

Memorial to Martin Gerard Rutten 1910—1970

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Martin Rutten was born in Djornbang, Java, Indonesia, on October 22, 1910. As his father, Louis M. R. Rutten, was professor of geology at the State University of Utrecht, and his mother, Catherina J. Pekelhar- ing, was one of the first women in Holland with a degree in biology, his interest in nature was fostered at an early age. In his youth he was very active in "Jeugdbond voor Natuurstudie," a nature study society for young people in the Netherlands. He frequently served as field trip leader for the group in later years.

From accompanying his father in the field he decided to study geology as an undergraduate, receiving his bachelor's degree from Utrecht in 1929. By the time he finished the equivalent of a master's degree from that same university in 1933 he had already published several papers, primarily dealing with the geology of Curaçao in the Dutch Antilles north of Venezuela. That he retained, even as a graduate student in geology, an active interest in the other natural sciences is shown by the fact that his publications in this interval included several on the birds of the Caribbean region.

He received the degree of Doctor of Science, again from Utrecht, in 1936. The title of his dissertation was "Geology of the Northern Part of the Province Santa Clara, Cuba." The eight professional papers he published between 1933 and 1936 deal largely with the fossil foraminifers and rudistids from this portion of Cuba, although his secondary interest in ornithology is represented as well.

Upon completing his graduate work in geology Martin went to work as an oil geologist with the Bataafsche Petroleum Maatschappij (Royal Dutch) in eastern Java and southern Sumatra, Indonesia. He continued to publish on the details of the family of fossil foraminifera, orbitoididae, during this interval, his work culminating in the publication of a synopsis of the entire family in 1941.

With the outbreak of World War II he returned to the Netherlands where he spent a year as an assistant in the Mineralogical-Geological Institute at Utrecht before taking a position with the State Collieries at Heerlen, Limburg, the Netherlands, as a coal geologist.

After the withdrawal of the German troops from the southern Netherlands in 1944, Martin served as an advisor to the engineers of the 19th U. S. Army Corps during campaigns in the Ardennes, the Ruhr, and the Rhine, and a year later (1945—1946) took a position as a relief team director for UNRRA, working in the DP camps of the British zone of Germany. It was during this interval that Martin became truly proficient in

the English language. He also took advantage of the war's end by finishing a number of professional publications ranging over a wide spectrum of geology, including some of the philosophical concepts most basic to the field.

From 1946 to 1951 he held the professorship in stratigraphy and paleontology at the University of Amsterdam, where he taught courses in stratigraphy, paleontology, micropaleontology, and the geology of the Netherlands. While at Amsterdam he first became interested in the geology of Iceland, a place to which he returned many times in subsequent years. It was also during this interval that his capabilities as a teacher and mentor of young geologists came to the fore.

In 1951 he assumed a professorship in physical geology at the State University of Utrecht, a position he held until his death. His teaching at Utrecht included courses in physical geology, coal geology, the geology of the Netherlands, and the tectonics of the Alps – reflecting Martin's move away from his earlier specialization in paleontology and stratigraphy. The extensive bibliography covering the 19-year period of his professorship at Utrecht clearly demonstrates his breadth as a natural scientist. While he continued to contribute in the field of paleontology, he branched out even more into the fields of physical stratigraphy and sedimentation, particularly as related to tectonism, volcanology, and paleomagnetism. He also wrote more extensively on actualism (uniformitarianism) as a principle important in geological and evolutionary study. These studies culminated in 1962 with the publication of a monograph on the geological aspects of the origin of life on earth.

On two occasions in his tenure at the State University of Utrecht, Martin Rutten took leave to accept a position at The University of Michigan, the first in 1957–1958, when he came to Ann Arbor as the Netherlands Visiting Professor of Geology, and the second in 1966–1967, when he came as an NSF Senior Foreign Scientist Fellow. It was during the former of these visits that he first gave a graduate course in the geology of Europe from which sprang the writing of his last, and perhaps most important book, *The Geology of Western Europe*. He also led seminars in paleomagnetism and continental drift. During his second period at Michigan he also taught a course for honor students from the College of Literature, Science, and the Arts, covering some of the philosophical concepts basic to scientific work. It was during his second term in this country that he suffered a severe circulatory failure that curbed, somewhat, his boundless energy, and led to a slightly less vigorous life in the subsequent years.

In addition to those major works already mentioned, Martin Rutten published books on the geology of Dutch coal and the geohydrology of the Dutch coal district; the petrology of a suite of rocks from Borneo, collected by a 1925 expedition; and, in conjunction with R. W. van Bemmelen, a book on the table mountains of northern Iceland.

Martin tried throughout his professional career not to become too specialized. He always felt that a well-trained general geologist working in the field with hammer and hand lens was able to make a major contribution to our science. As a scientist and teacher he had few equals. It was always difficult to win a scientific argument with him, for his ability to reason out relationships in the field was truly outstanding. His untimely death is a severe loss to the science.

Martin Rutten became a member of The Geological Society of America in 1957 and a Fellow in 1967. He was a member of the Dutch, German, and French geological societies, the Society of Sigma Xi, and the Dutch Ornithological Union. He served as a member of the Netherlands scientific commission on natural conservation and was a board member of its research unit. He was also a member of the Netherlands Commission for the Upper Mantle Project.

He is survived by his wife, Henny, and seven children, five daughters (Else, married to a doctor; Wietske, a biologist married to a paleontologist; Louise and Catherina, both in college; and Everdien, a high school student); and two sons (Robert, an astronomer; and Kees, who is carrying on the Rutten name in the geological sciences as a geophysicist).

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