



fulfill his dearest wish to study the vast change of paleoenvironments for the last several hundred thousand years. First he examined planktonic foraminifera from the surface of sea bottom sediments from 180 stations in the marginal area of the Northwest Pacific. He related them to such environmental parameters as water temperatures, salinities, and water depth, with an eye to the formulation of transfer functions unique to the Northwest Pacific, where lie the Japanese Islands where he has lived. In the later part of this work, he managed to obtain material from an exploratory well for oil and gas, called Sk-1, drilled in the shallow waters off the coast of Kashima, toward the central part of the Main Island. He examined the entire well depth for sedimentology and micropaleontology, invoking the transfer functions to elucidate numerically the vicissitudes of paleoenvironments for the last several hundred thousand years. As with his other research of land sections, he took care to have his assistants with him to construct the framework of high resolution synthetic biostratigraphy, combining datum planes defined among various groups of microfossils and assessing their significance for paleoceanography. He was also involved in researches on the Shimanto terrain on Shikoku Island, successfully contributing to the biostratigraphy of the Cretaceous.

Toward the end of this decade, Professor Takayanagi accomplished his greatest achievements in foraminiferology: "the Checklist and Bibliography of Post-Paleozoic Foraminifera Established by Japanese Workers, 1890-1986," (which he is currently updating), and "the Foraminifera from the Japanese Islands," the result of research supported by the Cooperative Research, Ministry of Education, Science and Culture of the Government of Japan. These great compendia represent the achievements of a century of study of foraminifera in Japan, and have raised the study of foraminiferal paleontology to a new level, thus encouraging further advances in the field.

Professor Takayanagi's accomplishments include a long and outstanding career as a teacher. Immediately after graduation, he joined the faculty at Tohoku University, and received a full professorship in 1974, a position he has held up to the present. Over the years he has lectured at 15 major universities, including Hokkaido University, the University of Tokyo, the University of Tsukuba, Kyoto University, and Nagoya University, as well as at numerous professional societies and institutions in Japan. During 40 years of teaching, he has inspired and promoted the careers of a large number of students, many of whom have already achieved distinction in both the academic world and in industry, at home and abroad. Not a few overseas scholars came to Tohoku University to study micropaleontology under his guidance. Although most of us find teaching to be taxing and time-consuming, Professor Takayanagi's abundant talent enabled him to excel at teaching while remaining an extraordinarily active researcher.

He has been an impressive administrator as well, serving as chairman of his institute for the greater part of the period from 1974 to 1987. At the same time he has filled many other important administrative positions at his university: he worked on the council of the University Library from 1977 to 1986, and has served as President of the Kita-aobayama Branch of the University Library since 1986. He has also been active in many professional societies. He has been a councilor of the Palaeontological Society of Japan since 1971, the Editor-in-Chief of its journal "Fossils" for many years, and the President of the Society from 1977 to 1978. Concurrently, he has been a councilor of the Tokyo Geographical Society since 1987, and of the Geological Society of Japan from 1975 to 1976. He has been a member or a liaison of over 25 national and international committees and commissions, and continues to serve many of them. They include the Scientific Committee on Oceanic Research (International Council of Scientific Unions), the International Union of Geological Sciences, the International Union for Quaternary Research, the Liaison Committee for Paleontology, the Liaison Committee for Physical Oceanography (Science Council of Japan), IPOD, KAIKO, and ODP. In addition to these numerous activities, he has served as either an editor or a foreign correspondent of the *Journal of Foraminiferal Research*, the *Micropaleontology*, the *Revista Española de Micropaleontología*, and the *Marine Micropaleontology*.

His first research trip abroad was to Stanford University, where he spent one year conducting foraminiferal research in 1961. He subsequently visited the Philippines and Taiwan for geological and paleontological reconnaissance in 1964. Since then he has been abroad once or twice yearly to participate in international symposia, congresses, and workshops, including the International Geological Congress, the Pacific Science Congress, SCOR, IPOD, and ODP. Hence he has been able to systematically present his most recent discoveries to an international audience.

It is a great pleasure for me to have known Professor Takayanagi for most of his career, and to be given the opportunity to write this biographical account in his honor. My previous remarks have touched only on his professional life, and have failed to capture his personal qualities. For in reality, Professor Takayanagi is a true gentleman, and enjoys life to the fullest. In his younger days, I have heard, he would occasionally climb up telephone poles after drinking sake (Japanese wine) at a feast. There he would sing to the entire company, with great melancholy and a jesting Tohoku dialect, the Song of Arabia, a popular Japanese song from the good old days. Yet he is also a fine painter, illustrator, author, and linguist. He possesses the rare ability to depict detailed and fascinating illustrations of foraminifera. Although he has been unable to use these talents fully since the SEM came into wide use, next year he will once again exercise his talents: he will depict his favorite creatures on the covers of various prints that will appear in public at Benthos'90, for which he is also serving as Chairman. He has also been devoted to linguistic pursuits for the last several years; often he is engrossed in using a

literal rather than a figurative phrase, and lingers carefully over his choice of words.

Professor Takayanagi has produced an amazing volume of excellent research that is summarized in the more than 200 publications listed below. These range over diverse fields of earth science, although foraminifera have been his special interest; his moving studies of these creatures have earned him widespread recognition as a first-rate investigator. As a teacher, he has maintained standards of excellence that have strongly inspired and promoted the careers of numerous students, disciples, and associates. As an administrator, he has launched, reformed, and influenced many organizations and journals. And as the author or the editor of two monumental books on foraminiferal studies, he has established a new standard of scientific knowledge and inquiry for future generations of foraminiferal researchers. Above all these accomplishments, Professor Takayanagi is sincere, generous, and dedicated.

It is admirable that even after his retirement from a busy and productive career, Professor Takayanagi will continue to serve his devotees by working as chairman of Benthos'90, the Fourth International Symposium on Benthic Foraminifera, to be held in Sendai. This seems a fitting accomplishment to adorn the final page of his distinguished career.

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