IN MEMORIAM SUMNER B. MYERS
1910-1955

Colleagues, students and friends have joined to dedicate this volume of the Michigan Mathematical Journal to the memory of Sumner B. Myers.

Sumner B. Myers was born to Dr. Solomon and Mrs. Nettie Myers on February 19, 1910. He graduated from Harvard University, *summa cum laude*, in 1929, and wrote his dissertation (1932) at Harvard, under the direction of Marston Morse. After a year in Europe, on a Harvard Traveling Fellowship, a year as Instructor at Harvard, and two years at the Institute for Advanced Study, on a National Research Council Fellowship, he came to the University of Michigan in 1936. He married Alison Tennant in 1942, and thereafter the Myers home played an important role in the life of the Mathematics Department. Young faculty members and students found there wise counsel in mathematical and personal problems; Department members hard pressed by illness or by the housing shortage after the war found shelter and help.

Sumner Myers took a deep interest in problems of the Department (to which he devoted a large portion of his time and energy in various offices, including that of Acting Chairman), the University and the world-at-large. He had strong principles, and whenever he saw injustice done, his sense of moral responsibility forced him to speak out and to take whatever action was possible. At the same time he was full of warmth and humor, and he was a master at finding the right word to relieve a tense situation.

But his main concern was mathematics, both research and teaching. A brief survey of his investigations will be given below. As a teacher, he was magnificent. In his lectures, which were very well planned, in spite of their informal appearance, he knew how to stimulate the students, undergraduates as well as graduates. Beyond the classroom, he was generous with his time and with his fund of mathematical knowledge; the many theses written under his direction attest to his ability in leading students to active research.

During a period of great fruitfulness, he died of a heart attack on October 8, 1955. His loss is deeply felt by his family and closer friends, by the other members of his university, and by all mathematicians who had known him.

In his first papers, particularly in his thesis, Sumner Myers dealt with the calculus of variations in its classical form. His early mastery of the calculus of variations, and especially of the second variation, served him well in the subject which attracted his attention next: differential geometry in the large. In [6] and [7], he studied the minimal locus of a point on a two-manifold, and he derived topological conclusions from its structure. This notion goes back to Poincaré, and was independently and simultaneously developed by J. H. C. Whitehead and Myers in 1935. It is defined as follows: Let A be a point on the complete Riemannian manifold M_n. A point P on a geodesic ray g issuing from A is called a minimum point with respect to A, provided P is the last point on g such that AP furnishes an absolute minimum to the arc length of curves joining A to M. The set of all such points in M_n is precisely the minimal locus of A (we shall denote it by m_A). Myers discusses the analytic, two-dimensional case completely: the set m_A is always a graph, and its complement a two-cell; the homology of M_2 is determined by m_A; the order of a vertex P of m_A is precisely the number of geodesics joining A to P in

1