Prof. Tadashi Sato

IUGS Vice President

Prof. Tadashi Sato is professor emeritus of the University of Tsukuba, Japan, and at present chairman of the Fukada Geological Institute in Tokyo, a non-governmental, non-profit foundation for the development of geology and geo-engineering.

He was born in 1928 at an oil field (now defunct) on the coast of the Japan Sea. The oil derricks he saw from his home greatly stimulated his scientific mind, and eventually led him to the Department of Geology of the University of Tokyo, from which he graduated in 1953. His graduation thesis was on the stratigraphy of the Lower Jurassic in northeast Japan, in which he focused his research on the ammonite zonation, under the guidance of the late Professor T. Kobayashi, vice-president of the first generation of the IUGS. Ammonites collected during this study, together with some older Tokyo University collections, were taken for paleontological study to the Faculty of Science at the Sorbonne (old regime) in Paris in 1957 and were identified after comparative studies with French collections. In 1960, he obtained his Docteur-es-Science d'Etat degree with the dissertation '*Etudes biostratigraphiques des Ammonites du Jurassique du Japon*', published later in the Memoirs of the Geological Society of France.

He returned to Japan in the same year, to be attached to the Faculty of Science of the University of Tokyo as associate professor, and remained there until 1974. During this period at the University of Tokyo, he extended his research areas to Southeast Asia, including Thailand, Malaysia, Vietnam, the Philippines and Indonesia, spending much time on field surveys from 1962. Emphasis was put on the stratigraphic study of the Jurassic of areas such as Mae Sot in North Thailand, Mansalay on the Mindoro Island in the Philippines, and the Sula Islands in Indonesia, among others, where he was successful in establishing the ammonite-controlled stratigraphy. The results were published in various books and journals, including a series of monographs (up to Volume 25) titled '*Geology and Palaeontology of Southeast Asia*' founded and edited by Professor Kobayashi.

In the meantime, he broadened his interests to embrace structural geology, and started tectonic studies in both Japan and Southeast Asia. His main concern was centered on the analysis of small-scale structures, on the basis of which he attempted tectonic syntheses of the areas not completely analyzed so far, namely Mindoro and Palawan islands, in conjunction with stratigraphic studies on Jurassic. Some of his results were findings of superposed foldings on Mindoro and inclined zigzag folds on Palawan. He was enthusiastic about doing fieldwork in these countries, in a tropical climate and under a blue sky.

In 1974, he moved to the University of Tsukuba, a new national university founded by the Japanese government in the previous year, where he was a professor of structural geology until 1991. His main concern gradually shifted to structural geology, and most of his time was devoted to the Mesozoic-Paleozoic formations distributed in central Japan. Formations of this age are widely distributed in the axial parts of the Japanese islands, and were formerly dated mostly as Paleozoic in age, according to the fossils sporadically discovered from the limestone beds intercalated in fine-grained clastic formations which had seemed to be barren until then. Now it has turned out that these formations are mainly composed of accretionary prism sediments of Jurassic-early Cretaceous, dated by widespread radiolarians which has been discovered from the 'barren', clastic forma-

tions since early 1980s. It became clear that the disordered superposition of exotic layers and blocks gave a very complicated appearance to the overall geologic structures. He was much interested in deciphering the real geological structures of these formations and disclosed fossil submarine slidings of the late Jurassic-early Cretaceous age, as exemplified by a gigantic landslide mass of Permian limestone transported and emplaced in the base-of-slope pelitic sediments of the Jurassic age. The internal structure of the slide masses was well preserved, so that we can readily make a correlation with the corresponding structures in the slide mass of the present time.

In 1978–1979, he was invited as a guest professor at the University of Paris VI at Jussieu in Paris, where he gave a course on the tectonics of Japan. In this course he attempted a synthesis of the tectonic evolution of the Japanese islands. The text of this course was published in a French journal. The article, somewhat outmoded from the present viewpoint, attracted however some French researchers to Japanese geology.

In Tsukuba, he became more and more involved in the university administration, and served successively as dean of the College of Natural Sciences, dean of the Graduate School, and vice president of the university. Besides his duties at the university, he acted as chairman of the Japanese National Committee of Geology from 1988 to 1997. In 1988, he was elected president of the 29th IGC (Kyoto, 1992), and spent much time and energy on the organization of the congress. Meanwhile, he retired from the University of Tsukuba in 1991, and moved to the Hyogo University of Teacher Education, also a national university, but retired after two years, and finally withdrew from university education in 1993. Later, in 1996, he was elected chairman of the Fukada Geological Institute, a position which he still holds.

He has devoted much of his time to international cooperation, and has participated in various international research projects. He was an active member of the IGCP project No. 171, "Circum-Pacific Jurassic", and convened a field conference in 1985 in northeast Japan, where classical Japanese Jurassic is exposed. Through this project, he established a standard Jurassic biostratigraphical classification for Japan and surrounding areas, together with colleagues from East and Southeast Asia. He continues to work with the CCOP (a network of 11 geological surveys in East and Southeast Asia), and is producing digital geotectonic maps of the region. The first product was published in 2000 in the form of CD-ROM.

Prof. Sato is the author of more than 100 scientific papers and books, mostly on Jurassic stratigraphy, ammonite paleontology, structural analyses of Japanese Mesozoic rocks, and the tectonics of Japan and East and Southeast Asia, in addition to textbooks and dictionaries related to earth sciences.

Address:

Prof. Tadashi Sato
IUGS Vice President
Fukada Geological Institute
2-13-12 Hon-Komagome, Bunkyo-ku
Tokyo 113-0021, Japan
Tel: +81-3-3944-8010
Fax: +81-3-3944-5404
E-mail: sato-tad@fgi.or.jp