
Obituary



Jotaro Masuzawa (1922–2000)

Jotaro Masuzawa, a distinguished oceanographer and an honorary member of the Oceanographic Society of Japan, died of illness on 29 August 2000, at the age of 77, in Kamakura, Kanagawa Prefecture, Japan.

Masuzawa was born in Okaya, Nagano Prefecture in 1922. He attended the Tokyo Imperial University (now the University of Tokyo) where he earned his B.S. majoring in geography in September 1945 just after the end of the World War II. He started his career in the Central Meteorological Observatory (now the Japan Meteorological Agency) in 1946, stationed first at Suwa, studying hydrology under the guidance of Dr. Shinkichi Yoshimura, a prominent limnologist. Their association was interrupted in winter of 1947 by the tragic death of Yoshimura in an accident on frozen Lake Suwa during a limnological observation. Masuzawa survived this accident.

He was then transferred to the Oceanography Section in Tokyo of the Central Meteorological Observatory and engaged in the analysis of data obtained by observation ships during their cruises to the northern and southern fixed weather stations; he described the seasonal change of water properties of the Kuroshio. The operation of the weather stations was terminated in 1952 and the R.M.S. Ryofu-maru became available mainly for oceanographic work in the adjacent seas of Japan. Since 1953, Masuzawa and other members of the Oceanography Section planned and executed cruises to the eastern sea of Honshu to clarify the behaviour of the Kuroshio after it leaves the Japanese coast. The analysis of these data revealed many interesting phenomena such as branching of the Kuroshio, formation of a large warm eddy, and also cut-off of cold eddies to the south of the Kuroshio stream axis. In 1955 he tracked the main stream of the Kuroshio up to 160°E by crisscrossing the strong current as a part of the North Pacific Cooperative Expedition (NORPAC). This observation confirmed that the Kuroshio Extension maintains strong currents for a considerable distance to the east after leaving the Japanese coast. He also described a typical cross-section of the Kuroshio in the eastern sea of Japan and showed a cold-water belt attached to the northern edge of the Kuroshio, flowing to the east with the Kuroshio. He was awarded his Doctor of Science degree from the University of Tokyo in 1957 for these works on the Kuroshio system.

For two years from 1962, Masuzawa stayed at the Johns Hopkins University, Baltimore, USA, with a UNESCO fellowship, where he was deeply impressed by the style of research of Professor Raymond Montgomery at the Department of Oceanography. After returning to Japan he published a paper on the volume distribution of water in the North Pacific central region and coined the term *Subtropical Mode Water* for the nearly isothermal water between the upper thermocline and the main thermocline in the subtropical North Pacific Ocean. He also examined the contribution

of various types of water transported in the subtropical and tropical current systems such as the Kuroshio and the North Equatorial Current. He took a leading role in establishing a long oceanographic section at 137°E from Japan to New Guinea in 1967, as a part of the Cooperative Survey of the Kuroshio (CSK). This observation line has been reinforced (occupied twice a year) and maintained up to the present. The long duration data revealed many important signals related to climatic variations of the western North Pacific Ocean. Another of his attempts in 1967 was an observation of short-term variations of the Kuroshio south of Kii Peninsula by mobilizing five research vessels belonging to the Japan Meteorological Agency; he showed a large change of surface velocity maximum and its position within a few days. He was awarded the Oceanographic Society Prize in 1976 for his contribution to the advancement of our understanding of the hydrography of the western North Pacific, in particular the Kuroshio current systems.

After 1974 he successively took several high ranking administrative positions, finally serving as Director-General of the Japan Meteorological Agency for three years until his retirement in 1983. After retirement, he was a professor of oceanography in the School of Marine Science and Technology, Tokai University, Shimizu, Japan, training students in descriptive oceanography. He also served as the president of the Oceanographic Society of Japan for two years from 1987 to 1989 and contributed to the development of Japanese oceanography.

He had a good sense of balanced judgment and was considerate of others. He was highly respected by all who knew him. He will be sorely missed.

Kinjiro Kajiura
Professor Emeritus of the University of Tokyo