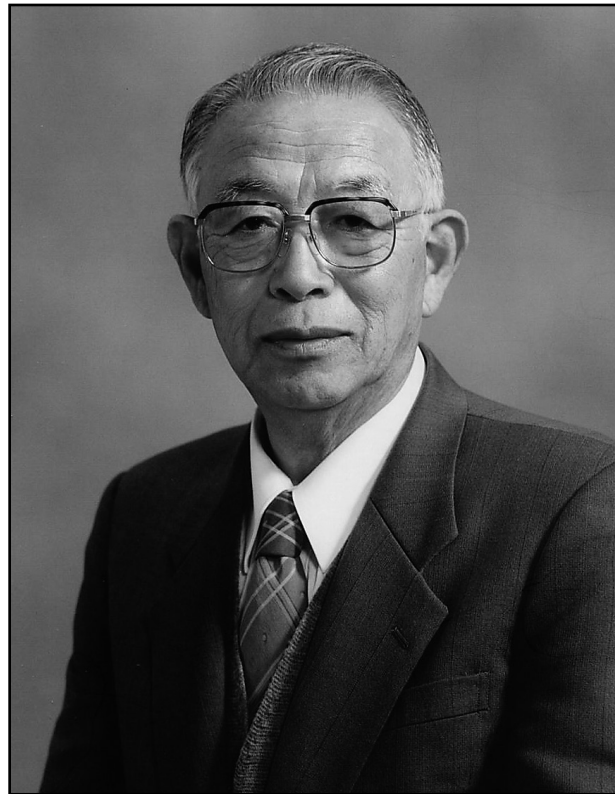


## OBITUARY



**Koichi Sekiguchi**  
**(1919–2012)**

Dr. Koichi Sekiguchi, an honorary fellow of the Arthropodan Embryological Society of Japan, died of aortic dissection on February 1st, 2012, at age 92.

He also was a Professor Emeritus of University of Tsukuba, honorary fellows of the Zoological Society of Japan, of the Japanese Society of Systematic Zoology, and of the Arachnological Society of Japan, the first honorary president of the Japanese Society of Preservation of Horseshoe Crabs, and an honorary citizen of Kazo City, Saitama, Japan.

Koichi Sekiguchi was born in Kisai Town (present Kazo City), Saitama Prefecture, on December 20th, 1919, as the first son of three sons of Ryosaku and Take Sekiguchi. He lost his father early at his age of 10, and thereafter he and his younger brothers were brought up all by their mother. He was educated at the Ko-guki village elementary school and the Saitama-prefectural Fudo-Oka junior high school. He went on to the Higher Teachers College of Tokyo (present University of Tsukuba) in 1938 and was admitted to the Department of Biology in Tokyo Bunrika University (present University of Tsukuba) in 1941. After receiving his Bachelor's degree in 1943, he was selected as a special research fellow of zoology in Tokyo Bunrika University. In 1945, he was placed as Assistant of Zoology of Tokyo Bunrika University, appointed to Assistant Professor of Zoology in 1947, and transferred to Assistant Professor of Tokyo Kyoiku University (present University of Tsukuba) in 1951.

In 1941, Koichi Sekiguchi began to study experimental embryology of spiders in the laboratory of Professor Hidemitsu Oka (1902–1982) and received his PhD from Tokyo Kyoiku University in 1957. Dr. Sekiguchi was promoted to Associate Professor of Tokyo Kyoiku University in 1962, to Professor in 1973, and transferred to Professor of University of Tsukuba in 1974. He retired from University of Tsukuba in 1983 (Professor Emeritus in 1991). In 1983, he was invited to be Professor of Biology in Jobu University, and was in the post until 1991.

