Science and Technology*, **4**: 370–374. Gakken, Tokyo. (In Japanese, with English book title.) [1. VIII. 1967.]
高山帯の動物．原色現代科学大事典，**4**：370–374．学研，東京．

110. Advances in the cave entomology of Japan. *Kontyû, Tokyo*, **35**: 302–311. (In Japanese, with English title.) [10. IX. 1967.]
日本における洞窟昆虫学の発展．昆蟲，**35**：302–311.

111. The *Trechus* (Coleoptera, Trechinae) of the Rolwaling Himal. *Bull. natn. Sci. Mus., Tokyo*, **10**: 241–246. [20. X. 1967.]

1968

112. Some cave-dwelling trechids (Coleoptera) from South Korea. *Bull. natn. Sci. Mus., Tokyo*, **11**: 245–262. [Coauthored with J. Namkung; 20. IX. 1968.]
113. Life in the cave. *Kagaku Asahi, Tokyo*, **28** (12): 26–28, 43–47. (In Japanese.) [1. XI. 1968.]
ほら穴に生きる生命．科学朝日，**28** (12)：26–28，43–47.
114. [*Book review*] The Dawn of Speleology in Japan. *Kagaku Asahi*, **28** (12): 131. (In Japanese.) [1. XI. 1968.]
洞穴学ことはじめ［書評］．科学朝日，**28** (12)：131.
115. Occurrence of two new *Paratrechus* (Coleoptera, Trechinae) in Ecuador. *Bull. natn. Sci. Mus., Tokyo*, **11**: 341–349. [21. XII. 1968.]

1969

116. Three new cave trechines of the genus *Ryugadous* (Coleoptera, Trechinae). *Bull. natn. Sci. Mus., Tokyo*, **12**: 17–32. [15. II. 1969.]
117. On the blind trechines of the genus *Awatrechus* (Coleoptera, Trechinae). *Bull. natn. Sci. Mus., Tokyo*, **12**: 195–209. [24. V. 1969.]
118. Caves and cave animals. *Conserv. Nat., Tokyo*, (86): 10–12. (In Japanese.) [15. VII. 1969.]
洞窟と洞窟動物．自然保護，(86)：10–12.
119. *Stygiotrechus* (Coleoptera, Trechinae), an assemblage of remarkably diversified blind trechines. *Bull. natn. Sci. Mus., Tokyo*, **12**: 485–515. [10. IX. 1969.]
120. The trechid beetles of the Islands of Tsushima. *Mem. natn. Sci. Mus., Tokyo*, (2): 57–72. [13. IX. 1969.]
121. A new endogean *Trechiama* (Coleoptera, Trechinae) from western Honshu, Japan. *Bull. natn. Sci. Mus., Tokyo*, **12**: 779–782. [20. XII. 1969.]

1970

122. More cave species of the genus *Quedius* (Coleoptera, Staphylinidae) from Southwest Japan. *Bull. natn. Sci. Mus., Tokyo*, **13**: 9–20. [Coauthored with Y. Watanabe; 28. II. 1970.]
123. A new anophthalmic *Trechiama* (Coleoptera, Trechinae) from Central Japan. *Bull. natn. Sci. Mus., Tokyo*, **13**: 65–70. [28. II. 1970.]
124. The cave trechines (Coleoptera, Trechinae) of Kumamoto Prefecture in Southwest Japan. *Bull. natn. Sci. Mus., Tokyo*, **13**: 91–116, 1 folder. [13. VI. 1970.]
125. Long-eared bat found in Inusuzumi-daini-fûketsu, a lava cave at the western

foot of Mt. Fuji-san. *Chiroptera, Musashino*, **1**: 15. (In Japanese.) [25. VIII. 1970.]
富士犬涼み第二風穴のウサギコウモリ. *Chiroptera*, 1: 15.

126. Occurrence of a peculiar cave species of *Trechiama* (Coleoptera, Trechinae) in the Suzuka Mountains of Central Japan. *Bull. natn. Sci. Mus., Tokyo*, **13**: 363–372. [30. IX. 1970.]

127. The fauna of the insular lava caves in West Japan. I. General account. *Bull. natn. Sci. Mus., Tokyo*, **13**: 443–454, 1 folder, 1 pl. [Coauthored with Y. Morimoto; 30. IX. 1970.]

128. A brief account of the herpetology of the Islands of Tsushima. *Mem. natn. Sci. Mus., Tokyo*, (3): 193–198. (In Japanese, with English summary.) [Coauthored with Y. Shibata; 20. X. 1970.]
対馬の爬虫両生類相小記. 国立科博専報, (3): 193–198. [柴田保彦と共著.]

129. The speleological survey in the Islands of Tsushima 1969. *Mem. natn. Sci. Mus., Tokyo*, (3): 297–303. (In Japanese, with English summary.) [Coauthored with Y. Morimoto; 20. X. 1970.]
対馬における地下性動物の調査. 国立科博専報, (3): 297–303. [森本義信と共著.]

130. The fauna of the insular lava caves in West Japan. III. Trechinae (Coleoptera). *Bull. natn. Sci. Mus., Tokyo*, **13**: 603–622. [19. XII. 1970.]

1971

131. Green turtle. *Animal Life*, [(2)]: 30–32. Nippon Mail-order, Tokyo. (In Japanese.) [2. III. 1971.]
アオウミガメ. アニマルライフ, [(2)]: 30–32. 日本メール・オーダー社, 東京.

132. Loggerhead. *Animal Life*, [(2)]: 49–53. Nippon Mail-order, Tokyo. (In Japanese.) [Coauthored with S. Kikuyama; 2. III. 1971.]
アカウミガメ. アニマルライフ, [(2)]: 49–53. 日本メール・オーダー社, 東京. [菊山 栄と共著.]

133. The fauna of the insular lava caves in West Japan. IX. Trechinae (additional notes). *Bull. natn. Sci. Mus., Tokyo*, **14**: 181–185. [31. V. 1971.]

134. The fauna of the lava caves around Mt. Fuji-san. I. Introductory and historical notes. *Bull. natn. Sci. Mus., Tokyo*, **14**: 201–218, pls. 1–4. [31. V. 1971.]

135. Alligator newt. *Animal Life*, [(16)]: 421–422. Nippon Mail-order, Tokyo. (In Japanese.) [8. VI. 1971.]
イボイモリ. アニマルライフ, [(16)]: 421–422. 日本メール・オーダー社, 東京.

136. Red-bellied newt. *Animal Life*, [(16)]: 427–432. Nippon Mail-order, Tokyo. (In Japanese.) [Coauthored with S. Kikuyama; 8. VI. 1971.]
イモリ. アニマルライフ, [(16)]: 427–432. 日本メール・オーダー社, 東京. [菊山 栄と共著.]

137. Ghost frog. *Animal Life*, [(19)]: 528. Nippon Mail-order, Tokyo. (In Japanese.) [29. VI. 1971.]
ウスカワガエル. アニマルライフ, [(19)]: 528. 日本メール・オーダー社, 東京.

138. A new anophthalmic bembidiine (Coleoptera, Bembidiinae) discovered in northern Japan. *Nouv. Rev. Ent., Toulouse*, **1**: 145–154. [30. VI. 1971.]

139. Notes on the lava cave fauna of Mt. Fuji. *Fuji-san* [*Results of the Co-operative Scientific Survey of Mt. Fuji*], 752–759. Fuji Kyuko, Tokyo. (In Japanese, with English summary.) [18. IX. 1971.]
富士溶岩洞の動物相. 富士山 [富士山総合学術調査報告書], 752–759. 富士急行, 東京.

140. The fauna of the lava caves around Mt. Fuji-san. VI. Trechinae (Coleoptera). *Bull. natn. Sci. Mus., Tokyo*, **14**: 337–350. [30. IX. 1971.]

141. Occurrence of an aphaenopsoid trechine beetle in Japan. *Annls. Spéléol., Moulis*, **26**: 451–462. [3. X. 1971.]

142. Japanese grass lizard. *Animal Life*, [(36)]: 992–993. Nippon Mail-order, Tokyo. (In Japanese.) [26. X. 1971.]
カナヘビ. アニマルライフ, [(36)]: 992–993. 日本メール・オーダー社, 東京.

143. Chameleons. *Animal Life*, [(39)]: 1065–1069. Nippon Mail-order, Tokyo. (In Japanese.) [Coauthored with S. KIKUYAMA; 16. XI. 1971.]
カメレオン. アニマルライフ, [(39)]: 1065–1069. 日本メール・オーダー社, 東京. [菊山 栄と共著.]

144. The trechine beetles of the Hidaka and the Yûbari Mountain Ranges in Hokkaido, northern Japan. *Mem. natn. Sci. Mus., Tokyo*, (4): 5–28. [30. XI. 1971.]

145. A new *Trechisibus* (Coleoptera, Trechinae) from Peru. *Annot. zool. japon., Tokyo*, **44**: 227–232. [10. XII. 1971.]

146. The affinities of three trechid beetles from South America. *Bull. natn. Sci. Mus., Tokyo*, **14**: 553–569. [22. XII. 1971.]

147. Ryukyuan japalure. *Animal Life*, [(45)]: 1249–1250. Nippon Mail-order, Tokyo. (In Japanese.) [28. XII. 1971.]
キノボリトカゲ. アニマルライフ, [(45)]: 1249–1250. 日本メール・オーダー社, 東京.

1972

148. Hairy frog. *Animal Life*, [(52)]: 1445. Nippon Mail-order, Tokyo. (In Japanese.) [15. II. 1972.]
ケガエル. アニマルライフ, [(52)]: 1445. 日本メール・オーダー社, 東京.

149. A new subgenus of *Trechisibus* (Coleoptera, Trechinae), with descriptions of four new species from Peru. *Bull. natn. Sci. Mus., Tokyo*, **15**: 1–17. [28. II.

1972.]

150. Rear-fanged snakes. *Animal Life*, [(54)]: 1487. Nippon Mail-order, Tokyo. (In Japanese.) [29. II. 1972.]
コウガダ. アニマルライフ, [(54)]: 1487. 日本メール・オーダー社, 東京.

151. A new endogean *Trechiama* (Coleoptera, Trechinae) from the northern side of Central Japan. *Annot. zool. japon., Tokyo*, **45**: 42–48. [31. III. 1972.]

152. Viviparous lizard. *Animal Life*, [(59)]: 1633–1634. Nippon Mail-order, Tokyo. (In Japanese.) [4. IV. 1972.]
コモチカナヘビ. アニマルライフ, [(59)]: 1633–1634. 日本メール・オーダー社, 東京.

153. Siren. *Animal Life*, [(61)]: 1695. Nippon Mail-order, Tokyo. (In Japanese.) [18. IV. 1972.]
サイレン. アニマルライフ, [(61)]: 1695. 日本メール・オーダー社, 東京.

154. Water-holding frog. *Animal Life*, [(63)]: 1739. Nippon Mail-order, Tokyo. (In Japanese.) [2. V. 1972.]
サバクガエル. アニマルライフ, [(63)]: 1739. 日本メール・オーダー社, 東京.

155. Salamanders. *Animal Life*, [(65)]: 1793–1796. Nippon Mail-order, Tokyo. (In Japanese.) [16. V. 1972.]
サンショウウオ. アニマルライフ, [(65)]: 1793–1796. 日本メール・オーダー社, 東京.

156. Midwife toad. *Animal Life*, [(65)]: 1799. Nippon Mail-order, Tokyo. (In Japanese.) [16. V. 1972.]
サンバガエル. アニマルライフ, [(65)]: 1799. 日本メール・オーダー社, 東京.

157. A new anophthalmic *Trechiama* (Coleoptera, Trechinae) found in an old mine of the Izu Peninsula, Central Japan. *Annot. zool. japon., Tokyo*, **45**: 111–117. [30. VI. 1972.]

