



Paul Bert's (1886) version of the guide at the grotto and his recumbent dog (9).

skeletons of human beings, animals, and birds which have been asphyxiated in an atmosphere overloaded with carbon dioxide.

Like the *Grotta del Cane*, the *Valley of Death* seems to have disappeared from the textbook literature in the 1940's and 50's.

Should one wish to revive these interesting examples, the modern textbook writer would have yet a third to add to them - an example even more striking than the *Valley of Death* and certainly much better documented. This is, of course, the massive release of trapped carbon dioxide from the bottom of Lake Nios in Northwest Cameroon in late August of 1986 (10). The spreading blanket of dense carbon dioxide suffocated close to 2,000 people and as many animals, a set of statistics which leaves Hooker's generations of dull-eyed Italian canines far behind.

Literature Cited

1. C. J. Furio Mas, J. H. Perez, and H. H. Harris, "Parallels between Adolescents' Conception of Gases and the History of Chemistry," *J. Chem. Educ.*, **1987**, *64*, 616.
2. Mellor (8) claims that van Helmont, who imperfectly anticipated the discovery of carbon dioxide in the 17th century in the form of his so-called *gas sylvestre*, also identified it with the gas in the *Grotta del Cane*, but he does not provide a citation for this reference.
3. T. Cavello, *A Treatise on the Nature and Properties of Air and Other Permanently Elastic Fluids*, published by the Author, London, 1781, pp. 244-245, 578-579, and 787.
4. W. Hooker, *First Book in Chemistry*, Harper, New York, 1870, pp. 46-47.
5. T. W. Reid, *Memoirs and Correspondence of Lyon Playfair*, Carsell, London, 1899, pp. 56-57.

6. A. Findlay, *The Spirit of Chemistry*, Longmans, Green & Co., London, 1934, p. 160.

7. J. R. Partington, *A Textbook of Inorganic Chemistry*, Macmillan, London, 1939, p. 676.

8. J. W. Mellor, *Modern Inorganic Chemistry*, Longmans, Green & Co., London, 1927, p. 804.

9. P. Bert, *First Steps in Scientific Knowledge, Part V: Chemistry*, Lippincott, Philadelphia, PA, 1886, pp. 118-119.

10. J. Smolowe, "The Lake of Death", *Time Magazine*, **1988** (Sept. 8), *128*, 34-37.

11. R. P. Williams, *Elements of Chemistry*, Ginn, Boston, MA, 1897, pp. 172-173.

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QUESTIONS AND QUERIES

The following item appeared in the 21 May 1881 issue of "The Chemical News". Since no one apparently answered Duckworth's original query, we thought we would resubmit it to our present day readers:

Sirs - Without doubting for a moment that Priestley discovered oxygen on 1 August 1774, I should be glad if you or some other historical chemist would enlighten me as to the following statement which I have culled from an old work on Chemistry:

"Klaproth, 'On the Knowledge of the Chemistry of the Chinese in the Eighth Century', infers that the Chinese were then acquainted with oxygen and the composition of water. The following is interesting:

There are many circumstances that purify it (referring to the atmosphere), and which can rob it of part of its *yne*; the chief of these are those things which are modifications of the *yann*, such as the metals, sulphur (*lieou-hhouann*), and *tane*, or carbon. These ingredients, when burnt, amalgamate the *yann* of the air, and form with it new combinations of two fundamental bases. The *ky-yune*, or *yne* of the air, is always pure; but by the aid of fire it can be extracted from *tchine-che*, a black stone found in the marshes. It enters also into the composition of water, in which it is so closely united with the *yann* that its decomposition becomes extremely difficult. Gold never amalgamates with the *yne* of the air, and is always found native.' - *Memories de l'Academie*

Imperiale des Sciences de St. Petersburg, tome ii., p. 476."

Most modern textbooks on chemistry take us no further back than Priestley; so that if there be any truth in the above statement it is only fair that it should be noted. Possibly others beside myself may be interested in the matter.

Charles W. Duckworth, Clayton, Manchester, 8 May 1886

THE HISTORY OF THE DEXTER AWARD

Part I: Origins

At the beginning of the twentieth century numerous history of chemistry courses were taught in American colleges and universities. The course was considered a necessary part of the education of chemists and such courses remained popular until World War I. They were nearly always taught by professors whose major obligations lay in one of the other areas of chemistry. Following World War I, increased emphasis on education of chemists began to crowd history of chemistry courses out of the curriculum. Although a number of schools continued to offer the course, it was largely a labor of love on the part of an overworked professor and these courses were generally offered as electives rather than required courses.

There was, nevertheless, a certain amount of professional interest in history of chemistry. In 1922, Edgar Fahs Smith, Provost of the University of Pennsylvania and a longtime leader in chemical education, announced an unscheduled meeting at the ACS convention for any chemists interested in seeing a few historical selections from his library and in discussing history of chemistry. Charles Albert Browne of the U.S. Department of Agriculture and Tenny L. Davis of MIT were cosponsors of the informal meeting which revealed considerable interest in such a session. It was determined to continue such meetings of chemists interested in history at future meetings. The group was soon formalized as a probationary section which began holding regular meetings. In 1927, the section was voted divisional status and has functioned as a small division of the ACS since that time.

The division did not grow to large size but contained a nucleus of enthusiasts who read historical papers, exhibited favorite books and pieces of apparatus, and talked shop in the corridors. No one thought of history of chemistry as a formal profession but as an avocation pursued by enthusiasts.

Sidney M. Edelstein became associated with the group sometime during the 1940's and in 1948 volunteered to take over the secretary-treasurership from Ralph Oesper. He continued to serve as secretary-treasurer until late 1965,



Edgar Fahs Smith

when the position was passed on to Sister Saint John Nepumocene. In many respects, Edelstein was the officer who held the section together during a period after the original founders were no longer around and a new group of enthusiasts had not firmly congealed.

Edelstein was born on 22 January 1912 in Chattanooga, Tennessee. He was educated at Baylor School in Chattanooga until he entered MIT. He received a bachelor's degree in chemistry in 1932. Returning to Chattanooga, he took a position as textile microscopist and research chemist at Dixie Mercerizing Company. After three years he became Research Associate with the American Association of Textile Chemists and Colorists. In 1938, he became Vice President and director of Research with Lamede, Inc. in Rossville, Georgia, and in 1939 took a similar position at Hart Products Corporation in Woodbridge, New Jersey. He held this position until 1945, when he founded the Dexter Chemical Corporation and began his long service as its President. The corporation grew to worldwide status and the related Dexter International has headquarters in Israel.

After graduation from college, Edelstein began building up a splendid library dealing with the history of science. The library concentrated particularly in three areas - early chemistry, alchemy, and dyeing. Besides his many books, the library contains autographed letters, engravings, etchings, medals, and presentation copies of books. Several years ago this collection was transferred to the National Library at Hebrew University in recognition of the deep feelings held by Edelstein and his wife, Mildred, for the nation of Israel. Through the Israel Educational Fund, the Edelsteins also built "Beit Edelstein", the library and community center at Kiryat Shemona, and they have also built several day-care centers in the country. Dr. Edelstein is an honorary chairman of the United Jewish Appeal and a