In 1957, Dr. Sekiguchi inherited the study on experimental embryology of horseshoe crabs from Professor H. Oka. Afterwards Dr. Sekiguchi developed this study deeply and widely through his life. He devised a method of artificial insemination for horseshoe crab eggs. He collected paired horseshoe crabs at Oe-Hama beach, Kasaoka Bay, Okayama Prefecture, facing the Inland Sea of Japan, artificially inseminated their eggs in his laboratory of Tokyo Kyoiku University, and obtained a large number of embryos and larvae of the same developmental stage. He used some of these embryos and larvae

for the study, and planted the rest in their home beach at the end of every study season. In 1980, he was honoured with the Zoological Society of Japan Award for his studies on experimental embryology of horseshoe crabs.

Dr. Sekiguchi not only accomplished his own study, but also led a number of students to research on horseshoe crabs and arachnids. At first he used only the Japanese horseshoe crab, *Tachypleus tridentatus*, for his and his students' studies, but later, used all of the four living species including *T. gigas* and *Carcinoscorpius rotundicauda* in Southeast Asia and *Limulus polyphemus* in east coasts of USA. In summer seasons of 1974 and 1975, Dr. Sekiguchi stayed at the Marine Laboratory of Duke University, USA, obtained a large number of embryos of *L. polyphemus* by his artificial insemination method, and brought the embryos into his laboratory of Tokyo Kyoiku University. He and his students compared embryonic and larval development of *T. tridentatus* and *L. polyphemus*. In 1975 to 2000, he and his students frequently surveyed distributions and breeding conditions of three Asian horseshoe crab species in beaches of Southeast Asian Countries, and obtained fresh female and male specimens for the intra- and interspecific insemination.

Dr. Sekiguchi edited three tomes: "Biology of Horseshoe Crabs" in Japanese (1984), an enlarged English edition of the book (1988), and a more enlarged Japanese edition of the book (1999). In 2008, Handbuch der Zoologie (HDZ), one of the most authorized zoological library, entrusted Dr. Sekiguchi with writing some parts of the chapter of the horseshoe crabs for the newly revised edition. Despite his great age, Dr. Sekiguchi took on the work with his students, and by the end of 2011, the final deadline, Dr. Sekiguchi and his students mostly completed their manuscripts. Unfortunately, Dr. Sekiguchi suddenly died before the publication of the revised edition of HDZ, but his students are making efforts to publish the final work of Dr. Sekiguchi.

In 1970s, horseshoe crabs of the Kasaoka Bay were threatened with extinction by water pollution and a massive reclamation of beaches and mud flats, including Oe-Hama beach. In 1978, Professor Sekiguchi founded the Japanese Society of Preservation of Horseshoe Crabs with his students, some local volunteers, and about 700 members from many parts of Japan, and served as the first president of the Society until 2003, and then was elected as the honorary president of the Society. He appealed for the preservation of horseshoe crabs and of the natural environment for the horseshoe crabs and for our own at every annual meeting of the Society, through every number of the annual bulletin of the Society, "Kabuto-Gani (the horseshoe crab)", and at every other opportunity. He also collected records of living and breeding conditions of the horseshoe crabs in coasts of the Inland Sea and of the northern Kyushu, Japan, and edited two tomes: "The Present Conditions of Japanese Horseshoe Crabs (in Japanese)" (1989) and an enlarged edition of the book (in Japanese)(1993).

Koichi Sekiguchi lived all his life at the house where he was born. In this house, he married, and Koichi and Tatsue Sekiguchi had two daughters and a son. He loved his family and his hometown, Kisai, Saitama Prefecture. After his retirement, Dr. Sekiguchi forwarded the preservation of natural environment of his hometown as expert members of the committees in Kisai Town and Saitama Prefecture. He also taught schoolchildren the natural history of his hometown. In 2007, he was selected as an honorary citizen of Kisai Town (present Kazo City).

Koichi Sekiguchi was a kind, warm-hearted and broad-minded person, and was loved by his many friends, students and neighbors. They will remember him forever.

**Toshiki MAKIOKA**  
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*University of Tsukuba*  
*Tsukuba,*  
*Japan*

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