158. Frogs and toads [postscript to the "Valley of the Japanese Tree Frog"]. *In* TANEMURA, H.: *Valley of the Japanese Tree Frog*, 180–185. Gakushu Kenkyu Sha, Tokyo. (In Japanese.) [10. VII. 1972.]
"モリアオガエルの谷" 解説. 種村ひろし: モリアオガエルの谷, 180–185. 学習研究社, 東京.

159. Spadefoot toad. *Animal Life*, [(73)]: 2035–2036. Nippon Mail-order, Tokyo. (In Japanese.) [11. VII. 1972.]
スキアシガエル. アニマルライフ, [(73)]: 2035–2036. 日本メール・オーダー社, 東京.

160. Pitted-shelled turtle. *Animal Life*, [(74)]: 2062. Nippon Mail-order, Tokyo. (In Japanese.) [18. VII. 1972.]
スッポンモドキ. アニマルライフ, [(74)]: 2062. 日本メール・オーダー社, 東京.

161. Hawksbill turtle. *Animal Life*, [(79)]: 2205–2206. Nippon Mail-order, Tokyo. (In Japanese.) [22. VIII. 1972.]
タイマイ. アニマルライフ, [(79)]: 2205–2206. 日本メール・オーダー社, 東京.

162. Darwin's frog. *Animal Life*, [(80)]: 2218. Nippon Mail-order, Tokyo. (In Japanese.) [29. VIII. 1972.]
ダーウィンガエル. アニマルライフ, [(80)]: 2218. 日本メール・オーダー社, 東京.

163. On *Trechus perissus* ANDREWES (Coleoptera, Trechinae). *Bull. natn. Sci. Mus., Tokyo*, **15**: 429–433. [22. IX. 1972.]

164. Two new trechine beetles from Nepal Himalaya obtained by the Hokkaido University Scientific Expedition 1968. *Annot. zool. japon., Tokyo*, **45**: 178–186. [30. IX. 1972.]

165. Okinawan stalactite caves mysteriously glowing under the ground — typical formation of limestone caves. *Asahi Graph, Tokyo*, (2549): 38–43. (In Japanese.) [6. X. 1972.] —— [Reprinted in *Japan Caving, Matsuyama*, **5** (1): 20–22 (25. I. 1973).]
神秘に輝く沖縄の鍾乳洞 — 教科書通りに石灰洞を形成. アサヒグラフ, (2549): 38–43. —— [*Japan Caving*, **5** (1): 20–22 (1973) に再録.]

166. Horned frogs. *Animal Life*, [(86)]: 2403. Nippon Mail-order, Tokyo. (In Japanese.) [10. X. 1972.]
ツノガエル. アニマルライフ, [(86)]: 2403. 日本メール・オーダー社, 東京.

167. Cave animals — Life in the total darkness —. *Animal Life*, [(90)]: 2509–2514. Nippon Mail-order, Tokyo. (In Japanese.) [7. XI. 1972.]
洞くつの動物 —暗やみの世界の住人—. アニマルライフ, [(90)]: 2509–2514. 日本メール・オーダー社, 東京.

168. Skinks. *Animal Life*, [(91)]: 2521–2525. Nippon Mail-order, Tokyo. (In Japanese.) [14. XI. 1972.]
トカゲ. アニマルライフ, [(91)]: 2521–2525. 日本メール・オーダー社, 東京.

169. Arrow-poison frogs. *Animal Life*, [(91)]: 2535–2536. Nippon Mail-order, Tokyo. (In Japanese.) [14. XI. 1972.]
ドクガエル. アニマルライフ, [(91)]: 2535–2536. 日本メール・オーダー社, 東京.

170. Moloch. *Animal Life*, [(91)]: 2544. Nippon Mail-order, Tokyo. (In Japanese.) [14. XI. 1972.]
トゲトカゲ. アニマルライフ, [(91)]: 2544. 日本メール・オーダー社, 東京.

171. Flying frog. *Animal Life*, [(93)]: 2582. Nippon Mail-order, Tokyo. (In Japanese.) [28. XI. 1972.]
トビガエル. アニマルライフ, [(93)]: 2582. 日本メール・オーダー社, 東京.

172. Flying lizard. *Animal Life*, [(93)]: 2585. Nippon Mail-order, Tokyo. (In Japanese.) [28. XI. 1972.]
トビトカゲ. アニマルライフ, [(93)]: 2585. 日本メール・オーダー社, 東京.

173. Paradise tree-snake. *Animal Life*, [(93)]: 2587. Nippon Mail-order, Tokyo. (In Japanese.) [28. XI. 1972.]
トビヘビ. アニマルライフ, [(93)]: 2587. 日本メール・オーダー社, 東京.

174. The second species of the genus *Caecidium* (Coleoptera, Bembidiinae). *Mem.*

natn. Sci. Mus., Tokyo, (5): 107–110. [30. XI. 1972.]

175. Natterjack. *Animal Life*, [(95)]: 2638–2639. Nippon Mail-order, Tokyo. (In Japanese.) [12. XII. 1972.]
ナタージャック．アニマルライフ，[(95)]: 2638–2639. 日本メール・オーダー社，東京.

176. Racers. *Animal Life*, [(96)]: 2662. Nippon Mail-order, Tokyo. (In Japanese.) [Coauthored with T. Matsui; 19. XII. 1972.]
ナメラ．アニマルライフ，[(96)]: 2662. 日本メール・オーダー社，東京．[松井孝爾と共著.]

177. Occurrence of *Trechiama* (Coleoptera, Trechinae) in northern Kyushu, Southwest Japan. *Annot. zool. japon., Tokyo*, **45**: 250–256. [20. XII. 1972.]

1973

178. Two new endogean *Kurasawatrechus* (Coleoptera, Trechinae) from the Japanese Alps. *Bull. natn. Sci. Mus., Tokyo*, **16**: 15–22. [22. II. 1973.]

179. A new endogean trechine beetle from Central Japan, with notes on the Japanese species of the *Stygiotrechus* complex. *Bull. natn. Sci. Mus., Tokyo*, **16**: 23–30. [22. II. 1973.]

180. Two new trechine beetles from northeastern Nepal obtained by the Osaka Fudai Himalayan Expedition 1962. *Annot. zool. japon., Tokyo*, **46**: 57–65. [20. III. 1973.]

181. Marsupial frog. *Animal Life*, [(115)]: 3213. Nippon Mail-order, Tokyo. (In Japanese.) [1. V. 1973.]
フクロガエル．アニマルライフ，[(115)]: 3213. 日本メール・オーダー社，東京.

182. Snake-necked and side-necked turtles. *Animal Life*, [(119)]: 3321–3323. Nippon Mail-order, Tokyo. (In Japanese.) [29. V. 1973.]
ヘビクビガメ．アニマルライフ，[(119)]: 3321–3323. 日本メール・オーダー社，東京.

183. Poche. *Animal Life*, [(122)]: 3402. Nippon Mail-order, Tokyo. (In Japanese.) [19. VI. 1973.]
ポーチ．アニマルライフ，[(122)]: 3402. 日本メール・オーダー社，東京.

184. Further notes on *Awatrechus* (Coleoptera, Trechinae). *Bull. natn. Sci. Mus., Tokyo*, **16**: 181–189. [22. VI. 1973.]

185. Olm. *Animal Life*, [(123)]: 3431. Nippon Mail-order, Tokyo. (In Japanese.) [26. VI. 1973.]
ホライモリ．アニマルライフ，[(123)]: 3431. 日本メール・オーダー社，東京.

186. Two new cavernicolous *Kurasawatrechus* (Coleoptera, Trechinae) from the northern side of central Honshu, Japan. *Annot. zool. japon., Tokyo*, **46**: 127–134. [30. VI. 1973.]

187. Mudpuppy. *Animal Life*, [(125)]: 3488. Nippon Mail-order, Tokyo. (In Japanese.) [10. VII. 1973.]
マッドパピー．アニマルライフ，[(125)]: 3488. 日本メール・オーダー社，東京．

188. Fresh-water snakes. *Animal Life*, [(128)]: 3573. Nippon Mail-order, Tokyo. (In Japanese.) [31. VII. 1973.]
ミズヘビ．アニマルライフ，[(128)]: 3573. 日本メール・オーダー社，東京．

189. Green lizard. *Animal Life*, [(129)]: 3594–3595. Nippon Mail-order, Tokyo. (In Japanese.) [7. VIII. 1973.]
ミドリカナヘビ．アニマルライフ，[(129)]: 3594–3595. 日本メール・オーダー社，東京．

190. Worm lizards. *Animal Life*, [(130)]: 3619–3620. Nippon Mail-order, Tokyo. (In Japanese.) [14. VIII. 1973.]
ミミズトカゲ．アニマルライフ，[(130)]: 3619–3620. 日本メール・オーダー社，東京．

191. Earless monitor. *Animal Life*, [(130)]: 3622. Nippon Mail-order, Tokyo. (In Japanese.) [14. VIII. 1973.]
ミミナシトカゲ．アニマルライフ，[(130)]: 3622. 日本メール・オーダー社，東京．

192. Leiopelmid frogs. *Animal Life*, [(131)]: 3645. Nippon Mail-order, Tokyo. (In Japanese.) [21. VIII. 1973.]
ムカシガエル．アニマルライフ，[(131)]: 3645. 日本メール・オーダー社，東京．

193. Tuatara. *Animal Life*, [(131)]: 3646–3649. Nippon Mail-order, Tokyo. (In Japanese.) [21. VIII. 1973.]
ムカシトカゲ．アニマルライフ，[(131)]: 3646–3649. 日本メール・オーダー社，東京．

194. Notes on the higher classification of snakes. *Asahi-Larousse Shûkan Sekai Dôbutsu Hyakka*, (131): 27–28. Asahi Shimbun, Tokyo. (In Japanese.) [30. IX. 1973.]
ヘビ類の分類について．朝日=ラルース週刊世界動物百科，(131): 27–28.

195. Japanese water-snake. *Animal Life*, [(137)]: 3811–3813. Nippon Mail-order, Tokyo. (In Japanese.) [Coauthored with T. MATSUI; 2. X. 1973.]
ヤマカガシ．アニマルライフ，[(137)]: 3811–3813. 日本メール・オーダー社，東京．[松井孝爾と共著.]

196. Geckos. *Animal Life*, [(137)]: 3833–3836. Nippon Mail-order, Tokyo. (In Japanese.) [2. X. 1973.]
ヤモリ．アニマルライフ，[(137)]: 3833–3836. 日本メール・オーダー社，東京．

197. Night lizards. *Animal Life*, [(138)]: 3856. Nippon Mail-order, Tokyo. (In Japanese.) [9. X. 1973.]
ヨアソビトカゲ．アニマルライフ，[(138)]: 3856. 日本メール・オーダー社，東京．

198. Phylogeny of sea-snakes. *Asahi-Larousse Shûkan Sekai Dôbutsu Hyakka*, (133): 27–28. Asahi Shimbun, Tokyo. (In Japanese.) [14. X. 1973.]
ウミヘビ類の系統．朝日=ラルース週刊世界動物百科，(133): 27–28.

199. Slowworm. *Animal Life*, [(139)]: 3884–3885. Nippon Mail-order, Tokyo. (In Japanese.) [16. X. 1973.]
ヨーロッパアシナシトカゲ. アニマルライフ, [(139)]: 3884–3885. 日本メール・オーダー社, 東京.

200. European salamander. *Animal Life*, [(139)]: 3886–3887. Nippon Mail-order, Tokyo. (In Japanese.) [16. X. 1973.]
ヨーロッパイモリ. アニマルライフ, [(139)]: 3886–3887. 日本メール・オーダー社, 東京.

201. Iguanid lizards and agamid lizards — adaptive radiation and convergence. *Asahi-Larousse Shûkan Sekai Dôbutsu Hyakka*, (136): 27–28. Asahi Shimbun, Tokyo. (In Japanese.) [4. XI. 1973.]
タテガミトカゲ類とキノボリトカゲ類 — 適応放散と収斂現象. 朝日=ラルース週刊世界動物百科, (136): 27–28.

