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IN THIS ISSUE

THE LEAD ARTICLE IN THIS number of the *Osler Library Newsletter* is by the eminent American historian of medicine, Dr. Günther Risse. Dr. Risse's wide ranging publications include major monographs on everything from the palaeopathology of ancient Egypt, to medical practice in New Spain, to the hospitals of 18th century Edinburgh. His most recent book, *Mending Bodies—Saving Souls: A History of Hospitals*, was published by Oxford University Press, in 1999. In 1988, the American Association for the History of Medicine awarded him the William H. Welch Medal "for particular contributions of outstanding scholarly merit in the field of medical history."

Dr. Risse teaches in the Department of Anthropology, History and Social Medicine at the University of California, San Francisco. In this essay, he explores the seamy, steamy, and stinky underside of Osler's Baltimore, and the challenges Osler faced in awakening professional and public consciousness of public health.



 McGill

OSLER, BALTIMORE AND PUBLIC HEALTH

Following the Civil War, Baltimore like other major population centres on the eastern seaboard witnessed an impressive economic growth punctuated by a succession of boom and bust periods. Its history and geographic location made the city an ideal metropolis to assist in the postwar reconstruction of the South.¹ Baltimore's bankers, flush with capital obtained from government contracts for cotton, iron, and steel, provided the necessary venture money to create a number of domestic industries and transportation systems to carry their wares—from farm implements to millinery—to the southern states. At the same time, the city used its port facilities to establish an active international trade in tobacco, wheat, and flour with Europe. Prominent among the new entrepreneurs contributing to Baltimore's development was a native of Maryland, Johns Hopkins (1795-1873), a Quaker and president of the Merchants Bank. Hopkins was also one of the directors of the Baltimore and Ohio Railroad, another important local economic player. His most enduring legacy, of course, was the endowment that created a prominent university and hospital.²

Originally built in the early 1700s on low ground bordered on three sides by marshes with flowing streams, Baltimore quickly expanded towards higher ground through repeated annexations, following a checkerboard grid of streets and buildings. The sprawl during the 1880s was especially directed towards the northwest, nearly tripling the city's

limits and adding about 40,000 new inhabitants to the city's rolls. While the expansion generated a veritable real estate and construction boom, the extension of municipal services strained the city's coffers. For a decade, house construction soared, with thousands of new units built—an average of 3,700 per year—following the economic slump of the 1870s. The result was a vast tract of "respectable" privately owned two-story row houses, somewhat elevated to avoid periodic flooding from adjacent streams. These buildings with their frequently polished marble "front steps" and sidewalks, were constructed of a reddish-pink brick by well-paid bricklayers who became world famous. Behind the townhouses with their yards and cesspools

by
Dr. Günther
Risse



The well-known cartoon of 1896 by Max Brödel in which the germs flee in Osler's presence.

"Fortunately it is now a great and growing function of the medical profession to search out the laws about epidemics and these outside enemies of man, and to teach you, the public—dull, stupid pupils you are too as a rule—the way of nature that you may walk therein and prosper."



were labyrinths of alleys and small overcrowded shacks.

By 1890, the city's cesspools had greatly increased in number—every dwelling had its own—and they were connected to old and new storm water sewers which discharged all wastes directly into the harbor basin. Failure to clean them regularly and keep them closed caused a constant overflow into yards, courts, and alleys producing noxious odors. To compound the problem, Baltimore's water pipes were made from hemlock logs. Cracks and joints in these log pipes allowed seepage from contaminated soils near privies and stables, a situation that created a perennial contamination of water supplies coming from Jones Falls and the Gunpowder River reservoir outside the city. Lack of a chemical and bacteriological laboratory at the Health Department, in turn, hindered periodic analyses of this water so that its actual impurity was never suspected until 1892.³ Milk supplies, lacking refrigeration and exposed to flies and urban dust, were equally contaminated. There was no inspection of dairies.

The major obstacles to an improved public health in Baltimore were linked to its rapid and unprecedented growth. Fueled by an influx of immigrants, Baltimore's modest infrastructure was quickly overwhelmed by new settlements that outstripped existing water supplies, dwellings, pavement, sewerage, and garbage removal, thus creating significant hazards to the city's public health.⁴ Indeed, the land additions of 1888 had provided vast housing tracts with quite primitive sanitary conditions, especially large numbers of polluted wells. Garbage removal became deficient, with an abundance of refuse from slaughterhouses and packing plants rotting on streets. A large and sustained German immigration, especially from 1860 onwards, now made up a third of Baltimore's population. Many of them participated in the city's various industries, as furniture makers and piano manufacturers, brewers and butchers, shoe and can makers. In 1882, a special contingent of German miners was brought to the mines near

Frostburg. Home owners, especially in German and Bohemian neighbourhoods, had their water piped to their private property but not to the shacks located in the inner alleys. Many of them were well-paid mechanics, in contrast to the cannery labour force, that also included Poles but was increasingly replaced with unskilled workers, as machines took over production of the cans.

