Homer W. Smith
(1895-1962)

By Alfred P. Fishman, M.D.

THE DEATH of Homer W. Smith in March of this year brought to a close a remarkable career in science, philosophy, and literature. Long before his death, he had become the acknowledged dean of renal physiology, renowned for both his personal research on the kidney and his role in catalyzing the work of others. But his distinction extended far beyond the realm of the kidney; indeed, he was also unique as an active biological scientist, who not only applied his special training and discipline to the exploration of broad philosophic problems but also possessed the gift of being able to communicate his results and hypotheses to scientists and nonscientists alike.

Homer Smith’s studies of the kidney began more than thirty-five years ago with Claude Bernard’s concept of the constancy of the “internal environment”; he approached this idea through the comparative physiology of the body fluids and of the excretory organs. The studies on the kidney took two directions. On the one hand was the development of precise methods for assessing renal performance—the reliable measurements of the filtration rate, renal blood flow, and tubular excretion and reabsorption in animals and man. On the other was a fresh appraisal of the evolution of the kidney in the light of comparative physiology and geology.

His first investigations led to remote corners of the world. In 1928, as the newly appointed Professor of Physiology at New York University College of Medicine, he traveled to Africa to obtain lungfish for study during activity and during estivation. In 1930, he sought fresh-water sharks and rays in Siam and Malaya in order to explore the physiologic meaning of urea in the Elasmobranch fishes. His subsequent scientific life centered around three laboratories: the physiological laboratory at the New York University medical school, the Marine Biological Laboratory at Salisbury Cove, Maine, and the clinical investigative “unit” at Bellevue Hospital. To each of these research centers came students and established investigators, for training and for the exchange of ideas; there they met philosophers, theologists, mathematicians, and natural scientists, as well as renal physiologists. All came away deeper in their knowledge of science and broader in their philosophic scope. Although Smith was not trained in medicine, physicians comprised a considerable portion of his students and associates, carrying over the techniques and lessons of the experimental laboratory to clinical medicine.

Dr. Smith’s studies of the kidney culminated in 1951 in the classical monograph, “The Kidney, Structure and Function in Health and Disease”; in this scholarly volume, existing knowledge of the kidney was critically reviewed and weighed in the balance of his own experience. In 1953, the reflective essay From Fish to Philosopher described the evolutionary role of the kidney in enabling survival in water and on land and in the emergence of man as a thinking, conscious being. For his accomplishments in the physiology of the kidney, he received many distinguished awards, including the Presidential Medal for Merit, the Lasker Award, and the Passano Award; he was also honored by prized lectureships in this country and abroad, by memberships in the learned...
societies, and by seats on the highest academic and governmental advisory councils.

From the beginning, Homer Smith examined man and man's place in nature as he examined the kidney. In the manner of Thomas Huxley, he exposed man's beliefs to the stern, objective scrutiny of the laboratory; those which were rooted in observation and experiment were carefully sorted from the others, which represented untested hypotheses or speculations. Relentlessly, he pressed for truth, recognizing that the reward was more apt to shake a cherished belief than to provide a lasting fact. He defined his mission in the words of Maeterlinck:

At every crossway on the road that leads to the future, each progressive spirit is opposed by a thousand men appointed to guard the past. Let us have no fear lest the fair towers of former days be sufficiently defended. The least that the most timid among us can do is not to add to the immense dead weight which nature drags along.

Instead of confining his doubts and his discoveries to fellow scientists, Homer Smith announced them to all who would listen. In 1932, he published Kamongo, a fictional account of his search for the lungfish, in which he questioned man’s place in nature by recounting, in a masterly fashion, an imaginary debate between a young scientist and an Anglican missionary as their ship moved through the Red Sea. A quarter of a century later, he re-examined the same subject on new grounds: Man and His Gods considered man’s ideas about the supernatural in the perspective of the evolution of Western theology and philosophy from the ancient Egyptians to the nineteenth century.

In singling out a few creative features of Smith’s intellectual existence, this brief ac-

count has slighted others, such as the “Library on Man’s Place in Nature,” which he founded a few years before his death at the New York University College of Medicine, and his steady growth in the art of music, from listening and playing to composing. Much could be said about each of these accomplishments. To do so, however, would merely emphasize the variations in Smith’s full creative life instead of its theme.

The theme was the belief in the orderly sequence of nature and the concept that the disciplined ways of science would ultimately disclose the plan. Accordingly, when not pre-occupied with specialized topics in physiology and physical chemistry, the same scientific approach could be applied to the broader problems of man and the human environment. With Darwin, he found it interesting
to contemplate a tangled bank, clothed with many plants of many kinds, with birds singing on the bushes, with various insects flitting about, and with worms crawling through the damp earth and to reflect that these elaborately constructed forms, so different from each other, and dependent upon each other in so complex a manner, have all been produced by laws acting around us.

And, just as Darwin concluded his essay on the Descent of Man, so would Smith have epitomized his own approach to science, to man, and to nature.

Many of the views which have been advanced are highly speculative, and some no doubt will prove erroneous; but I have in every case given the reasons which have led me to one view rather than to another... False facts are highly injurious to the progress of science, for they often endure long; but false views, if supported by some evidence, do little harm, for everyone takes a salutary pleasure in proving their falseness; and when this is done, one path toward error is closed and the road to truth is often at the same time opened.
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