202. Archiannelida. *In* UÉNO, M. (ed.), *The late Tamiji KAWAMURA Freshwater Biology of Japan*, (rev. ed.), 342–343. Hokuryukan, Tokyo. (In Japanese, with English book title.) [25. XI. 1973.]
原始環虫類. 上野益三(編), 川村多實二原著 日本淡水生物学, 342–343. 図鑑の北隆館, 東京.

203. Coleoptera. *In* UÉNO, M. (ed.), *The late Tamiji KAWAMURA Freshwater Biology of Japan*, (rev. ed.), 610–635. Hokuryukan, Tokyo. (In Japanese, with English book title.) [Coauthored with M. SATÔ & K. MORIMOTO; 25. XI. 1973.]
鞘翅目. 上野益三(編), 川村多實二原著 日本淡水生物学, 610–635. 図鑑の北隆館, 東京. [佐藤正孝, 森本 桂と共著.]

204. Amphibia. *In* UÉNO, M. (ed.), *The late Tamiji KAWAMURA Freshwater Biology of Japan*, (rev. ed.), 657–664. Hokuryukan, Tokyo. (In Japanese, with English book title.) [25. XI. 1973.]
両生類. 上野益三(編), 川村多實二原著 日本淡水生物学, 657–664. 図鑑の北隆館, 東京.

205. Reptilia. *In* UÉNO, M. (ed.), *The late Tamiji KAWAMURA Freshwater Biology of Japan*, (rev. ed.), 665–670. Hokuryukan, Tokyo. (In Japanese, with English book title.) [25. XI. 1973.]
爬虫類. 上野益三(編), 川村多實二原著 日本淡水生物学, 665–670. 図鑑の北隆館, 東京.

206. Cave-dwelling salamanders. *Asahi-Larousse Shûkan Sekai Dôbutsu Hyakka*, (144): 27–29. Asahi Shimbun, Tokyo. (In Japanese.) [30. XII. 1973.]
洞窟性のサンショウウオ類. 朝日=ラルース週刊世界動物百科, (144): 27–29.

1974

207. Common European frog. *Animal Life*, [(150)]: 4146–4147. Nippon Mail-order, Tokyo. (In Japanese.) [8. I. 1974.]

ヨーロッパアカガエル．アニマルライフ，[(150)]: 4146–4147. 日本メール・オーダー社，東京．

208. Reptiles and amphibians [of Japan]. *Asahi-Larousse Shûkan Sekai Dôbutsu Hyakka*, (Suppl. – Animals of Japan II): 35–46. Asahi Shimbun, Tokyo. (In Japanese.) [5. III. 1974.]
爬虫類・両生類．朝日=ラルース週刊世界動物百科，(増刊 – 日本の動物 II): 35–46.

209. The Japanese fauna of reptiles and amphibians. *Asahi-Larousse Shûkan Sekai Dôbutsu Hyakka*, (Suppl. – Animals of Japan II): 47–50. Asahi Shimbun, Tokyo. (In Japanese.) [5. III. 1974.]
日本の爬虫・両生類相．朝日=ラルース週刊世界動物百科，(増刊 – 日本の動物 II): 47–50.

210. A new locality of *Trechiama lavicola* (Coleoptera, Trechinae). *Kontyû, Tokyo*, **42**: 6. [25. III. 1974.]

211. Cave animals. *Encyclopedia Genre Japonica*, **20**: 435. Shogakukan, Tokyo. (In Japanese.) [10. VI. 1974.]
洞窟動物．万有百科大事典，**20**: 435. 小学館，東京．

212. The cave trechines (Coleoptera, Trechinae) of the Abukuma Hills in East Japan. *Bull. natn. Sci. Mus., Tokyo*, **17**: 105–116, 2 folders. [22. VI. 1974.]

213. A new *Trechisibus* (Coleoptera, Trechinae) from Central Chile. *Kontyû, Tokyo*, **42**: 133–137. [25. VI. 1974.]

214. Occurrence of a new anophthalmic trechine beetle in the lava caves of the Aso Volcanoes, Southwest Japan. *Annot. zool. japon., Tokyo*, **47**: 121–126. [30. VI. 1974.]

215. Arachnida and Myriapoda. *Asahi-Larousse Shûkan Sekai Dôbutsu Hyakka*, (Suppl. – Animals of Japan III): 42–46. Asahi Shimbun, Tokyo. (In Japanese.) [Coauthored with T. YAGINUMA; 25. VII. 1974.]
蜘蛛・多足類．朝日=ラルース週刊世界動物百科，(増刊 – 日本の動物 III): 42–46.

216. Insects in caves. *Insectarium, Tokyo*, **11**: 172–175. (In Japanese, with English title.) [1. VIII. 1974.]
洞窟にすんでいる昆虫．インセクタリゥム，**11**: 172–175.

217. Cavernicolous beetles. *Asahi-Larousse Shûkan Sekai Dôbutsu Hyakka*, (176): 27–29. Asahi Shimbun, Tokyo. (In Japanese.) [18. VIII. 1974.]
洞窟性の甲虫類．朝日=ラルース週刊世界動物百科，(176): 27–29.

218. The trechid beetles of the Ryukyu Islands. *Mem. natn. Sci. Mus., Tokyo*, (7): 157–167. [20. IX. 1974.]

219. The *Kurasawatrechus* (Coleoptera, Trechinae) of the Mino Highlands and the adjacent areas, Central Japan. *Bull. natn. Sci. Mus., Tokyo*, **17**: 193–204. [22. IX. 1974.]

220. A new subalpine species of the genus *Kurasawatrechus* (Coleoptera, Trechinae). *Kontyû, Tokyo*, **42**: 265–269. [25. IX. 1974.]

221. The type material of *Lasiotrechus discus* (FABRICIUS) (Coleoptera, Trechinae). *Kontyû, Tokyo*, **42**: 269. [25. IX. 1974.]

222. *Kurasawatrechus kyokoae*, a new anophthalmic trechine beetle found in a sandstone cave of Japan. *Annot. zool. japon., Tokyo*, **47**: 194–198. [Coauthored with K. BABA; 30. IX. 1974.]

223. Reptiles and amphibians of the Ryukyu Islands. *Nat. Sci. & Mus., Tokyo*, **41**: 116. (In Japanese.) [1. X. 1974.]
琉球の爬虫・両生類. 自然科学と博物館, **41**: 116.

1975

224. Occurrence of a new endogean trechine beetle in the Shimokita Peninsula, northern Japan. *Bull. natn. Sci. Mus., Tokyo*, (A), **1**: 115–118. [22. VI. 1975.]

225. The cave trechines of the subgenus *Yuadorgus* (Coleoptera, Trechinae). *Bull. natn. Sci. Mus., Tokyo*, (A), **1**: 169–178. [22. IX. 1975.]

226. A new *Kurasawatrechus* (Coleoptera, Trechinae) from a sandstone cave of Central Japan. *Bull. natn. Sci. Mus., Tokyo*, (A), **1**: 179–182. [22. IX. 1975.]

227. [*Book review*] Memorandum of a Naturalist. *Kagaku Asahi, Tokyo*, **35** (10): 129–131. (In Japanese.) [1. X. 1975.]
自然観察者の手記 [書評]. 科学朝日, **35** (10): 129–131.

228. The trechid beetles of the Island of Yaku-shima, Southwest Japan. *Mem. natn. Sci. Mus., Tokyo*, (8): 137–153. [20. XII. 1975.]

229. Two new *Trechiama* (Coleoptera, Trechinae) from eastern Shikoku, Japan. *Bull. natn. Sci. Mus., Tokyo*, (A), **1**: 203–212. [22. XII. 1975.]

1976

230. A new *Perileptus* (Coleoptera, Trechinae) from Central Asia. *Annot. zool. japon., Tokyo*, **49**: 67–71. [20. III. 1976.]

231. A revision of the perileptine trechid beetles in the West Pacific and adjacent areas. I. Introduction and the subgenus *Parablemus*. *Bull. natn. Sci. Mus., Tokyo*, (A), **2**: 39–50. [22. III. 1976.]

232. [*Book review*] One Hundred Species of Japanese Bugs. *Kontyû, Tokyo*, **44**: 42. (In Japanese.) [25. III. 1976.]
原色図鑑カメムシ百種 [書評]. 昆蟲, **44**: 42.

233. Two new alpine species of the genus *Trechisibus* (Coleoptera, Trechinae) from Peru. *Kontyû, Tokyo*, **44**: 43–48. [25. III. 1976.]

234. *Tienmutrechus dispersipunctis*, an extraordinary trechine beetle from eastern China. *Bull. natn. Sci. Mus., Tokyo*, (A), **2**: 123–128. [22. VI. 1976.]

235. Occurrence of *Hynobius dunni* in the Island of Shikoku. *Hata no Shizen* [*Dai 18-kai Shizen-kôén Taikai Kinen-gô*], 8–11. Hata no Shizen o Mamoru Kai, Nakamura. (In Japanese.) [27. VII. 1976.]
四国のオオイタサンショウウオ．幡多の自然［第 18 回自然公園大会記念号］，8–11．幡多の自然を守る会，中村．

236. A note on *Perileptus jeanneli* JEDLIČKA, *nec* DARLINGTON (Coleoptera, Trechinae). *Bull. natn. Sci. Mus., Tokyo*, (A), **2**: 183–187. [22. IX. 1976.]

237. [*Book review*] The Nature and Stalactite Caves of the Okinawa Islands. *Kagaku Asahi, Tokyo*, **36** (10): 134–136. (In Japanese.) [1. X. 1976.]
島の自然と鍾乳洞［書評］．科学朝日，**36** (10)：134–136．

238. A brief history and the present situation of speleology. *Gekkan Hyakka*, (171): 12–15. Heibonsha, Tokyo. (In Japanese.) [1. XII. 1976.]
洞窟学の歴史と現状．月刊百科，(171)：12–15．平凡社，東京．

239. Occurrence of *Stygiotrechus* (Coleoptera, Trechinae) in the Island of Shikoku, Japan. *Bull. natn. Sci. Mus., Tokyo*, (A), **2**: 277–284. [22. XII. 1976.]

240. A new anophthalmic *Trechiama* (Coleoptera, Trechinae) from the Minoo Hills, Central Japan. *J. speleol. Soc. Japan*, **1**: 1–7. [25. XII. 1976.]

241. Contributions from the Spelaeological Society of Japan. *J. speleol. Soc. Japan*, **1**: 56–64. [25. XII. 1976.]

1977

242. Ergebnisse der Bhutan-Expedition 1972 des Naturhistorischen Museums in Basel. Coleoptera: Fam. Carabidae Subfam. Trechinae. *Ent. basil.*, **2**: 175–196. [7. I. 1977.]

243. A new humicolous trechine beetle from Hokuriku, Central Japan. *Bull. natn. Sci. Mus., Tokyo*, (A), **3**: 49–53. [22. III. 1977.]

244. The fauna of the lava caves in the Far East. *Proc. 6th int. Congr. Speleol., Olomouc 1973*, **5**: 237–242. [31. III. 1977.]

245. In memoriam Yoshiko NOGUCHI. *NOGUCHI Yoshiko Tsuisô*, 48–49. NOGUCHI Yoshiko Tsuisôshû Kankô-kai, Tokyo. (In Japanese.) [20. V. 1977.]
野口圭子さんを偲んで．野口圭子追想，48–49．野口圭子追想集刊行会，東京．

246. A new trechine beetle of the genus *Trechicomimus*. *Bull. natn. Sci. Mus., Tokyo*, (A), **3**: 113–116. [22. VI. 1977.]

247. The biospeleological importance of non-calcareous caves. *Proc. 7th int. speleol. Congr., Sheffield 1977*, 407–408. [10. IX. 1977.]