The inner city, Oldtown, and Fells Point, as well as areas located west and south of Camden Station obtained their water through free public fountains from shallow wells, vulnerable to pollution from privies and street drainage. Attracted by the city's demands for labourers and domestic servants, newly freed Blacks had migrated there after 1870 from Virginia, North Carolina, and Georgia, and by 1891 made up about 15% of Baltimore's population. They mainly lived near the waterfront and in the segregated ghetto in South Baltimore named "Pigtown," and their mortality rates were twice that of the city's white population.⁵ Many Black females were part of a contingent of 20,000 domestics employed in the city. In Oldtown and Fells Point, similar unhealthy conditions prevailed among the nearly 16,000 overworked and underpaid garment workers, many of them Jewish. They were mostly women and children, among them immigrants from Italy, Lithuania, Bohemia, and Russia who worked twelve hours a day in small, ill-ventilated sweatshops of East Baltimore, part of a clothing industry facing increasingly acute competition. Indeed, following the Civil War, Baltimore had become "the city that tries to suit everybody."⁶

Discussions concerning Baltimore's impure water supply and its links to epidemics of typhoid and cholera were already common in the late 1880s. The British Public Health Act of 1875, based on the ideas of the English physician William Budd (1811-1880), had already accepted the view that typhoid fever was spread by means of water and food.⁷ By this time, typhoid was already endemic in Baltimore, peaking during the late summer and early fall. Most cases occurred during the months of

July, August, September, and October. The newly accepted cause of typhoid fever was a bacillus discovered in 1880 by the German scientist Carl J. Eberth (1835-1926), a finding later confirmed by the prominent bacteriologists Robert Koch (1843-1910) and Georg Gaffky (1850-1918). However, since Eberth's causal agent still failed to fulfill Koch's third postulate of inoculation and reproduction of the disease in an experimental animal, many physicians continued to question the role of this particular microorganism in the pathogenesis of the disease.⁸ Two distinct contemporary paradigms competed for the attention of physicians concerned with public health. One was the ground-water hypothesis proposed by the German sanitarian Max J. Pettenkoffer (1818-1901) of Munich, who postulated that particular soil conditions were responsible for drainage, and that epidemics spread because of alterations in the soil caused by fluctuations in levels of ground water.⁹ The other theory was supported by the new bacteriologists including Koch who attributed these outbreaks to the contamination of water supplies. Infection occurred when such water, containing Eberth's bacillus, were ingested.¹⁰ Although the causal agent had been cultured from the blood and stool of typhoid fever victims, it was still difficult to identify and isolate the bacteria in the water. Recent evidence from typhoid fever outbreaks in Hamburg and Berlin, as well as Boston, Plymouth, and Pennsylvania, however, pointed to a lack or failure of water filters, an indirect confirmation of this hypothesis.¹¹

Under the circumstances, Baltimore's Health Department, devoid of both adequate funding and expertise, remained a passive spectator in the battle against contagious diseases, and considered them nuisances to be blamed, in the traditional manner, on foul "miasma." Even Daniel C. Gilman, president of the Johns Hopkins University and interim director of the Hospital, questioned at the opening of the institution in 1889 "whether Baltimore is now fortified as it should against the hostile incursions of epidemic

disease."¹² Political corruption and administrative inefficiency compounded public indifference towards the importance of public health. Although diphtheria, scarlet fever, and typhoid were widely prevalent after 1875, the first two were not included among the reportable diseases until 1882 and typhoid was only listed in 1895. By 1890, Baltimore's new health commissioner, George F. Rohe, began advising the disinfection and fumigation of houses in which a death or recovery from a communicable disease had already occurred. People with diphtheria and scarlet fever were to be hospitalized. Indeed, during Rohe's brief tenure, Baltimore entered an era of greater public health consciousness that would eventually turn the city around in the following decade.¹³

