Clay Minerals (1967) 7, 243.

OBITUARY

JOHAN CHRISTIAAN LOUIS FAVEJEE (1903–1966)

The death of Johan Christiaan Louis Favejee on 30 April 1966 left a gap in the ranks of Dutch mineralogists that is hard to fill. Favejee was not only a known specialist on clay mineralogy but also fulfilled the role of 'kritikus' for many of his colleagues and, although he did not publish a large number of papers, many soil scientists as well as mineralogists who were associated with him benefited from his good advice.

His first contact with problems concerning the fine fraction of soils dates from 1932. A first publication considering properties of clay particles appeared in *Nature, Lond.* in 1933 in which Favejee and Kolkmeijer discussed the colloidal behaviour of these particles. After this paper Favejee selected starch for a first approach to such problems and his thesis about 'X-ray investigations on hydrophilic colloids' appeared in 1935.

At this time the dogma of amorphous soil colloids was still firmly rooted in the minds of 'leading' soil scientists, but a number of young scientists were demonstrating that the particles in these fine fractions were of a crystalline nature. Favejee and his contemporaries Bradley, Correns and Grimm strove to introduce the ideas of crystalline clay minerals into the concepts of soil science. In 1937 he was appointed research fellow at the laboratory of Regional Soil Science and Geology of the Agricultural University at Wageningen. This appointment at the laboratory of the young Professor C. H. Edelman was warmly supported by Professor J. A. Prins, at that time holding the chair of physics. Prins and Favejee developed a warm mutual understanding and were often seen together in the workshop devising and machining new instruments for their experiments.

One of the first things Favejee did after his appointment was to develop a special Debye–Scherrer camera for clay samples. Furthermore, he introduced the idea of using hydrogen in the camera to reduce scattering of X-rays. This enabled him to obtain X-ray powder patterns of clay samples measurable up to 30 Å. Favejee loved to develop new techniques and to build new instruments. He was highly skilled in operating a lathe and these first two clay cameras have never been equalled in accuracy and reliability by any of the later copies made commercially. The cameras were used in the experiments related to the ideas Favejee cherished about the structure of halloysite and montmorillonite. Working closely with Edelman, he developed the well known 'Edelman–Favejee structure of smectites', still discussed and never entirely refuted.

Favejee had a special gift for unconventional approaches towards established facts and methods and was not afraid to leave familiar ground and venture into

realms where the methods he knew were untried. This often brought him in contact with rather odd problems such as the structure of egg-shells. He was often called on to assist in the work of the police laboratory.

For a few years during the last war Favejee left the University and worked in a laboratory for the development of processes in the ceramic industry. In 1948 he returned and once more devoted his time to the problems of soils. In this post-war period he studied the nature and genesis of the oxides and hydroxides of iron, as well as the minerals in the sand fraction. He introduced a staining method for fine sand particles and a separation technique for feldspars and quartz.

Officially Favejee did no formal teaching. However, a large number of Wageningen postgraduates found him easy to approach. His influence on them and his contributions to soil mineralogy will long be remembered.

L. VAN DER PLAS

https://doi.org/10.1180/claymin.1967.007.2.13 Published online by Cambridge University Press