248. A new anophthalmic *Trechiama* (Coleoptera, Trechinae) from copper mines in

western Honshu, Japan. *Bull. natn. Sci. Mus., Tokyo*, (A), **3**: 157–161. [22. IX. 1977.]

249. A revision of the Himalayan trechine beetles of the genus *Stevensius*. *Bull. natn. Sci. Mus., Tokyo*, (A), **3**: 245–254. [22. XII. 1977.]

250. On the systematic position of *Neanops caecus* (Coleoptera, Trechinae). *J. speleol. Soc. Japan*, **2**: 1–8. [28. XII. 1977.]

251. [*Book review*] Karst in China. *J. speleol. Soc. Japan*, **2**: 43. (In Japanese.) [28. XII. 1977.]
中国岩溶 [書評]. 洞窟学雑誌, **2**: 43.

252. The cave fauna of Nyûkawa-mura in Central Japan. *Japan Caving, Akiyoshi*, **9**: 72–79. (In Japanese, with English summary.) [31. XII. 1977.]
岐阜県丹生川村の洞窟動物相. *Japan Caving*, **9**: 72–79.

1978

253. A new *Kurasawatrechus* (Coleoptera, Trechinae) found in a tuff mine at the northern side of Central Japan. *Bull. natn. Sci. Mus., Tokyo*, (A), **4**: 69–74. [22. III. 1978.]

254. The cryptozoic trechines of the subgenus *Epaphiama* (Coleoptera, Trechinae). *Bull. natn. Sci. Mus., Tokyo*, (A), **4**: 123–146. [22. VI. 1978.]

255. An Introduction to Speleology. Exploring the Underground World in Darkness. *Blue Backs*, B–361. 233 pp. Kodansha, Tokyo. (In Japanese.) [Coauthored with N. KASHIMA; 20. VII. 1978.]
洞窟学入門. 暗黒の地下世界をさぐる. ブルーバックス, B–361. 233 pp. 講談社, 東京.

256. Two new trechine beetles from mine adits in northwestern Shikoku, Japan. *Bull. natn. Sci. Mus., Tokyo*, (A), **4**: 197–205. [22. IX. 1978.]

257. The *Thalassoduvalius* (Coleoptera, Trechinae) of the Izu area, Central Japan. *Mem. natn. Sci. Mus., Tokyo*, (11): 123–130, pl. 6. [20. XII. 1978.]

258. Two new anophthalmic *Trechiama* (Coleoptera, Trechinae) found in non-calcareous areas of Central Japan. *Bull. natn. Sci. Mus., Tokyo*, (A), **4**: 293–301. [22. XII. 1978.]

259. The cave trechines of the genus *Allotrechiama* (Coleoptera, Trechinae). *J. speleol. Soc. Japan*, **3**: 1–13. [25. XII. 1978.]

260. New records of *Kurasawatrechus fujisanus* (Coleoptera, Trechinae). *J. speleol. Soc. Japan*, **3**: 34. [25. XII. 1978.]

1979

261. The trechine beetles of the Philippines. I. Genus *Luzonotrechus* nov. *Bull.*

natn. Sci. Mus., Tokyo, (A), **5**: 25–38. [22. III. 1979.]

262. General consideration on the survey of Japanese amphibians and reptiles. *The 2nd National Survey on the Natural Environment in Japan, 1978 —— Final Report of Reptiles and Amphibians Survey*, 5–6. Nature Conservation Society of Japan, Tokyo. (In Japanese.) [31. III. 1979.]
両生類・は虫類調査結果の総括. 第2回自然環境保全基礎調査 動物分布調査報告書, (両生類・は虫類), (全国版): 5–6. 日本自然保護協会, 東京.

263. New cave-dwelling trechine beetles from the eastern part of the Kii Peninsula, Central Japan. *Bull. natn. Sci. Mus., Tokyo*, (A), **5**: 115–126. [22. VI. 1979.]

264. Evidence for a transmarine dispersal of mesophilous trechine beetles from eastern Siberia to northern Japan. *XIV Pacif. Sci. Congr., Khabarovsk 1979*, Abs. Pap., (K): 53–54. [20. VIII. 1979.]

265. A glimpse of Chinese caves. *Prometheus, Tokyo*, **3** (5): 10–11. (In Japanese.) [1. IX. 1979.]
中国の洞窟瞥見. プロメテウス, **3**(5): 10–11.

266. New *Yuadorgus* (Coleoptera, Trechinae) from southwestern Shikoku, Japan. *J. speleol. Soc. Japan*, **4**: 1–10. [15. IX. 1979.]

267. A note on the distribution of *Trechiama ovoideus* (Coleoptera, Trechinae). *J. speleol. Soc. Japan*, **4**: 11. [Coauthored with H. ICHIHASHI; 15. IX. 1979.]

268. Occurrence of a new alate species of *Trechiama* (Coleoptera, Trechinae) in Taiwan. *Bull. natn. Sci. Mus., Tokyo*, (A), **5**: 201–206. [22. IX. 1979.]

269. The blind trechine beetles of the genus *Kurasawatrechus* from the Southern Japanese Alps. *Mem. natn. Sci. Mus., Tokyo*, (12): 113–122. [1. XII. 1979.]

1980

270. A new trechine beetle of the *Epaphiopsis* complex from Korea. *Annot. zool. japon., Tokyo*, **53**: 140–146. [20. VI. 1980.]

271. *Agonotrechus horni* (Coleoptera, Trechinae), a Taiwanese species showing an altitudinal wing dimorphism. *Bull. natn. Sci. Mus., Tokyo*, (A), **6**: 107–114. [22. VI. 1980.]

272. Beijing Natural History Museum, China. *Nat. Sci. & Mus., Tokyo*, **47**: 79–80. (In Japanese, with English title.) [30. VI. 1980.]
北京自然博物館. 自然科学と博物館, **47**: 79–80.

273. The anophthalmic trechine beetles of the group of *Trechiama ohshimai*. *Bull. natn. Sci. Mus., Tokyo*, (A), **6**: 195–274. [22. XII. 1980.]

274. New *Stygiotrechus* (Coleoptera, Trechinae) from non-calcareous areas. *J. speleol. Soc. Japan*, **5**: 1–12. [27. XII. 1980.]

275. Occurrence of an eyeless trechine beetle in the Nepal Himalaya. *J. speleol. Soc. Japan*, **5**: 13–20. [27. XII. 1980.]

276. [*Book review*] Illustrations of the Mites and Ticks of Japan. *J. speleol. Soc. Japan*, **5**: 49. (In Japanese.) [27. XII. 1980.]
日本ダニ類図鑑［書評］. 洞窟学雑誌，**5**: 49.

1981

277. The first flightless trechodine (Coleoptera, Trechinae) from the Nepal Himalaya. *Annot. zool. japon., Tokyo*, **54**: 59–66. [20. III. 1981.]

278. *Hynobius retardatus* Dunn. *The 2nd National Survey on the Natural Environment in Japan, 1978 —— Final Report of Reptiles and Amphibians Survey*, Part II, 123–127. Nature Conservation Society of Japan, Tokyo. (In Japanese.) [31. III. 1981.]
エゾサンショウウオ. 第2回自然環境保全基礎調査　動物分布調査報告書（両生類・は虫類），(全国版－2): 123–127. 日本自然保護協会，東京.

279. *Salamandrella keyserlingii* Dyobowski. *The 2nd National Survey on the Natural Environment in Japan, 1978 —— Final Report of Reptiles and Amphibians Survey*, Part II, 137–141. Nature Conservation Society of Japan, Tokyo. (In Japanese.) [31. III. 1981.]
キタサンショウウオ. 第2回自然環境保全基礎調査　動物分布調査報告書（両生類・は虫類），(全国版－2): 137–141. 日本自然保護協会，東京.

280. *Eublepharis kuroiwae kuroiwae* (Namiye). *The 2nd National Survey on the Natural Environment in Japan, 1978 —— Final Report of Reptiles and Amphibians Survey*, Part II, 207–209. Nature Conservation Society of Japan, Tokyo. (In Japanese.) [31. III. 1981.]
クロイワトカゲモドキ. 第2回自然環境保全基礎調査　動物分布調査報告書（両生類・は虫類），(全国版－2): 207–209. 日本自然保護協会，東京.

281. *Eublepharis kuroiwae orientalis* M. Maki. *The 2nd National Survey on the Natural Environment in Japan, 1978 —— Final Report of Reptiles and Amphibians Survey*, Part II, 211–213. Nature Conservation Society of Japan, Tokyo. (In Japanese.) [31. III. 1981.]
マダラトカゲモドキ. 第2回自然環境保全基礎調査　動物分布調査報告書（両生類・は虫類），(全国版－2): 211–213. 日本自然保護協会，東京.

282. *Eublepharis kuroiwae splendens* K. Nakamura et S. Uéno. *The 2nd National Survey on the Natural Environment in Japan, 1978 —— Final Report of Reptiles and Amphibians Survey*, Part II, 215–217. Nature Conservation Society of Japan, Tokyo. (In Japanese.) [31. III. 1981.]
オビトカゲモドキ. 第2回自然環境保全基礎調査　動物分布調査報告書（両生類・は虫類），(全国版－2): 215–217. 日本自然保護協会，東京.

283. A new microphthalmic trechine beetle of the *Trechoblemus* complex from Tian

Shan. *Annot. zool. japon., Tokyo*, **54**: 147–155. [Coauthored with J. Pawłowski; 20. VI. 1981.]

284. Two new anophthalmic *Trechiama* (Coleoptera, Trechinae) found in mine adits of Central Japan. *Bull. natn. Sci. Mus., Tokyo*, (A), **7**: 79–85. [22. VI. 1981.]

285. A remarkable new trechine beetle found in a superficial subterranean habitat near Tokyo, Central Japan. *J. speleol. Soc. Japan*, **6**: 1–10. [31. VIII. 1981.]

286. New anophthalmic *Trechiama* (Coleoptera, Trechinae) from northern Shikoku, Japan. *J. speleol. Soc. Japan*, **6**: 11–18. [31. VIII. 1981.]

287. *Trechiama tamaensis* (Coleoptera, Trechinae) and its close relatives. *Mem. natn. Sci. Mus., Tokyo*, (14): 117–132. [1. XII. 1981.]

288. A new blind species of the genus *Eustra* (Coleoptera, Paussidae) from northern Thailand. *Kontyû, Tokyo*, **49**: 620–623. [25. XII. 1981.]

1982

289. A new genus and species of anophthalmic trechine beetle from a mine adit of Southwest Japan. *Annot. zool. japon., Tokyo*, **55**: 51–58. [20. III. 1982.]

290. [*Book review*] The World of Caves. *Shizen, Tokyo*, **37** (4): 122–123. (In Japanese.) [1. IV. 1982.]
洞窟の世界［書評］．自然，**37** (4)：122–123.

291. *Yamautidius* (Coleoptera, Trechinae), an example of remarkable genitalic differentiation. *J. speleol. Soc. Japan*, **7**: 5–65. [30. VI. 1982.]

292. The *Rakantrechus* (Coleoptera, Trechinae) of the Island of Shikoku, Southwest Japan. *J. speleol. Soc. Japan*, **7**: 66–77. [30. VI. 1982.]

293. [*Book review*] The Darkness under the Earth. *J. speleol. Soc. Japan*, **7**: 77. [30. VI. 1982.]
素晴らしき地底の世界［書評］．洞窟学雑誌，**7**：77.

294. *Trechiama tamaensis* (Coleoptera, Trechinae) found in an abandoned underground shelter. *J. speleol. Soc. Japan*, **7**: 87. [30. VI. 1982.]

295. Occurrence of *Trechiama fujiwaraorum* (Coleoptera, Trechinae) in the upper hypogean zone. *J. speleol. Soc. Japan*, **7**: 100. [30. VI. 1982.]

296. A new anophthalmic *Trechiama* (Coleoptera, Trechinae) from the southeastern tip of Shikoku, Southwest Japan. *Annot. zool. japon., Tokyo*, **55**: 184–189. [20. IX. 1982.]