On February 22, 1891, Dr. William Osler (1849-1919), since 1888 a professor of medicine at the Johns Hopkins University, and physician-in-chief of the newly established Johns Hopkins Hospital, gave the main address during the ceremonies commemorating the fifteenth anniversary of the University. Taking advantage of the presence of local dignitaries, his talk stressed the importance of sanitary science in the prevention of disease and the need for physicians to educate city authorities and the public about its principles. At stake were issues of pure water, clean streets, and adequate drainage, all capable of cutting in half the mortality of certain infectious diseases, including typhoid fever.¹⁴ For Osler, the presence of typhoid fever was an important index of sanitation, and in his opinion Baltimore obviously fared badly in this regard.¹⁵ In another talk on this subject in 1891 to the first class of graduates from the Training School for Nurses at the Johns Hopkins Hospital, Osler ranted and raved: "Fortunately it is now a great and growing function of the medical profession to search out the laws about epidemics and these outside enemies of man, and to teach you, the public—dull, stupid pupils you are too as a rule—the way of nature that you may walk therein and prosper."¹⁶ Later, one of Osler's contemporaries remembered that the

prevalence of typhoid fever in the United States and especially Baltimore "was a source of deep aggravation to him and he called for the use of all his powers of voice and pen to bring light into the darkness,

The Johns Hopkins Hospital Bulletin, Vol. 1, No. 8, November 1890 with the paper by Charles E. Simon on the use of Ehrlich's Test in Typhoid Fever which became a key, quick diagnostic method to detect the presence of the disease.



EHRlich's TEST IN TYPHOID FEVER.
By CHARLES E. SIMON, M. D., Assistant Physician, Johns Hopkins Hospital.

The following is a translation of the German text of the paper by Dr. Charles E. Simon, M.D., on the use of Ehrlich's test in typhoid fever, published in the Johns Hopkins Hospital Bulletin, Vol. 1, No. 8, November 1890.

The test consists of a mixture of the patient's blood with a solution of Ehrlich's reagent. In a normal case, the mixture remains colorless. In the case of typhoid fever, the mixture turns a deep red color. This reaction is due to the presence of typhoid bacilli in the blood.

The test is a simple and rapid method of diagnosing typhoid fever. It is especially useful in cases where the clinical symptoms are not clear.

The test is based on the fact that typhoid bacilli possess a specific antigen which reacts with Ehrlich's reagent to form a red color. This reaction is not observed in other febrile diseases.

The test is a valuable addition to the diagnostic armamentarium of the physician. It is especially useful in the early stages of the disease, when the clinical symptoms are not yet fully developed.

The test is a simple and rapid method of diagnosing typhoid fever. It is especially useful in cases where the clinical symptoms are not clear.

that rational legislative measures might be inaugurated to restrict its incidence."¹⁷

In agitating for sanitary improvements in Baltimore, Osler was consciously following the example of the doyen of German medicine, Rudolf Virchow (1821-1902), a famous pathologist and originator of the cell-theory of disease, who decades earlier had quite eloquently reported on typhus conditions in Silesia.¹⁸ Osler's earliest documented encounter with the public health aspects of typhoid fever can be traced back to his days at the Montreal General Hospital and his membership on a committee that had studied and reported on an outbreak of the disease in Canada at the Bishop's College School in Lennoxville in December 1880.¹⁹ Now in his early forties, Osler was a well-trained pathologist and

microscopist who followed in the tradition of French medicine by studying the correlation between clinical observations and pathological anatomy. He also strongly supported

the newer linkages between the basic medical sciences and clinical events.²⁰

Earlier in the nineteenth century, so-called continuous fevers had been gradually separated on the basis of careful clinical observations.²¹ By the 1840s, the distinction between typhoid and typhus fever was gradually accepted both in Europe and America.²² By 1891, Osler and others were also confident that, despite decades of medical controversy, malaria and typhoid fever could now be separated from a peculiarly American disease entity designated as typho-malarial fever. This creation of the Civil War had erroneously fused the manifestations of malaria and typhoid fever into a single disease. A resolution to this problem began after the discovery of separate causal microorganisms—Laveran's malarial parasite and Eberth's typhoid bacillus—in 1880. In sharp contrast

The Johns Hopkins Hospital became an ideal site to carry on the bacteriological research necessary to make the differential diagnoses since both malaria and typhoid fever were quite prevalent in this southern city.

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to a majority of contemporary American physicians, Osler accepted Laveran's etiological claims. The Johns Hopkins Hospital became an ideal site to carry on the bacteriological research necessary to make the differential diagnoses since both malaria and typhoid fever were quite prevalent in this southern city.²³

