BOOK REVIEWS

Chemistry and Cooperation

Crusading for Chemistry. The Professional Career of Charles Holmes Herty. GERMAINE M. REED. Forest History Society, Durham, NC, and University of Georgia Press, Athens, 1995. xvi, 474 pp., illus. $45.

Those who promote science could profitably study the life of Charles Holmes Herty. Born in Milledgeville, Georgia, in 1867, Herty translated a chemist's education into an unusual career of entrepreneurship and advocacy. In 1890, seeking an academic's life, he took a doctorate under Ira Remsen at Johns Hopkins. When his star as a professor subsequently failed to rise at his alma mater, the University of Georgia, and a year at European polytechnics didn't help, he turned to applied work, adapting efficient French methods to the naval stores industry in his native state. In 1901, with an aplomb that became a hallmark, Herty parlayed an audience with Gifford Pinchot into a paid consultancy on naval stores for the Bureau of Forestry. One thing led to another until Herty deserted academe entirely to become an "expert" at the bureau. In short order, he patented a new apparatus for tapping southern pine trees, aggressively sold it among progressive turpentine producers, and resigned from the bureau to become a full-time principal in the firm manufacturing his resin cups. That made him financially secure, and the innovation revolutionized the industry. Moreover, the experience established three enduring characteristics of Herty's life: faith that fundamental education and "pure science" undergird industrial prosperity; belief that applied chemistry could develop the South; and a penchant for tireless speechmaking, elite networking, and relentless cultivation of newspapermen.

For a decade thereafter, at the University of North Carolina, Herty tried academe again, but the lure of a lobbyist's life proved irresistible. As the 1915–16 president of the American Chemical Society, Herty hopped on the preparedness bandwagon for the "Chemists' War," an activity that yielded two further career motifs: enthusiasm for "cooperation" in "matters chemical" among academics, industrialists, and politicians; and near-xenophobic endorsement of national chemical "independence." As full-time editor of the *Journal of Industrial and Engineering Chemistry*, then as first president of the Synthetic Organic Chemicals Manufacturers' Association, he lobbied for steep import tariffs on organic chemicals. Herty thereby befriended Francis P. Garvan, the flamboyant but reclusive president of the Chemical Foundation, and by 1926 he had become Garvan's full-time paid ambassador. As such, he figured centrally in the creation of the National Institutes of Health, objected to the intrusions of the I.G. Farben cartel, and preached lay appreciation for the blessings of science. When the Chemical Foundation's funds ran out, Herty returned to Georgia pine, scoring his greatest success. The demonstration experiments conducted at Herty's Savannah Pulp and Paper Laboratory, launched in 1931, proved pivotal in establishing the lucrative southern pulp paper industry; just after his death in 1938, the first plant to make commercial newsprint from southern pine opened in Herty, Texas.

Reed's faithfulness to the extensive Herty Papers at Emory University is both blessing and curse for this readable, albeit occasionally repetitive and overly detailed, biography. Herty's correspondence forms the backbone for her reconstruction of his activities, providing a valuable complement to such related works as Victoria Harden's *Inventing the NIH* (Johns Hopkins University Press, 1986) and David Rhees's "The Chemists' Crusade" (University of Pennsylvania dissertation, 1987). She also includes several new tidbits, such as the revelation that Frederick E. Breithut was Herty's mole inside Herbert Hoover's Commerce Department. In her crusade for the chemist of the southern pine, however, Reed sometimes loses sight of the forest for the trees. Most notably, Herty's progressive obsession with "cooperation" as a panacea repeatedly left him wounded in the crossfire of conflicting interests among competing industrialists, regionalist legislators, and ambitious academics, thereby diminishing his effectiveness relative to more shrewdly political contemporaries like Vannevar Bush. To her credit, Reed clearly identifies cooperation mania as quintessential Herty, but her readers must ponder alone the distinctions between scientific solutions and political settlements.

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Notorious Events

Factories of Death. Japanese Biological Warfare 1932–45 and the American Cover-Up. SHELDON H. HARRIS. Routledge, New York, 1994. xiv, 297 pp., illus. $25; paper, $16.95.

Although there is no direct lineage to prewar and wartime Japanese military activities, the Sarin nerve-gas outrages committed by doomsday cultists at Matsumoto in 1994 and in the Tokyo-Yokohama area in 1995 have rekindled interest in Japan's larger experience in both the chemical and the bacteriological warfare domains. After the Pacific War, sporadic information emerged on horrific biological weapons testing conducted in Manchuria by the clandestine Unit 731 of the Japanese Kwantung Army. In October 1981 John W. Powell published a probe of the matter, "Japan's biological weapons 1930–1945," in the *Bulletin of the Atomic Scientists*. Subsequently the subject was rediscovered by foreign journalists such as Peter Williams and David Wallace, authors of *Unit 731: Japan's Secret Biological Warfare in World War II* (Free Press, 1989), and unvarnished transcripts of interviews with Japanese veterans have appeared in Haruko Taya and Theodore F. Cook's *Japan at War: An Oral History* (New Press, 1992). More recently, Gavan Daws touched briefly on the biological atrocities in *Prisoners of the Japanese* (Morrow, 1994). All this work, however, has suffered from unavailability of records, lack of testimony from senior officials, and the deadening plea-bargain that exempted the Japanese biological weaponry leaders such as Lieutenant General Shiro Ishii from prosecution as war criminals in exchange for the revelation of data to the American Occupation authorities at the outset of the Cold War.

A professional historian, Sheldon H. Harris, professor emeritus at California State University, Northridge, has undertaken the laborious effort of tracking down extant documentation in the countries that were the main targets of Japanese prewar and wartime ground operations, China and the Soviet Union. It is the Chinese nexus that provides the core of Harris's research, and he has often traveled to such distant locales as Changchun, Harbin, and Hailar in search of material. Harris also tenaciously delved into documentation housed in the United States, as at Fort Detrick, Maryland, though his access was inevitably incomplete. Less successful were his efforts in Russia and Japan. Issues of access aside, Harris's account suffers from the fact that, lacking command of the languages involved, he had to rely on interpreters and translators. Some of the published works in