

Obituary

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OBITUARY

**Masutarou A. Kuwabara (1909–1998)**

Professor Kuwabara, a former president and an honorary member of the Zoological Society of Japan, died on February 17, 1998. He was born on October 15, 1909, grew up in Tokyo, and graduated from then newly established Musashi High School as one of the first graduates. He graduated from Hokkaido Imperial University (HIU) in 1933, likewise as a first graduate of the newly established Department of Zoology, Faculty of Science. For 10 years after graduating from the University, he worked as a subassistant in the same university, meanwhile he taught at a girls' junior high school and served in army for a few years in Tokyo. He was prompted to lecturer in 1941, and to assistant professor in 1944 at HIU. In 1949, he was appointed to the first professor of animal physiology at the newly opened Department of Biology, Faculty of Science, Kyushu University. After retirement from Kyushu University in 1973, he was Professor of Sophia University (1973–1977). Engaged in the establishment of National Institute for Biology in Okazaki, he became its first Director General in 1977, and then the first head of the Okazaki National Research Institutes in 1981. He ceased his service there in 1983. Thus, he always selected or even built a new organization at every turning point in his life.

For these services mentioned above and for the notable innovation in biology as shown below, he was awarded the Second Order of the Rising Sun and Purple Ribbon Medal.

Young Kuwabara wrote a few papers on *Hydra* at HIU, since his graduation thesis was the sexuality of *Hydra*. One day when he was the teacher of the girls' school in Tokyo, he found a German book, *Aus dem Leben der Bienen* by K. von Frisch, in a bookstore. This book inspired him to study sensory physiology thereafter as well as to publish its Japanese version immediately (1942). I first met him as a freshman at HIU, when he was Assistant Professor of HIU and just started his study of insect sensory physiology. He was really a brilliant and attractive teacher for students to be interested in brain functions or sensory world of animals. This genius for education enabled him afterward to write many excellent books of popular science.

Professor Kuwabara performed almost all his works on sensory physiology when he was the professor of Kyushu University. He showed the existence of conditioned reflex in the honeybee, studied the color vision of honeybee by means of the conditioned reflex, and showed the central inhibition in the proboscis extension response in the butterfly, *Vanessa indica*. He further introduced electrophysiology and electron microscopy in his study. Thus, he and his students performed and published many pioneering works, such as measurement of membrane potential changes in the egg of Japanese killifish associated with fertilization, intracellular recording of responses of single photoreceptor cells of an insect, responses of single taste cells of an insect, fine structures of insect sense organs, etc. For these studies he was awarded the prize of Zoological Society of Japan in 1960.

Professor Kuwabara extended his research from sensory organs mentioned above to the central nervous system, namely, olfactory responses in insect brain, central nervous system of *Onchidium*, neuronal control of proboscis extension response, etc.

After retirement from Kyushu University, he organized the special project of The Mechanisms of Animal Behavior supported by a Grant-in-Aid of the Ministry of Education, Science and Culture of Japan (1979–1982), which gave a particular impetus to the study of animal behavior in this country.

He deeply loved classical music, especially that of Beethoven, and played the part of first violin in Kyushu University Philharmonic Orchestra. He used to say “It is No. 7 among Beethoven’s symphonies that I wish to listen to at my last moment”. The CD of this symphony was played at a party held in his memory at Sophia University on June 6, 1998.

Hiromichi Morita
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