Osler re-visited Munich in May 1890, and was impressed with the city's new drainage system and concomitant reduction in cases of typhoid fever. He remarked that Munich was now one of the healthiest cities on the continent.²⁴ Typhoid fever periodically continued to seize Baltimore despite what Osler described as more than fifty years of a “gospel of preventative medicine” that recommended pure water, good drainage, and the prompt isolation of the sick.²⁵ In addition to the lack of a proper sewage system and scheme for inspecting dairies and slaughterhouses, a compulsory reporting mechanism for contagious diseases and isolation facilities for those already infected were wanting. Moreover, Baltimore's cobbled streets were simply swept, not watered, creating unhealthy clouds of dust composed of filth and horse manure. The problem, of course, was that the city only had a surface drainage system designed to collect excessive rainwater and household waste. Human wastes, in contrast, went into an estimated 70,000-80,000 privy pits, many of which were leaking and contaminating the adjacent ground. Thus, Osler was on target when he pointed out that local conditions allowed typhoid fever to remain endemic in the city throughout the entire year, although the continued prevalence of the disease during autumn was imperfectly understood. According to Osler, “Baltimore has the unenviable distinction of having the largest number of privy pits of any city on this continent, the major portion of which are, in the words of the last report of the medical officer of health, filthy, unsanitary, threatening and positively dangerous.”²⁶ In 1891, the local Health Department responded by issuing regulations that every privy, well, and cesspool had to be watertight.

Based on information from the yearly Baltimore Health Reports, the mortality rates from typhoid fever in the city during the years 1888-1892 only confirmed Osler's concerns. There averaged around 229 official cases per year, affecting disproportionately poor Blacks and white city dwellers of German and Irish extraction. The lack of reporting and diagnostic confusion surrounding the disease, as well as its average mortality rate of 12% suggested at least 2,750 cases of the disease per year in a population estimated at 450,000 in the early 1890's. Baltimore's largest number of fatal typhoid fever cases came from the outlying areas of the city, especially the first Ward, followed by Wards 17, 21, and 22, where there were a large number of dairies, and where well water was used. Cases reported from Ward 19 on the western fringes of the city had the highest mortality rates. Faced with such statistics, Osler bluntly stated that it “behooves civilized communities to insist upon” public health measures. Creating a proper sewage system and providing an ample supply of clean water could dramatically reduce the incidence of water-borne diseases.²⁷

Osler's keen interest in preventing typhoid fever was closely related to his clinical experiences with the disease at the Johns Hopkins Hospital. During certain times of the year, nearly half of the hospital's medical wards were filled with new and relapsed typhoid cases, mostly single Caucasian males, many of them recent immigrants living in nearby slums. In spite of contemporary advances in bacteriology, Osler and his team of residents continued to struggle in making an early diagnosis based on cultures of the etiological agent. Partly responsible for the difficulties was the morphological similarity between the Eberth and coli bacilli when the stools were cultured. Presumptive diagnoses continued to be made mostly on clinical grounds, including temperature charts that revealed the disease's characteristic fever pattern. “Typhoid fever has a Pennsylvania-Railway-like directness in distinction to the zigzag Baltimore-and-Ohio chart of aestivo-autumnal fever,” read

one of Osler's aphorisms.²⁸ Treatment, for the most part, remained symptomatic, consisting of the traditional and repeated application of cold water to lower the high fever of the patients. In fact, Osler simply took an expectant attitude, eschewing a number of antiseptic intestinal treatments then popular in Europe and trusting in the natural recuperative powers of his young patients.²⁹ Hospital statistics at Johns Hopkins revealed 10% mortality from the disease. Osler told his colleagues: “Year by year we physicians sit at the bedside of thousand upon thousand, chiefly of youths and maids whose lives are offered up at the altars of Ignorance and Neglect.”³⁰

At the 97th annual meeting of the Medical and Chirurgical Faculty of Maryland, held in Baltimore on April 23, 1895, Osler organized a symposium on typhoid fever.³¹ His growing frustration at seeing significant numbers of sufferers under his care die of the disease gave further impetus to his quest for prevention. By now, the bacteriological evidence for the transmission of the disease through contaminated water, milk, raw vegetables, and oysters was overwhelming and could no longer be ignored by public health authorities. Although the city of Baltimore had finally established a bacteriological laboratory and enacted legislation to begin compulsory reporting of typhoid fever, little else was in the offing regarding key reforms of the city's infrastructure, especially the construction of sewers. Once again, Osler urged city leaders to support measures intended to avoid the contamination of Baltimore's water supply by abolishing the local cesspool system of drainage. Indeed, the city was to take control of the Gunpowder River and Jones' Falls watersheds but the polluted stream was merely tamed by the construction of granite walls to prevent flooding.³² A year later, a report from the city's sanitary inspectors declared the general water supply seriously polluted.³³ Osler persisted in bringing up the subject again when Simon Flexner came to town in November of 1896 for the

purpose of explaining to local physicians the novel serum diagnosis of typhoid fever designed by the French physician Fernand Widal (1862-1929). Widal's agglutination test was based on the observed fact that persons infected with the Eberth bacillus—now salmonella typhi—developed antibodies to this microorganism's outer wall. Unfortunately, the test often proved inaccurate.³⁴