297. Origin and dispersal of cave animals. *Nat. Sci. & Mus., Tokyo*, **49**: 134–139. (In Japanese.) [30. XII. 1982.]
洞窟動物の由来と分布．自然科学と博物館，**49**：134–139.

298. Origin and dispersal of the Trechina in East Asia (Coleoptera: Carabidae). *Ent. gen., Stuttgart*, **8**: 71–77. [31. XII. 1982.]

1983

299. A new subalpine *Trechus* (Coleoptera, Trechinae) from eastern Nepal. *Annot. zool. japon., Tokyo*, **56**: 68–72. [20. III. 1983.]

300. Occurrence of *Epaphiopsis* (Coleoptera, Trechinae) in the eastern Himalayas. *Annot. zool. japon., Tokyo*, **56**: 141–148. [Coauthored with J. Pawłowski; 20. VI. 1983.]

301. The anophthalmic trechine beetles from Takamatsu, Southwest Japan. *Bull. natn. Sci. Mus., Tokyo*, (A), **9**: 69–77. [22. VI. 1983.]

302. A new *Kurasawatrechus* (Coleoptera, Trechinae) found in a tuff mine at Ôiso, Central Japan. *Bull. natn. Sci. Mus., Tokyo*, (A), **9**: 79–82. [22. VI. 1983.]

303. A new *Trechiama* (Coleoptera, Trechinae) from the upper hypogean zone of eastern Shikoku, Southwest Japan. *Proc. Jpn. Soc. syst. Zool., Tokyo*, (25): 36–42. [25. VI. 1983.]

304. A new *Trechiama* (Coleoptera, Trechinae) rediscovered after thirty-seven years. *Annot. zool. japon., Tokyo*, **56**: 246–250. [20. IX. 1983.]

305. A new species-complex of the genus *Trechiama* (Coleoptera, Trechinae), with descriptions of three new taxa. *Bull. natn. Sci. Mus., Tokyo*, (A), **9**: 123–136. [22. IX. 1983.]

306. What is a "new" species ? *Nat. Sci. & Mus., Tokyo*, **50**: 116. (In Japanese.) [30. IX. 1983.]
「新種」とは．自然科学と博物館，**50**: 116.

307. The archaic trechine beetles of the genus *Oroblemus*. *Mem. natn. Sci. Mus., Tokyo*, (16): 155–171. [1. XII. 1983.]

308. The faunal affinity of the Island of Awaji-shima as viewed from trechine beetles. *Annot. zool. japon., Tokyo*, **56**: 351–357. [20. XII. 1983.]

309. Turtles, lizards and salamanders. Yamamoto Keigu: *Honzô Shasei Zufu*, **7**, explanations of pls. 79–91. Yukonsha, Kyoto. (In Japanese.) [25. XII. 1983.]
亀・トカゲ・サンショウウオ．山本渓愚：本草写生図譜，**7**，図版 79–91 の解説．雄渾社，京都．

310. Occurrence of a microphthalmic *Trechiama* (Coleoptera, Trechinae) on the Island of Shôdo-shima in West Japan. *J. speleol. Soc. Japan*, **8**: 1–6. [28. XII. 1983.]

311. New anophthalmic *Trechiama* (Coleoptera, Trechinae) from the upper hypogean zone of Northeast Japan. *J. speleol. Soc. Japan*, **8**: 7–17. [28. XII. 1983.]

312. An addition to the genus *Oroblemus* (Coleoptera, Trechinae). *J. speleol. Soc. Japan*, **8**: 18–20. [28. XII. 1983.]

1984

313. Episodes in overseas scientific researches (2): "Yellow pollution" in the Himalayas. *Overseas scient. Res. Newsletter, Tokyo*, (2): 16. (In Japanese.) [31. III. 1984; reprinted in *Gakushin Shinsho 14*: Overseas Scientific Researches (1) — Nature and Culture of Asia —, 250–251 (Japan Soc. Promot. Sci., Tokyo; 22. III. 1993.)]
調査こぼればなし (2): ヒマラヤの黄害. 海外学術調査ニュースレター, (2): 16. [学振新書 14: 海外の学術調査 (1) —アジアの自然と文化—, 250–251 (1993) に再録.]

314. Additions to the trechine fauna of Northeast Japan (Coleoptera, Trechinae). *Bull. natn. Sci. Mus., Tokyo*, (A), **10**: 135–143. [22. IX. 1984.]

315. A new *Pseudepaphius* (Coleoptera, Trechinae) from Shikoku, Southwest Japan. *Bull. natn. Sci. Mus., Tokyo*, (A), **10**: 145–152. [22. IX. 1984.]

316. A supplementary account of *Trechiama janoanus* (Coleoptera, Trechinae). *Bull. natn. Sci. Mus., Tokyo*, (A), **10**: 203–207. [22. XII. 1984.]

317. Two new species and a new record of the group of *Trechiama oni* (Coleoptera, Trechinae). *J. speleol. Soc. Japan*, **9**: 5–13. [29. XII. 1984.]

1985

318. Paussidae, Omophronidae, Carabidae (Nebriinae, Elaphrinae, Loricerinae, Scaritinae, Broscinae, Trechinae), Phreatodytidae. *In* UÉNO, S.-I., Y. KUROSAWA & M. SATÔ (eds.), *The Coleoptera of Japan in Color*, **2**: 4–5, 9 [pl. 1], 54–88 [incl. pls. 11–16], 182, 187 [pl. 33]. Hoikusha, Osaka. (In Japanese, with English book title.) [31. I. 1985.]
ヒゲブトオサムシ科, カワラゴミムシ科, オサムシ科 (マルクビゴミムシ亜科, ハンミョウモドキ亜科, ツノヒゲゴミムシ亜科, ヒョウタンゴミムシ亜科, オサムシモドキ亜科, チビゴミムシ亜科), ムカシゲンゴロウ科. 上野俊一・黒沢良彦・佐藤正孝 (編著), 原色日本甲虫図鑑, **2**: 4–5, 9 [図版 1], 54–88 [図版 11–16 を含む], 182, 187 [図版 33]. 保育社, 大阪.

319. What is *Cnides rostratus* (Coleoptera, Trechinae)? *Bull. natn. Sci. Mus., Tokyo*, (A), **11**: 41–44. [22. III. 1985.]

320. Foreword [to "A List of Carabid Beetles from Akita Prefecture, Northeast Japan"]. *In* KASAHARA, S., *A List of Carabid Beetles from Akita Prefecture, Northeast Japan*, iii. Akita Shizenshi Kenkyû-kai, Akita. (In Japanese.) [30. V. 1985.]
まえがき ["秋田県のゴミムシ類" の]. 笠原須磨生: 秋田県のゴミムシ類, iii. 秋田自然史研究会, 秋田.

321. The group of *Trechiama oni* (Coleoptera, Trechinae) — its distribution and differentiation —. *Mem. natn. Sci. Mus., Tokyo*, (18): 163–198. [1. XII. 1985.]

322. The derivation of terrestrial cave animals. *Zool. Sci., Tokyo*, **2**: 852. [15. XII. 1985.]

323. Additions to the group of *Trechiama oni* (Coleoptera, Trechinae). *J. speleol. Soc. Japan*, **10**: 1–7. [30. XII. 1985.]

324. Bibliography of Japanese speleology 1981–1985. I. Biospeology. *J. speleol. Soc. Japan*, **10**: 47–56. [30. XII. 1985.]

1986

325. New oculate *Trechiama* (Coleoptera, Trechinae) from the Province of Aizu in Central Japan. *In* UÉNO, S.-I. (ed.), *Entomological Papers Presented to Yoshihiko KUROSAWA on the Occasion of his Retirement*, 131–142. Coleopterists' Association of Japan, Tokyo. [20. III. 1986.]

326. The life [of beetles] in peculiar environment. *In* MORIMOTO, K., & N. HAYASHI (eds.), *The Coleoptera of Japan in Color*, **1**: 18, 113–121. Hoikusha, Osaka. (In Japanese, with English book title.) [31. V. 1986.]
特殊環境と［甲虫類の］生活．森本　桂・林　長閑（編著），原色日本甲虫図鑑，**1**：18，113–121．保育社，大阪．

327. A new *Agonotrechus* (Coleoptera Trechinae) from Nepal, with notes on its congeners. *Bull. natn. Sci. Mus., Tokyo*, (A), **12**: 83–92. [21. VI. 1986.]

328. A new synonym in the subfamily Trechinae (Coleoptera, Carabidae). *Kontyû, Tokyo*, **54**: 234. [25. VI. 1986.]

329. Further additions to the group of *Trechiama oni* (Coleoptera, Trechinae). *Bull. natn. Sci. Mus., Tokyo*, (A), **12**: 123–127. [22. IX. 1986.]

330. Recent development of biospeology in Japan. *J. speleol. Soc. Japan*, (10th Anniv. Spec. Vol.): 17–23. (In Japanese, with English abstract.) [31. X. 1986.]
日本における近年の洞窟生物学．洞窟学雑誌，（創立十周年記念特別号）：17–23.

331. Two new subterranean *Trechiama* (Coleoptera, Trechinae) from the vicinities of Yonezawa, Northeast Japan. *Bull. natn. Sci. Mus., Tokyo*, (A), **12**: 179–184. [22. XII. 1986.]

332. The group of *Trechiama chikaichii* (Coleoptera, Trechinae). *J. speleol. Soc. Japan*, **11**: 1–14. [30. XII. 1986.]

333. A new anophthalmic *Trechiama* (Coleoptera, Trechinae) found in mine adits of Northeast Japan. *J. speleol. Soc. Japan*, **11**: 15–18. [30. XII. 1986.]

1987

334. Celebrating the 50th Anniversary of the Arachnological Society of East Asia. *Atypus, Osaka*, (89): 32–33. (In Japanese.) [2. II. 1987.]

東亜蜘蛛学会の創立 50 周年を祝して. *Atypus*, (89): 32–33.

335. The humicolous trechodines of the genus *Pachytrechodes* (Coleoptera Carabidae Trechinae). *Rev. Zool. afr.*, **100**: 479–485. [10. II. 1987.]

336. Regressive evolution in certain invertebrates. *In* MARUYAMA, K. (ed.), *Evolution of Animals*, 138–148, 177. Hôsô Daigaku Kyôiku Shinkô-kai, Tokyo. (In Japanese.) [20. III. 1987.]
無脊椎動物にみる退行進化. 丸山工作 (編), 動物の進化, 138–148, 177. 放送大学教育振興会, 東京.

337. A remarkable new *Trechiama* (Coleoptera, Trechinae) from the upper hypogean zone of West Japan. *Bull. natn. Sci. Mus., Tokyo*, (A), **13**: 21–27. [22. III. 1987.]

338. A new anophthalmic *Trechiama* (Coleoptera, Trechinae) found in a rhyolitic cave in Central Japan. *Bull. natn. Sci. Mus., Tokyo*, (A), **13**: 29–34. [22. III. 1987.]

339. The cave fauna of Mt. Fuji-san. *Nippon no Seibutsu* [*Bunichi Sôgô Shuppan*], *Tokyo*, **1** (5): 26–30. (In Japanese, with English title.) [1. VI. 1987.]
富士山の洞窟動物. 日本の生物 [文一総合出版], **1** (5): 26–30.

340. A new saproxylophilous trechine beetle from central Taiwan. *Kontyû, Tokyo*, **55**: 333–341. [25. VI. 1987.]

341. The derivation of terrestrial cave animals. *Zool. Sci., Tokyo*, **4**: 593–606. [15. VIII. 1987.]

342. Flying lizards gliding from trees to trees. *Animals Flying in the Air* [Tenji-kaisetsu Series 3], 15–16. National Science Museum, Tokyo. (In Japanese.) [1. IX. 1987.]
木から木へ飛び移るトビトカゲ. 空を飛ぶ動物たち [展示解説シリーズ 3], 15–16. 国立科学博物館, 東京.

