CUSHMAN COLLECTION OF FORAMINIFERA AVAILABLE FOR STUDY

The Cushman Collection of Foraminifera, well known types of microfossils, has been received and housed at the National Museum in Washington following shipment from Sharon, Massachusetts, William E. W. Rether, Director of the U. S. Geological Survey announced.

Miss Ruth Todd who had charge of the collection in Sharon has been transferred to Washington as a member of the Paleontology and Stratigraphy Branch of the Survey. From 1910 until his death in 1949, she was associated with Dr. Joseph A. Cushman, founder of the private foraminifera laboratory whose contents were willed to the National Museum. She collaborated with him in his most recent publications and will continue to work with the collection, now assigned to Room 304 in the National Museum Building.

Dr. Cushman too, was a member of the Geological Survey from 1912 to 1921 and again from 1926 to the time of his passing. His early work as a consultant specialist on tiny, single-celled marine animals known as Protozoa, brought him into association with the former Survey section of Coastal Plain Investigations under Dr. T. Wayland Vaughan. In this work he was called upon for expert judgment in determining the geologic age of sedimentary rock formations by means of the minute shells of foraminifera that were buried with the sediment.

Then came attempts to correlate similar stratigraphic horizons in wells being drilled in South Carolina to obtain water. Because it was possible to determine the geologic age and sequence of rocks through which a drill was passing by matching these Foraminifera (certain forms of which are characteristic of certain geologic ages and are found in no others) it was only a step further to apply such knowledge to guiding the men who drill for oil.

When Dr. Cushman started his work with the "Forams", it was with no thought of any practical, economic use for his studies. These animals, whose remains form some of the ocean bottom ooze in modern seas, and solidified in ages past to form the layers of Mesozoic and Tertiary limestone so popular with builders from pyramid days on down, offered a scientific challenge to the then youthful scientist. Cushman specialized in classifying them into neat pigeon-holes according to family, genera, species, and geologic age.

When the economic value of such correlations became apparent to him, he resigned for a time from the Survey, and engaged in studies of Forams in Mexico for an oil company. The story of his phenomenal success there has often been told. Foraminifera jumped suddenly from obscurity into the limelight as fewer and fewer "dry holes" were drilled. Today this use of geology in searching for oil is common practice; another instance where so-called "pure research" of no commercial value suddenly became a tool of great economic importance.
Most people would have capitalized on this success, but Dr. Cushman was more interested in research than monetary rewards. He returned to Sharon and continued in his oil consulting work for a few years, investing his earnings in the construction of an adequately equipped scientific laboratory and making two trips to Europe to study important type specimens there.

In 1926 he again joined the Geological Survey as a sort of "dollar a year" man, to have a good excuse for not accepting commercial work. For 23 years he made himself and the resources of his laboratory available to Harvard students, adding tremendously to the prestige and effectiveness of the geology department of his Alma Mater. First appointed lecturer in Micropalaeontology, his appointment was later changed to Research Associate.

His collection is still being unpacked at the Museum, together with its accompanying card catalogue and an extensive library of more than 4,000 items on Foraminifera. There are more than half a million specimens mounted on 150,000 microscope slides. Some 13,000 are type specimens, irreplaceable, brought down from Sharon via special truck. They constitute holotypes, specimens chosen by the author as most characteristic of species he describes; paratypes, additional specimens from the same or adjacent locality chosen to supplement the holotype; and plesiotypes, subsequently figured specimens chosen by students who come along later. More than 98,000 species cards comprise the collection index.

Another highly prized part of the collection is a complete set of Foraminifera models made by D'Orbigny in 1826, still valuable as an aid to teaching. D'Orbigny was the first to recognize that these tiny creatures were Protozoa, minute single-celled animals, not merely small editions of molluscs.

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