In his keynote address to state health officers and other dignitaries in 1897, Osler once more complained about the "penalties of cruel neglect" in relation to the prevention of typhoid fever. "To our shame," he added, "we do [this] with full knowledge, with an easy complacency that only long years of sinning can give."³⁵ The conference, however, led to the creation of the Maryland Public Health Association. Under the leadership of William H. Welch (1850-1934), Osler's Hopkins colleague, this organization began pressuring the legislature for public health reforms. Baltimore, in turn, commissioned its first epidemiological study of typhoid fever in 1899. In another speech that same year before the Medical Society of the State of New York in Albany, Osler discussed the prevalence of typhoid fever in the United States including the experiences of the Spanish-American War with its high incidence of the disease among the troops in military camps.³⁶ Suspicions of disease transmission by healthy carriers had been confirmed and almost 20% of the soldiers stationed in the US had fallen ill of typhoid in contrast to a war termed the "most bloodless campaign in history." In Europe that year, Koch investigated another typhoid fever epidemic in Trier, Germany, similarly stressing the need for early detection and isolation of the sick.³⁷ Osler considered the neglect of sanitary laws that had fostered this carnage "criminal" and a paradox for people who paid attention to their personal hygiene but somehow were careless about the public's health. Osler expressed a "keen sense of personal defeat in a closely contested battle" against those who had failed to take the necessary public health measures to

stave off epidemic disease. He admitted that the death of patients from typhoid caused him a "heart-searching dread lest something had been left undone," and "poignant grief" for parents and friends of the

*Dr. Osler
quizzing a
student at Johns
Hopkins
Hospital at the
Saturday
morning clinic
(4th yr.).
Tabulation of
typhoid and
pneumonia
cases on
blackboard.
Taken 1902-3.*



victims, "worn by the strains of anxious days and still more anxious nights."³⁸

By the early 1900s, Osler continued to ridicule the meager accomplishments of Baltimore's past and present public health officials, lashing out in public at the current mayor and bitterly complaining about the continuing lack of a proper sewer system and isolation hospital for infectious diseases.³⁹ In contrast to medical affairs at Johns Hopkins Hospital under Osler's immediate control, the glacial pace of the city's politicized bureaucracy proved very frustrating to him. Although disease reporting was slowly improving, cases from rural Maryland continued to be included, perpetuating the hitherto murky data. Although the growing problem of urban tuberculosis came to engage more of his energies before his departure for England, Osler continued to express concern for typhoid fever. Taking a page from ancient Greek mythology, he insisted that Baltimore, like

Athens, continued to pay "Delian" tribute, sacrificing young innocent lives to the "Minotaur" of infectious diseases, typhoid fever.⁴⁰ After Osler left for Oxford University in 1905 to assume the chair of Regius Professor

of Medicine, public health in America entered its most critical period of reform and expansion, and like Theseus in the myth, eventually slew the febrile monster.⁴¹ ❄

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End Notes

- 1 Sherry H. Olson, *Baltimore: The Building of an American City* (Baltimore: Johns Hopkins University Press, 1980), 198-241.
- 2 For details, see Hamilton Owens, *Baltimore on the Chesapeake* (Garden City, NY: Doubleday, Doran & Co., 1941), especially chapter XXV, "Pride and Prejudice," 288-303.
- 3 William T. Howard, Jr., *Public Health Administration and the Natural History of Disease in Baltimore, Maryland, 1797-1920* (Washington, DC: Carnegie Institution, 1924), 108-40.
- 4 Similar conditions existed in Pittsburgh. See C.R. Koppes and W.P. Norris, "Ethnicity, Class, and Mortality in the Industrial City: A Case Study of Typhoid Fever in Pittsburgh, 1890-1910," in *Journal of Urban History* 11 (1985): 259-79.

