ROCK USED FOR THE BERKEY GAVEL

by Helen L. Delano

The Berkey gavel is passed down from Chair to Chair each year at the Annual Business and Awards Luncheon. The head of the gavel is made from Roxbury Conglomerate. The Roxbury Conglomerate is a member of the Boston Bay Group (BBG), the major bedrock of Boston, Massachusetts. The conglomerate, also known as the Roxbury Puddingstone, is a polymictic conglomerate having a felspathic sandstone matrix. It was first described in 1861, and with the rest of the BBG has been a subject of geological controversy ever since. Both age and depositional environment of these rocks have seen many interpretations. Much of what is known about the Boston Bay Group is based on exposures in various construction projects, and subway, water and sewer tunnels. A late Precambrian age was established for the BBG in 1982 based on Vendian microfossils from the Cambridge argillite exposed in a subway extension tunnel. This age has been recently confirmed by radiometric dating of associated igneous rocks. The depositional setting for the BBG is probably an Avalonian volcanic arc basin subjected to some glacial influence. The conglomerates represent subaqueous debris flows. The complex and controversial geologic interpretations, the connection to major engineering projects in Boston, and the charming imagery of the poets version of the origin of the puddingstone make this an appropriate rock to form the head of the Berkey Gavel. This rock was chosen for the third Berkey gavel to honor William Otis Crosby, the "Father of Engineering Geology", who practiced in Boston. The gavel is one symbol of the Engineering Geology Division of the Geological Society of America through which the breadth of geologic interpretation, the mechanical considerations of construction projects, and human and societal concerns are brought together in consideration of the "applications of geology to various uses of mankind and engineering structures."