343. The trechine beetles of the Philippines. II. A revised account of *Luzonotrechus*. *Bull. natn. Sci. Mus., Tokyo*, (A), **13**: 123–135. [22. IX. 1987.]

344. New *Paratrechiama* (Coleoptera, Trechinae) from non-calcareous areas in northern Kyushu, Southwest Japan. *Kontyû, Tokyo*, **55**: 530–542. [25. IX. 1987.]

345. Occurrence of upper hypogean trechine beetles in southwestern Hokkaido, Northeast Japan. *Mem. natn. Sci. Mus., Tokyo*, (20): 123–132. [1. XII. 1987.]

346. A new aphaenopsoid trechine beetle from South Korea. *J. speleol. Soc. Japan*, **12**: 1–7. [30. XII. 1987.]

347. A new record of *Trechiama uncatus* (Coleoptera, Trechinae). *J. speleol. Soc. Japan*, **12**: 40. [30. XII. 1987.]

348. Terrestrial cave animals: where do they come from ? *In* KAWANO, S., J. H.

CONNELL & T. HIDAKA (eds.), *Evolution and Coadaptation in Biotic Communities*, 67–76. University of Tokyo Press, Tokyo. [31. XII. 1987.]

1988

349. Insects and I: Insects without eyes. *Insectarium, Tokyo*, **25**: 3. (In Japanese.) [1. I. 1988.]
昆虫と私 眼のない虫. インセクタリゥム, **25**: 3.

350. The distribution and differentiation of trechine beetles in Japan. *In* SATÔ, M. (ed.), *The Beetles of Japan, with Special Reference to their Origin and Differentiation*, 33–51+*3–5*. Tokai University Press, Tokyo. (In Japanese.) [1. III. 1988.]
チビゴミムシ類の分布と分化. 佐藤正孝(編), 日本の甲虫 —その起源と種分化をめぐって—, 33–51+*3–5*. 東海大学出版会, 東京.

351. Discovery of an anophthalmic *Trechiama* (Coleoptera, Trechinae) on the Miura Peninsula, Central Japan. *Kontyû, Tokyo*, **56**: 45–51. [25. III. 1988.]

352. The cave fauna of the Itsukaichi area, west of Tokyo, Central Japan. *Japan Caving, Sayama*, **17** (spec. no.): 11–18. (In Japanese, with English summary.) [Coauthored with Y. NISHIKAWA & H. KIZAKI; 25. III. 1988.]
武蔵五日市地域の洞窟動物相. *Japan Caving*, **17** (特別号): 11–18. [西川喜朗, 木崎裕久と共著.]

353. Foreword and general remarks [to "Reports of the distributional survey of Japanese animals and plants (amphibians and reptiles)"]. *The 3rd National Survey on the Natural Environment —— Reports of the distributional survey of Japanese animals and plants* (*amphibians and reptiles*), iii–iv, 161–163. Environment Agency, Tokyo. (In Japanese.) [31. III. 1988.]
発刊によせて; [調査結果] 考察の総括. 第3回自然環境保全基礎調査 動植物分布調査報告書 (両生類・爬虫類), iii–iv, 161–163. 環境庁, 東京.

354. A new *Kurasawatrechus* (Coleoptera, Trechinae) from northeastern Kwantô, Central Japan. *Elytra, Tokyo*, **16**: 1–5. [15. V. 1988.]

355. [*Book review*] Butterflies — Etymology of their Scientific Names —. *Elytra, Tokyo*, **16**: 32. (In Japanese.) [15. V. 1988.]
蝶の学名 —その語源と解説— [書評]. *Elytra*, **16**: 32.

356. Occurrence of a new *Kurasawatrechus* (Coleoptera, Trechinae) near the Pacific coast of Central Japan. *Bull. natn. Sci. Mus., Tokyo*, (A), **14**: 97–103. [22. VI. 1988.]

357. Flight of *Paragonotrechus paradoxus* (Coleoptera, Trechinae). *Kontyû, Tokyo*, **56**: 459–460. [25. VI. 1988.]

358. A redescription of the Philippine trechodine, *Trechodes bakeri* (Coleoptera, Trechinae). *Kontyû, Tokyo*, **56**: 499–505. [25. IX. 1988.]

359. The *Kurasawatrechus* (Coleoptera, Trechinae) of the Yamizo Range, Central Japan. *Elytra, Tokyo*, **16**: 107–116. [15. XI. 1988.]

360. [*Book review*] Elytron [Bulletin of the European Association of Coleopterology]. *Elytra, Tokyo*, **16**: 116. (In Japanese.) [15. XI. 1988.]

361. Parapatric occurrence of anophthalmic *Trechiama* (Coleoptera, Trechinae) in Central Japan. *J. speleol. Soc. Japan*, **13**: 1–13. [29. XII. 1988.]

1989

362. Editorial note [for the Japanese Journal of Entomology]. *Jpn. J. Ent.*, **57**: 1. [25. III. 1989.]

363. New anophthalmic *Trechiama* (Coleoptera, Trechinae) from the Noto Peninsula and its adjacent hills in Central Japan. *Jpn. J. Ent.*, **57**: 73–81. [25. III. 1989.]

364. Announcement [of the President, the Japanese Society of Coleopterology]. *Elytra, Tokyo*, **17**: 1–2. (In English and Japanese.) [15. V. 1989.]

365. Systematic position of the trechine genus *Eocnides* (Coleoptera, Trechinae). *Elytra, Tokyo*, **17**: 9–18. [15. V. 1989.]

366. [*Book review*] A new classification of the suborder Adephaga. *Elytra, Tokyo*, **17**: 97–98. (In Japanese.) [15. V. 1989.]
オサムシ亜目の新しい分類体系. *Elytra*, **17**: 97–98.

367. The Taiwanese species of the genus *Epaphiopsis* (Coleoptera, Trechinae). *Bull. natn. Sci. Mus., Tokyo*, (A), **15**: 105–137. [22. VI. 1989.]

368. Carabidae – Trechinae. *In* HIRASHIMA, Y., *et al.* (eds.), *A Check List of Japanese Insects*, [**1**]: 204–211. (In Japanese, with English book title.) [31. VII. 1989.]
オサムシ科チビゴミムシ亞科. 平嶋義宏ほか(編), 日本産昆虫総目録, [**1**]: 204–211.

369. New oculate *Trechiama* (Coleoptera, Trechinae) from Miyagi Prefecture, Northeast Japan. *Elytra, Tokyo*, **17**: 123–133. [15. XI. 1989.]

370. Occurrence of *Trechodes leclerci* (Coleoptera, Trechinae) in Northwest Thailand. *Elytra, Tokyo*, **17**: 134. [15. XI. 1989.]

371. Discovery of an eyeless trechine beetle (Coleoptera, Trechinae) in Taiwan. *Elytra, Tokyo*, **17**: 135–142. [15. XI. 1989.]

372. Will the scarabaeid become the type of all insects ? *Elytra, Tokyo*, **17**: 234. (In Japanese.) [15. XI. 1989.]
コガネムシが昆虫全体の代表になるか？ *Elytra*, **17**: 234.

373. What is the nature of cave animals ? *Kokuritsu Kogaku-hakubutsukan News, Tokyo*, (249): 15–17. (In Japanese.) [20. XII. 1989.]
洞窟動物とはなんだろうか. 国立科学博物館ニュース, (249): 15–17.

374. Foreword [to "The Coleoptera of Miyagi Prefecture, Japan"]. *The Insect Fauna of Miyagi Prefecture II: The Coleoptera of Miyagi Prefeacture* [sic], *Japan*, v. Japanese Society of Coleopterology, Tokyo. (In Japanese, with English book title.) [20. XII. 1989.]
刊行を祝して ["宮城県の甲虫" の]. 宮城県昆虫誌 II: 宮城県の甲虫, v. 日本鞘翅学会, 東京.

375. Discovery of a second species of *Suzuka* (Coleoptera, Trechinae) in the Hokuriku District, Central Japan. *J. speleol. Soc. Japan*, **14**: 15–22. [30. XII. 1989.]

376. A new anophthalmic *Trechiama* (Coleoptera, Trechinae) from near the tip of the Izu Peninsula, Central Japan. *J. speleol. Soc. Japan*, **14**: 23–27. [30. XII. 1989.]

1990

377. Anophthalmic trechine beetles of the Yamizo Mountains in Central Japan. *Mem. Tochigi pref. Mus., Utsunomiya*, (8): 1–7. (In Japanese, with English summary.) [31. III. 1990.]
八溝山地のメクラチビゴミムシ類. 栃木県立博物館研究報告書, (8): 1–7.

378. The *Trechiama* (Coleoptera, Trechinae) of the Island of Taiwan. *Elytra, Tokyo*, **18**: 19–29. [15. V. 1990.]

379. A new subspecies of *Trechiama exilis* (Coleoptera, Trechinae). *Elytra, Tokyo*, **18**: 29–30. [15. V. 1990.]

380. A new *Trechodes* (Coleoptera, Trechinae) from near the northwestern corner of Thailand. *Elytra, Tokyo*, **18**: 31–34. [15. V. 1990.]

381. On the validity of *Agonotrechus tenuicollis* S. UÉNO (Coleoptera, Trechinae). *Elytra, Tokyo*, **18**: 82. [15. V. 1990.]

382. Charles DARWIN's "The Voyages of the Beagle". 4. Small beetles. *Kokuritsu Kagaku-hakubutsukan News, Tokyo*, (255): 10–11. (In Japanese.) [20. VI. 1990.]
ビーグル号航海記を読む. 4. 小さい甲虫類. 国立科学博物館ニュース, (255): 10–11.

383. Crocodiles and alligators. *Kokuritsu Kagaku-hakubutsukan News, Tokyo*, (258): 18. (In Japanese.) [20. IX. 1990.]
ワニの仲間. 国立科学博物館ニュース, (258): 18.

384. Two new anophthalmic *Trechiama* (Coleoptera, Trechinae) from southeastern Shikoku, Japan. *J. speleol. Soc. Japan*, **15**: 15–21. [31. X. 1990.]

385. A new anophthalmic trechine beetle of the genus *Yamautidius* from western Shikoku, Southwest Japan. *J. speleol. Soc. Japan*, **15**: 22–25. [31. X. 1990.]

386. [*Book review*] Opredelitel' Nasekomykh Dal'nego Vostoka SSSR v Shesti

Tomakh. Tom 3. Zhestkokrylye, Ili Zhuki. Chast' I. *Elytra, Tokyo*, **18**: 166. (In Japanese.) [15. XI. 1990.]

387. The anophthalmic trechine beetles from the southwestern tip of Hokkaido, Northeast Japan. *Elytra, Tokyo*, **18**: 167–173. [15. XI. 1990.]

388. A record of *Paragonotrechus paradoxus* (Coleoptera, Trechinae) from the northern side of central Honshu, Japan. *Elytra, Tokyo*, **18**: 174. (In Japanese, with English title.) [Coauthored with T. TAKANO; 15. XI. 1990.]
日本海側から記録されたタカオチビゴミムシ. *Elytra*, **18**: 174. [高野 勉と共著.]

389. Occurrence of a new *Kurasawatrechus* (Coleoptera, Trechinae) at the central part of the Abukuma Hills, East Japan. *Elytra, Tokyo*, **18**: 175–178. [15. XI. 1990.]

390. Lectotype designation of *Carabus micros* HERBST (Coleoptera, Trechinae). *Elytra, Tokyo*, **18**: 191–192. [15. XI. 1990.]

391. Occurrence of *Trechiama alatus* (Coleoptera, Trechinae) on the Nan-hu Mountains in northern Taiwan. *Elytra, Tokyo*, **18**: 220. [15. XI. 1990.]

392. A new record of the Taiwanese opisthiine *Paropisthius masuzoi* (Coleoptera, Carabidae). *Elytra, Tokyo*, **18**: 230. [15. XI. 1990.]