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- ⁵ J.S. Billings, "Municipal Sanitation in Washington and Baltimore," in *The Forum* 15 (1 Aug. 1893): 727-37.
- ⁶ J.A.E. Argersinger, "The City That Tries to Suit Everybody: Baltimore's Clothing Industry," in *The Baltimore Book: New Views on Local History*, E. Fee, L. Shopes, and L. Zeidman, eds. (Philadelphia: Temple University Press, 1991), 81-101.
- ⁷ For a summary, see C.W. Le Baron and D.W. Taylor, "Typhoid Fever," in *The Cambridge World History of Human Disease*, K.F. Kiple, ed. (Cambridge: Cambridge University Press, 1993), 1071-77. For conditions in England, see B. Luckin, "Evaluating the Sanitary Revolution: Typhus and Typhoid in London, 1851-1900," in *Urban Disease and Mortality in Nineteenth-Century England*, R. Woods, ed. (London: Batsford, 1984), 102-19.
- ⁸ Budd's *Typhoid Fever: Its Nature, Mode of Spreading and Prevention* was published in 1875. For a contemporary discussion at the 40th annual meeting of the A.M.A. in June, 1889, see *Boston Medical & Surgical Journal* 121 (July 18, 1889): 63-4.
- ⁹ A.S. Evans, "Two Errors in Enteric Epidemiology: The Stories of Austin Flint and Max von Pettenkofer," in *Reviews of Infectious Diseases* 7 (May/June 1985): 434-40.
- ¹⁰ A.C. Abbott, "The Relation Between Water Supply and Epidemics," in *Bulletin of the Johns Hopkins Hospital* 1 (May 1890): 55-6. Abbott was an assistant at the Johns Hopkins Hospital's bacteriology and hygiene laboratory.
- ¹¹ C.V. Chapin, "Some Points in the Etiology of Typhoid Fever," in *Boston Medical & Surgical Journal* 120 (June 20, 1889): 604-7. As of 1884, Chapin was superintendent of health for the city of Providence and one of the leaders of a new bacteriologically-informed public health. See also James H. Cassidy, *Charles V. Chapin and the Public Health Movement* (Cambridge, MA: Harvard University Press, 1962).
- ¹² Alan M. Chesney, *The Johns Hopkins Hospital and the Johns Hopkins University School of Medicine: A Chronicle*, 3 vols. (Baltimore: Johns Hopkins University Press, 1943), vol 1, p. 260.
- ¹³ Howard, *Public Health*, 150. For an analysis of another nearby city, see Michael P. McCarthy, *Typhoid and the Politics of Public Health in Nineteenth-Century Philadelphia* (Philadelphia: American Philosophical Society, 1987).
- ¹⁴ The address titled "Recent Advances in Medicine," was published in *Science* 18 (1891): 170. See also Harvey Cushing, *The Life of Sir William Osler* (New York: Oxford University Press, 1940), 342.
- ¹⁵ William B. Bean, ed., *Sir William Osler: Aphorisms from his Bedside Teachings and Writings* (New York: H. Schuman, 1950), #325, p. 140. For a sketch of Osler's interests in public health see G. Rosen, "Osler and Public Health," in *North Carolina Medical Journal* 10 (1949): 277-9.
- ¹⁶ William Osler, *Doctor and Nurse* (Baltimore: J. Murphy & Co., 1891), 8.
- ¹⁷ H.B. Jacobs, "Osler as a Citizen and his Relation to the Tuberculosis Crusade in Maryland," in *Bulletin of the Johns Hopkins Hospital* 30 (July 1919): 206.
- ¹⁸ Osler, who admired Virchow, saw himself as a "man who translates the hieroglyphics of science into the plain language of healing." See Been, *Osler Aphorisms*, # 257, p. 123.
- ¹⁹ Cushing, *Life of Osler*, 183-4.
- ²⁰ For details, see Cushing, *Life of Osler*, especially chapters I-XII dealing with his life before coming to Baltimore. For another, more recent biography of Osler see, Michael Bliss, *William Osler: A Life in Medicine* (Toronto: University of Toronto Press, 1999).
- ²¹ L.G. Wilson, "Fevers and Science in Early Nineteenth-Century Medicine," in *Journal of the History of Medicine & Allied Sciences* 33 (1978): 386-407.
- ²² D.C. Smith, "Medical Science, Medical Practice, and the Emerging Concept of Typhus in Mid-Eighteenth-Century Britain," in *Theories of Fever from Antiquity to the Enlightenment*, W.F. Bynum and V. Nutton, eds. (London: Wellcome Institute, 1981), 121-34. See also William Budd, "Introduction," in *On the Causes of Fevers (1839)*, D.C. Smith, ed. (Baltimore: Johns Hopkins University Press, 1984), 1-39. For America, see D.C. Smith, "Gerhard's Distinction Between Typhoid and Typhus and its Reception in America, 1833-1860," in *Bulletin of the History of Medicine* 54 (1980): 365-85.
- ²³ D.C. Smith, "The Rise and Fall of Typhomalarial Fever II: Decline and Fall," in *Journal of the History of Medicine & Allied Sciences* 37 (1982): 287-321.
- ²⁴ Osler, "Letters to my House Officers," in *New York Medical Journal* 52 (1890): 192.
- ²⁵ Osler, "Typhoid Fever in Baltimore," in *Johns Hopkins Hospital Reports* 4 (1895): 159-67.
- ²⁶ Osler, "Typhoid Fever in Baltimore," 167.
- ²⁷ Osler, "Typhoid Fever in Baltimore," 166. The need for a sewer system was somewhat disputed by John S. Billings, who believed "that so long as the water supply is pure and abundant, the methods of sewage disposal do not have much influence on the health of the community." Billings, "Municipal Sanitation," 735.
- ²⁸ Bean, *Osler Aphorisms*, #282, p. 129.
- ²⁹ Osler, "The Cold-Bath Treatment in Typhoid Fever," in *Medical News* 61 (1892): 628-31. Details of Osler's management of typhoid fever at the Johns Hopkins Hospital in 1891 can be gleaned from a case history in Guenter B. Risse, "The Limits of Medical Science," in *Mending Bodies-Saving Souls: A History of Hospitals* (New York: Oxford University Press, 1999), 399-422.
- ³⁰ Osler, "The Problem of Typhoid Fever in the United States," in *Medical News* 74 (1899): 229.
- ³¹ Osler, "Typhoid Fever in Country Districts," in *Maryland Medical Journal* 33 (1895-96): 55-7.
- ³² Cushing, *Life of Osler*, 413-14. See also S. Bonsal, "The New Baltimore," in *Harper's New Month Magazine* 92 (Feb. 1896): 331-50.
- ³³ Howard, *Public Health*, 256.
- ³⁴ Cushing, *Life of Osler*, 441-2. See also Osler, "The Relation of Typhoid Mortality and Sewerage," in *Maryland Medical Journal* 38 (1897-98): 217-18.
- ³⁵ Jacobs, "Osler as a Citizen," 206.
- ³⁶ G. Sternberg, "Sanitary Lessons of the War," in *J.A.M.A.* 32 (1899): 1287-94.
- ³⁷ L.G. Stevenson, "Exemplary Disease: The Typhoid Pattern," in *Journal of the History of Medicine & Allied Sciences* 37 (1982): 159-81.
- ³⁸ Osler, *Counsels and Ideals* (Boston: Houghton, Mifflin & Co., 1908), 260. See also *Medical News* 74 (1899): 229.
- ³⁹ Osler, "Tuberculosis," in *Maryland Medical Journal* 45 (1902): 134-5. For British models of isolation hospitals, see J.M. Eyler, "Scarlet Fever and Confinement: The Edwardian Debate over Isolation Hospitals," in *Bulletin of the History of Medicine* 61 (1987): 1-24.
- ⁴⁰ Osler, "Typhoid Fever in Baltimore," 159.
- ⁴¹ For details, see Elizabeth Fee, *Disease and Discovery: A History of the Johns Hopkins School of Hygiene and Public Health, 1916-1939* (Baltimore: Johns Hopkins University Press, 1987) especially chapter 1, pp. 9-25, and E. Fee and R.M. Acheson, eds., *A History of Education in Public Health* (New York: Oxford University Press, 1991).

