ROHOLM'S CONTRIBUTION TO THE AIR POLLUTION PROBLEM

One of the most severe air pollution disasters occurred in Belgium's Meuse Valley December 3-5, 1930. It attracted much attention throughout the world. A Belgian government commission of scientists was established to determine its cause. The commission concluded that a combination of many agents was responsible, but failed to pinpoint a single one. The commission recognized what they termed "lacunae" or a gap in our knowledge of fluoride. At that time, little was known about fluoride's effect on the human organism.

Dr. Kaj Roholm of Copenhagen, Denmark, subsequently carried out extensive studies and animal experiments which rendered him the greatest authority of all times on the biological effect of fluoride. Six years after the disaster he took issue with the commission's conclusions. His findings appeared in one of the journals of the American Medical Association, the Archives of Industrial Hygiene and Toxicology, Vol. 19 pages 126-137, March, 1937.

Roholm is still recognized as the world's foremost expert on fluoride. For some unknown reason, however, his account of the Meuse Valley disaster fell into oblivion shortly after it appeared. Had the medical profession and scientists interested in air pollution given it the attention which it deserved, the worst U.S. air pollution disaster in Donora, Pa. 18 years later, might have been averted.

In many details, the Donora disaster paralleled that of the Meuse Valley. Fluoride in conjunction with certain other chemical agents was responsible.

In this issue "Fluoride" presents an abstract of Roholm's ingenious presentation. In spite of many technical improvements in the control of fluoride emissions and a vast body of literature which has accumulated on fluoride in the intervening years, the same "lacunae" in our knowledge on fluoride, which troubled the Meuse Valley commission, existed when U.S. government officials investigated the Donora disaster and when an Ontario government committee studied an air pollution problem in the vicinity of a Port Maitland fertilizer factory.

Although more than 3 decades have elapsed since Roholm's article appeared, most of the data which he presented are as new to physicians today as they were in 1937. Therefore "Fluoride" in this issue is reviewing Roholm's article. It should have received the same world wide attention as his classical book "Fluoride Intoxication" which appeared one month later published by Arnold Busck, Copenhagen.

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