1991

393. Japanese animals on the verge of extinction (2) —— Animals other than birds and mammals. *Heredity, Tokyo*, **45** (1): 38–42. (In Japanese.) [1. I. 1991.]
絶滅の危機にある日本の動物 (2) ——鳥・獣を除く動物. 遺伝, **45** (1): 38–42.

394. Endangered animals and plants of Japan. *Ishikawatrechus intermedius* S. UÉNO. *Heredity, Tokyo*, **45** (2): 77. (In Japanese.) [1. II. 1991.]
日本の絶滅危惧種. カドタメクラチビゴミムシ. 遺伝, **45** (2): 77.

395. A second species of *Masuzonoblemus* (Coleoptera, Trechinae) from northern Taiwan. *Bull. natn. Sci. Mus., Tokyo*, (A), **17**: 65–68. [22. III. 1991.]

396. Derivation and adaptation of cave animals. *Shizenshi Hakken*, 51–75. Kagakuhakubutsukan Kôénkai, Tokyo. (In Japanese.) [10. IV. 1991.]
洞窟動物の由来と適応. 自然史発見, 51–75. 科学博物館後援会, 東京.

397. *Eublepharis kuroiwae* (NAMIYE, 1912), *Eumeces kishinouyei* STEJNEGER, 1901, *Pareas iwasakii* (MAKI, 1937), *Achalinus werneri* VAN DENBURGH, 1912, *A. formosanus chigirai* OTA et TOYAMA, 1989, *Opheodrys herminae* (BOETTGER, 1895), *Dinodon septentrionalis multifasciatus* MAKI, 1931, *Calamaria pfefferi* STEJNEGER, 1901, *Calliophis macclellandii iwasakii* MAKI, 1935, *C. japonicus* GÜNTHER, 1868, *Hynobius dunni* TAGO, 1931, *H. okiensis* SATO, 1940, *H. stejnegeri* DUNN, 1923, *Salamandrella keyserlingii* DYBOWSKI, 1870, *Megalobatrachus japonicus* (TEMMINCK, 1837), *Tylototriton andersoni* (BOULENGER,

1982) [sic], *Rana porosa brevipoda* R. ITO, 1941, *R. namiyei* STEJNEGER, 1901, Tokyo population of *Hynobius nebulosus tokyoensis* TAGO, 1931, Kôchi population of *Hynobius dunni* TAGO, 1931. Environment Agency: *Threatened Wildlife of Japan — Red Data Book —*, (Vertebrata), 230–232, 250–251, 253, 255. Japan Wildlife Research Center, Tokyo. (In Japanese.) [30. IV. 1991.]
クロイワトカゲモドキ，キシノウエトカゲ，イワサキセダカヘビ，アマミタカチホヘビ，ヤエヤマタカチホヘビ，サキシマアオヘビ，サキシマバイカダ，ヒメヘビ，イワサキワモンベニヘビ，ヒャン，オオイタサンショウウオ，オキサンショウウオ，ベッコウサンショウウオ，キタサンショウウオ，オオサンショウウオ，イボイモリ，ダルマガエル，ナミエガエル，東京都のトウキョウサンショウウオ個体群，高知県のオオイタサンショウウオ個体群．環境庁：日本の絶滅のおそれのある野生生物 —レッドデータブック—，(脊椎動物編)，230–232, 250–251, 253, 255. 日本野生生物研究センター，東京．

398. Discovery of a highly specialized cave trechine (Coleoptera, Trechinae) in Southeast China. *Elytra, Tokyo*, **19**: 127–135. [Coauthored with WANG, F.; 15. V. 1991.]

399. A new record of *Yamautidius latipennis* (Coleoptera, Trechinae). *Elytra, Tokyo*, **19**: 136. [15. V. 1991.]

400. Occurrence of a new anophthalmic *Trechiama* (Coleoptera, Trechinae) on the Yüshan Mountains in central Taiwan. *Elytra, Tokyo*, **19**: 137–140. [15. V. 1991.]

401. A bibliography of Masuzo UÉNO (1900–1989). *J. speleol. Soc. Japan*, **15** (Suppl.): 1–42, 1 frontispiece. (In Japanese, with English abstract.) [17. VI. 1991.]
上野益三著作目録．洞窟学雑誌，**15**(特別号)：1–42，口絵1葉．

402. Forty years of underground explorations. *Kyôiku Jihô*, (522): 4–7. Tokyo Toritsu Kyôiku Kenkyûsho, Tokyo. (In Japanese.) [10. VII. 1991.]
地下探検の四十年．教育じほう，(522)：4–7．東京都立教育研究所，東京．

403. *Ishikawatrechus intermedius* S. UÉNO, 1957, *Rakantrechus elegans* S. UÉNO, 1960, *Chaetotrechiama procerus* S. UÉNO, 1982, *Rakantrechus lallum* S. UÉNO, 1970, *R. mirabilis* S. UÉNO, 1958, *Awatrechus hygrobius* S. UÉNO, 1955, *Drypta fulveola* H. W. BATES, 1883, *Macroplea mutica japana* (JACOBY, 1885), *Apotomopterus maacki aquatilis* (H. W. BATES, 1883), *Perileptus morimotoi* S. UÉNO, 1955, *Armatocillenus sumaoi* (MORITA, 1981), *Morion japonicum* (H. W. BATES, 1883), *Haplochlaenius insularis* S. UÉNO, 1964, *Morimotoa phreatica* S. UÉNO, 1957, *Nesticus uenoi* YAGINUMA, 1972. Environment Agency: *Threatened Wildlife of Japan — Red Data Book —*, (Invertebrata), 34–35, 45–49, 55, 71, 93–94, 246. Japan Wildlife Research Center, Tokyo. (In Japanese.) [31. VIII. 1991.]
カドタメクラチビゴミムシ，コゾノメクラチビゴミムシ，ケバネメクラチビゴミムシ，ツヅラセメクラチビゴミムシ，ウスケメクラチビゴミムシ，リュウノメ

クラチビゴミムシ，キイロホソゴミムシ，キイロネクイハムシ，マークオサムシ，ウミホソチビゴミムシ，オオキバナガミズギワゴミムシ，クチキゴミムシ，アマミスジアオゴミムシ，メクラゲンゴロウ，フジホラヒメグモ．環境庁：日本の絶滅のおそれのある野生生物 ―レッドデータブック―，(無脊椎動物編)，34–35，45–49，55，71，93–94，246．日本野生生物研究センター，東京．

404. Long-nosed pit-viper. *Kokuritsu Kagaku-hakubutsukan News*, *Tokyo*, (271): 14. (In Japanese.) [20. X. 1991.]
ヒャッポダ．国立科学博物館ニュース，(271)：14．

405. Two new *Epaphiopsis* (Coleoptera, Trechinae) from Taiwan. *Elytra*, *Tokyo*, **19**: 257–264. [15. XI. 1991.]

406. A new anophthalmic *Trechiama* (Coleoptera, Trechinae) from the upper hypogean zone of central Taiwan. *Elytra*, *Tokyo*, **19**: 265–271. [15. XI. 1991.]

407. Small localized species of *Epaphius* (Coleoptera, Trechinae) from northern Hokkaido, Northeast Japan. *Mem. natn. Sci. Mus.*, *Tokyo*, (24): 105–111. [1. XII. 1991.]

408. Occurrence of *Jujiroa* (Coleoptera, Carabidae) on the high mountains of Taiwan. *J. speleol. Soc. Japan*, **16**: 1–28. [Coauthored with A. Saito; 28. XII. 1991.]

1992

409. Tiny animals living in the darkness of caves. *Junior Asahi Nenkan 1992*, (Rika), 22–25. Asahi Shimbun, Tokyo. (In Japanese.) [20. III. 1992.]
洞窟の闇に息づく，小さな小さな命．ジュニア朝日年鑑 1992，(理科)，22–25．朝日新聞社，東京．

410. The cave fauna of Mt. Fuji-san and the process of its formation, with special reference to the biological importance of old lava caves. *Susono-shi Bunkazai Chôsa-hôkoku*, (5) [Lava caves at the southern foot of Mt. Fuji-san, particularly in Susono-shi] [for 1991]: 45–55. Susono City Board of Education, Susono. (In Japanese.) [30. III. 1992.]
富士山の洞窟動物相とその成立 ―とくに旧期溶岩洞の生物学的重要性―．裾野市文化財調査報告，(5) [富士南麓の溶岩洞窟 ―裾野市を中心に―] [1991]: 45–55．裾野市教育委員会，裾野．

411. Derivation and the present situation of the Japanese species of reptiles and amphibians. *A Pictorial of Japanese Fauna Facing Extinction*, 137–139. Japan Independent Communications Corporation, Tokyo. (In Japanese, with English book title.) [1. IV. 1992.]
日本産両生爬虫類の由来と現状．レッドデータアニマルズ ―日本絶滅危機動物図鑑―，137–139．JICC(ジック)出版局，東京．

412. Two new *Epaphius* (Coleoptera, Trechinae) from the Kushiro Moor, Northeast Japan. *Elytra*, *Tokyo*, **20**: 1–10. [15. V. 1992.]

413. A critical note on the description of *Ishidaterechus jianensis* Li et Chen (Coleop-

tera, Carabidae). *Elytra, Tokyo*, **20**: 11–14. [15. V. 1992.]

414. Differences in the trechine faunas of the Philippines and Taiwan (Coleoptera: Carabidae). *In* NOONAN, G. R., G. E. BALL & N. E. STORK (eds.), *The Biogeography of Ground Beetles (Coleoptera: Carabidae and Cicindelidae) of Mountains and Islands*, 187–199. Intercept, Andover. [30. VI. 1992.]

415. A new anophthalmic *Trechiama* (Coleoptera, Trechinae) from central Hokkaido, Northeast Japan. *Elytra, Tokyo*, **20**: 137–143. [Coauthored with G. Sh. LAFER; 15. XI. 1992.]

416. A new locality of *Trechiama sichotanus* (Coleoptera, Trechinae). *Elytra, Tokyo*, **20**: 143. [Coauthored with G. Sh. LAFER; 15. XI. 1992.]

417. [*Book review*] Opredelitel' Nasekomykh Dal'nego Vostoka SSSR v Shesti Tomakh. Tom 3. Zhestkokrylye, Ili Zhuki. Chast' 2. *Elytra, Tokyo*, **20**: 144. (In Japanese.) [15. XI. 1992.]

418. Occurrence of a new oculate *Trechiama* (Coleoptera, Trechinae) on the Abukuma Hills in eastern Honshu, Japan. *Elytra, Tokyo*, **20**: 145–150. [15. XI. 1992.]

419. [*Book review*] The Biogeography of Ground Beetles of Mountains and Islands. *Elytra, Tokyo*, **20**: 150. (In Japanese.) [15. XI. 1992.]

420. A new *Kurasawatrechus* (Coleoptera, Trechinae) from the Ôi-gawa drainage area, Central Japan. *Elytra, Tokyo*, **20**: 151–154. [15. XI. 1992.]

421. [*Book review*] Advances in Coleopterology. *Elytra, Tokyo*, **20**: 234. (In Japanese.) [15. XI. 1992.]

422. Two new upper hypogean *Trechiama* (Coleoptera, Trechinae) of zoogeographical interest. *J. speleol. Soc. Japan*, **17**: 23–32. [30. XII. 1992.]

423. A new long-legged species of the genus *Ishikawatrechus* (Coleoptera, Trechinae). *J. speleol. Soc. Japan*, **17**: 33–38. [30. XII. 1992.]

1993

424. Inhabitants of the world of total darkness — beetles without eyes. *Shûkan Asahi Hyakka — Dôbutsu-tachi no Chikyû*, **3**: 250–251. Asahi Shimbun, Tokyo. (In Japanese.) [10. I. 1993.]
暗黒の世界の住人 — 眼のなくなった甲虫類. 週刊朝日百科 — 動物たちの 地球, **3**: 250–251. 朝日新聞社, 東京.