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Department of History
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I received an Osler Research Fellowship to conduct research on the formation of a "medical science of childhood" during the Enlightenment and the early nineteenth-century. I was looking for evidence concerning physicians' attempts not just to diagnose and treat the diseases of childhood but to guide the treatment of *all* infants and children, in other words, to bring the entire domain of infant and child care under the purview of medical doctors. Thanks to the fellowship I was able to spend two intense and productive weeks in August 2003 mining the excellent resources of the Osler Library. I examined the works of medical popularizers such as Nils Rosen von Rosenstein and Simon Tissot and of practitioners dedicated to the care of infants and children such as George Armstrong, William Buchan, and Alphonse Leroy. Other valuable sources of information I consulted included official and unofficial inquiries into the problem of infant mortality, French medical theses (several of which were devoted to the "physical and moral education" of children), and early nineteenth-century medical dictionaries. I am grateful to the selection committee for offering me this opportunity to collect raw material for my research project and to the Osler Library staff for all the help they provided during my stay. ❀

GRAND PRIX DU JURY

The City of Montreal and Heritage Montreal have awarded the *Grand Prix du Jury, Commerce Design, Montréal*, to the firm of Fournier, Gersovitz and Moss, for the restoration of the Gault Hotel in old Montreal. The firm recently won an additional prize for work done on the Canadian Heritage Quebec headquarters. The Osler Library was fortunate enough to have Julia Gersovitz plan and design the hugely successful renovations at the Osler Library.