425. Japanese animals on the verge of extinction. *In* UÉNO, S.-I. (ed.), *Fifty Endangered Species of Japanese Animals*, 2–20. Tsukiji-shokan, Tokyo. (In Japanese.) [25. I. 1993.]
絶滅の危機に瀕する日本の動物. 上野俊一 (編), 滅びゆく日本の動物 50 種, 2–20. 築地書館, 東京.

426. *Hondoniscus kitakamiensis* VANDEL. *In* UÉNO, S.-I. (ed.), *Fifty Endangered Species of Japanese Animals*, 163–165. Tsukiji-shokan, Tokyo. (In Japa-

nese.) [Coauthored with N. NUNOMURA; 25. I. 1993.]
ホンドワラジムシ．上野俊一（編），滅びゆく日本の動物 50 種，163–165．築地書館，東京．[布村 昇と共著．]

427. Afterword [to "Fifty Endangered Species of Japanese Animals"]. *In* UÉNO, S.-I (ed.), *Fifty Endangered Species of Japanese Animals*, 190–191. Tsukiji-shokan, Tokyo. (In Japanese.) [25. I. 1993.]
あとがき ["滅びゆく日本の動物 50 種" の]．上野俊一（編），滅びゆく日本の動物 50 種，190–191．築地書館，東京．

428. *Chaetotrechiama procerus* S. UÉNO, *Ishikawatrechus intermedius* S. UÉNO. *In* ASAHINA, S. (ed.), *Fifty Endangered Species of Japanese Insects*, 75–80. Tsukiji-shokan, Tokyo. (In Japanese.) [10. II. 1993.]
ケバネメクラチビゴミムシ，カドタメクラチビゴミムシ．朝比奈正二郎（編），滅びゆく日本の昆虫 50 種，75–80．築地書館，東京．

429. *Macroplea japana* (JACOBY). *In* ASAHINA, S. (ed.), *Fifty Endangered Species of Japanese Insects*, 99–101. Tsukiji-shokan, Tokyo. (In Japanese.) [Coauthored with M. KUBOTA; 10. II. 1993.]
キイロネクイハムシ．朝比奈正二郎（編），滅びゆく日本の昆虫 50 種，99–101．築地書館，東京．[久保田正秀と共著．]

430. Nature and I. Recognition of the nature and its devastation. *Heredity, Tokyo*, **47** (3): 4–5. (In Japanese.) [1. III. 1993.]
自然と私．自然の認識とその荒廃．遺伝，**47** (3)：4–5．

431. *Epaphiama peckorum* DEUVE, a junior synonym of *Epaphiopsis morimotoi* S. UÉNO (Coleoptera, Trechinae). *Jpn. J. Ent.*, **61**: 161–163. [25. III. 1993.]

432. A bibliography of the biospeology of Japan 1916–1992. *Ann. speleol. Res. Inst. Japan, Iwaizumi*, (11) (Suppl.): 1–179. [30. III. 1993.]

433. Foreword and general remarks [to "Reports of the distributional survey of Japanese animals and plants (amphibians and reptiles)"]. *The 4th National Surveys on the Natural Environment —— Reports of the distributional survey of Japanese animals and plants (amphibians and reptiles)*, ii, 160–161. Nature Conservation Bureau, Environment Agency, Tokyo. (In Japanese.) [31. III. 1993.]
発刊によせて；[調査結果考察の] 総論．第 4 回自然環境保全基礎調査 — 動植物分布調査報告書（両生類・爬虫類），ii，160–161．環境庁自然保護局，東京．

434. Classification and distribution [of Japanese snakes]. *Illustrated Technical Manual for PC in Japan*, **4** (12): 1–10. Japan Pest Control Association, Tokyo. (In Japanese, with English book title.) [31. III. 1993.]
分類と分布 [日本産ヘビ類の]．原色ペストコントロール図説，**4** (12)：1–10．日本ペストコントロール協会，東京．

435. In memoriam Kintaro BABA (28 Jun. 1912 – 6 Jan. 1993). *Elytra, Tokyo*, **21**: 1–2. [15. V. 1993.]

436. A new record of *Trechus plutenkoi kushironis* S. UÉNO (Coleoptera, Trechinae).

Elytra, Tokyo, **21**: 26. [15. V. 1993.]

437. [*Book review*] Mesozoic Coleoptera. *Elytra, Tokyo*, **21**: 160. (In Japanese.) [15. V. 1993.]

438. Two new endogean trechines (Coleoptera, Trechinae) from the Shirakami Mountains, Northeast Japan. *Elytra, Tokyo*, **21**: 179–186. [15. V. 1993.]

439. Records of perileptines (Coleoptera, Trechinae) from Xishuangbanna in southern China. *Bull. natn. Sci. Mus., Tokyo*, (A), **19**: 69–75. [Coauthored with YIN, W.-y.; 22. VI. 1993.]

440. The late Dr. Kintaro BABA, discoverer of the coleopteran fauna of the upper hypogean zone. *Coleopterists' News, Tokyo*, (102): 3–4. (In Japanese.) [30. VI. 1993.]
地下浅層甲虫相の発見者，馬場金太郎先生．甲虫ニュース，(102): 3–4.

441. Rediscovery of *Setolebia nubatama*, a very rare lebiine carabid beetle from Central Japan. *Coleopterists' News, Tokyo*, (102): 14–15. (In Japanese.) [30. VI. 1993.]
ヌバタマノクロアトキリゴミムシの再発見．甲虫ニュース，(102): 14–15.

442. Scorpionida, Thelyphonida, Schizomida. Environment Agency: *Catalogue of Japanese Wildlife — The present situation of wild animals and plants of Japan —*, (Invertebrata I), 79, 83–84. Japan Wildlife Research Center, Tokyo. (In Japanese.) [30. IX. 1993.]
サソリ目，サソリモドキ目，ヤイトムシ目．環境庁：日本野生生物目録 —本邦産野生動植物の種の現状—，(無脊椎動物編 I)，79，83–84．自然環境研究センター，東京．

443. A new record of *Trechiama acco* (Coleoptera, Trechinae). *Elytra, Tokyo*, **21**: 234. [15. XI. 1993.]

444. [*Book review*] Monografía de los Carábidos de las islas Canarias (Insecta, Coleoptera). *Elytra, Tokyo*, **21**: 302. (In Japanese.) [15. XI. 1993.]

445. Discovery of a highly modified species of *Jujiroa* (Coleoptera, Carabidae) on the Japan Sea side of central Honshu, Japan. *Elytra, Tokyo*, **21**: 329–335. [15. XI. 1993.]

446. Occurrence of *Trechiama akinobui* (Coleoptera, Trechinae) on the Taishaku Mountains in Central Japan. *Elytra, Tokyo*, **21**: 336. [Coauthored with H. OHKAWA; 15. XI. 1993.]

447. Notes on the trechine fauna (Coleoptera, Trechinae) of the Diancang Shan Mountains in western Yunnan, Southwest China. *Elytra, Tokyo*, **21**: 353–361. [Coauthored with YIN, W.-y.; 15. XI. 1993.]

448. [*Book review*] L'abdomen et les genitalia des femelles de Coléoptères Adephaga. *Elytra, Tokyo*, **21**: 362. (In Japanese.) [15. XI. 1993.]

449. Celebrating the publication of A Field Guide to Japanese Bugs. *In* TOMOKUNI,

M. (ed.), *A Field Guide to Japanese Bugs — Terrestrial Heteropterans —*, i–ii. Zenkoku Noson Kyoiku Kyokai, Tokyo. (In Japanese, with English book title.) [9. XII. 1993.]
日本原色カメムシ図鑑の刊行に寄せて．友国雅章 (編著)，日本原色カメムシ図鑑 — 陸生カメムシ類，i–ii．全国農村教育協会，東京．

450. The complex of *Trechiama insperatus* (Coleoptera, Trechinae). *J. speleol. Soc. Japan*, **18**: 1–10. [30. XII. 1993.]

451. New postage stamps of cave animals. *J. speleol. Soc. Japan*, **18**: 56. (In Japanese.) [30. XII. 1993.]
新しく発行された洞窟動物の切手．洞窟学雑誌，**18**: 56.

1994

452. Cave life. [Separate booklet appended to "Look Closer: Cave Life".] 3 pp. Iwanami Shoten, Tokyo. (In Japanese.) [7. III. 1994.]
どうくつの生きもの．["クローズアップ図鑑 11 — どうくつの生きもの" 付録．] 3 pp．岩波書店，東京．

453. *Ishikawatrechus ishiharai*, a new anophthalmic trechine beetle from the Ishizuchi Mountains, Southwest Japan (Coleoptera: Trechinae). *Trans. Shikoku ent. Soc., Matsuyama*, **20**: 339–344. [10. III. 1994.]

454. A new oculate *Trechiama* (Coleoptera: Trechinae) collected by the late Dr. Kintaro BABA. *Spec. Bull. Essa ent. Soc., Niigata*, (2): 119–121. [31. III. 1994.]

455. New oculate *Trechiama* (Coleoptera, Trechinae) mainly from non-volcanic mountains of northern Honshu, Northeast Japan. *Elytra, Tokyo*, **22**: 23–44. [15. V. 1994.]

456. Occurrence of *Thalassoduvalius* (Coleoptera, Trechinae) on two isolated islands off Kyushu, West Japan. *Elytra, Tokyo*, **22**: 45–48. [15. V. 1994.]

457. Insects living under the ground. *Exhibition of the Wonders of Insects*, 16–17. Otaru Museum, Otaru. (In Japanese.) [22. VII. 1994.]
地下にすむ昆虫．ふしぎ？ 不思議昆虫展 — ムシのくらしのいろいろ，16–17．小樽市博物館，小樽．

458. Two relatives of *Trechus nakaguroi* (Coleoptera, Trechinae), with notes on the *Trechus* fauna of Northeast Asia. *Bull. natn. Sci. Mus., Tokyo*, (A), **20**: 111–126. [Coauthored with G. Sh. LAFER; 22. IX. 1994.]

459. New anophthalmic trechines of the *Trechiama tamaensis* complex (Coleoptera, Trechinae). *Elytra, Tokyo*, **22**: 207–213. [Coauthored with S. SONE; 15. XI. 1994.]

460. Occurrence of a *Trechoblemus* (Coleoptera, Trechinae) in Sakhalin. *Elytra, Tokyo*, **22**: 215–219. [Coauthored with G. Sh. LAFER; 15. XI. 1994.]

461. Preface to the natural history researches of eastern Hokkaido. *Mem. natn. Sci.*

Mus., Tokyo, (27): 1–6. (In Japanese, with English title.) [Coauthored with T. KUBODERA, A. SHINOHARA, H. KASHIWADANI, Y. KADOTA, T. TIBA, K. UEMURA & H. MATSUMURA; 1. XII. 1994.]
北海道東部の自然史科学的総合研究．国立科博専報，(27): 1–6.［窪寺恒己，篠原明彦，柏谷博之，門田裕一，千葉とき子，植村和彦および松村博文と共著.］

462. Presumable derivation of the Hokkaido species of the trechine genus *Masuzoa* (Coleoptera, Trechinae). *Mem. natn. Sci. Mus., Tokyo*, (27): 147–154. [1. XII. 1994.]

1995

463. The Trechinae (Coleoptera, Carabidae) from northern Vietnam. I. Two new species from Mt. Tam Dao. *Bull. natn. Sci. Mus., Tokyo*, (A), **21**: 13–25. [22. III. 1995.]

464. Further records of anophthalmic *Trechiama* (Coleoptera, Trechinae) from southeastern Shikoku, Japan. *J. speleol. Soc. Japan*, **19** [for 1994]: 1–7. [25. III. 1995.]

465. Half a century of subterranean explorations. *Spec. Bull. Jpn. Soc. Coleopterol., Tokyo*, (4): 1–30. [28. III. 1995.]