Octavio Salcedo, the cabinetmaker for our project also won the *Prix de l'artisan*, awarded by the same body. Congratulations to everyone for these much deserved honours. ❀

THE LIFE AND WORK OF J.L.W. THUDICHUM, 1829-1901

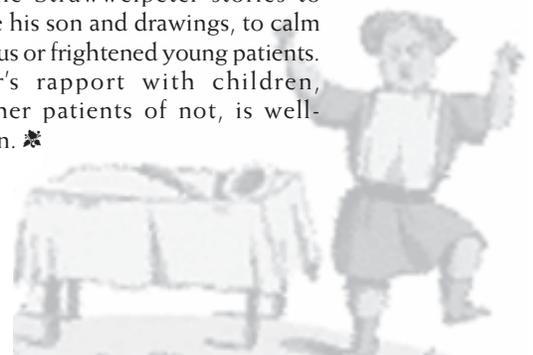
Dr. Theodore Sourkes, Chairman of the Standing Committee of the Osler Library, has just published *The Life and Work of J.L.W. Thudichum, 1829-1901*, No. 9 in the Osler Library Studies in the History of Medicine series. Dr. Sourkes first produced an exhibition on this versatile, talented and controversial doctor who published on a broad variety of topics, from a cookbook to the chemistry of the brain. During the course of his research, Dr. Sourkes unearthed a great deal of original material, producing an important, well illustrated and very readable medical biography. He also located works by Thudichum which we did not own but have since been lucky enough to purchase. Copies may be ordered from the Library or by our web page

for \$25, or \$20 for Friends of the Osler Library. Canadian Friends should remit in Canadian currency (the price includes GST), and American and international Friends in U.S. currency. The price also includes postage. ❀

"THE STORY OF AUGUSTUS WHO WOULD NOT HAVE ANY SOUP"

The lead article in our last newsletter, "Maysie's Memories..." brought the following letter from H.D. Vos in Amsterdam. "The song that Uncle Bill sang to soup-hating Gwyn was not his own invention. I recognize it immediately as "SupenKaspar" from Heinrich Kinderlieb's *Struwelpeter*. It is standard repertoire – has been for more than a century – for reciting to toddlers in my family while they are being fed." A quick search on the web revealed "The History of *Struwelpeter*," posted by Robert Godwin-Jones of Virginia Commonwealth University. "The Story of Augustus who would not have any Soup" http://www.fln.vcu.edu//struwel/kaspar_e.html. The first English edition was published in Leipzig in 1848 and it is hard to imagine the Osler family not being aware of it. The adventures of "Shockheaded Peter" (the English translation) are vintage Osler boys. What makes the poem even more pertinent is that the author was a doctor from Frankfurt, Dr. Heinrich Hoffmann, (1809-1894) who invented the *Struwelpeter* stories to amuse his son and drawings, to calm nervous or frightened young patients. Osler's rapport with children, whether patients of not, is well-known. ❀

The adventures of "Shockheaded Peter" (the English translation) are vintage Osler boys.



Struwelpeter

by Heinrich Hoffmann

The Story of Augustus
who would not have any Soup

Augustus was a chubby lad;
Fat ruddy cheeks Augustus had,
And everybody saw with joy
The plump and hearty healthy boy.
He ate and drank as he was told,
And never let his soup get cold.
But one day, one cold winter's day,
He threw away the spoon and screamed:
"O take the nasty soup away!
I won't have any soup to-day:
I will not, will not eat my soup!
I will not eat it, no!"

Next day! now look, the picture shows
How lank and lean Augustus grows!
Yet, though he feels so weak and ill,
The naughty fellow cries out still:
"Not any soup for me, I say!
O take the nasty soup away!
I will not, will not eat my soup!
I will not eat it, no!"

The third day comes. O what a sin!
To make himself so pale and thin.
Yet, when the-soup is put on table,
He screams, as loud as he is able:
"Not any soup for me, I say!
O take the nasty soup away!
I won't have any soup to-day!"

Look at him, now the fourth day's come!
He scarce outweighs a sugar-plum;

He's like a little bit of thread,
And on the fifth day he was dead.



MARGARET RIDLEY CHARLTON 1858-1931

by David S. Crawford
Emeritus Librarian
McGill University

Margaret Charlton came to the McGill University Medical Library in 1895 and was appointed to be the library's first Assistant Librarian in 1896. (The Librarian being, as was then common practice, a faculty member.) She

remained at McGill until 1914, when she moved to Toronto as Librarian of the Toronto Academy of Medicine.

In 1897 the British and Canadian Medical Associations met in Montreal and it is there that she first met William Osler. They became involved in the formation of the Association of Medical Librarians, founded in 1898 with the objectives of fostering medical libraries and maintaining an exchange of medical literature. Miss Charlton served as the Association's first Secretary from 1898-1903 and again from 1909-1911, after it had become (in 1907) the Medical Library Association. One of the other founding members, Marcia C. Noyes (who was to become the first woman and first non-physician President of the Association in 1933), writes of Margaret Charlton as follows:

"Miss Charlton was the one person who indirectly brought the Association into being from speaking with Dr. Osler. She had belonged to the American Library Association. Their problems were not our problems, and she felt lost and that time was wasted, yet she had striven for contact with those doing just the sort of work she was doing. And so she suggested to Dr. Osler that it would be a fine thing if the Medical Libraries could do the same thing the American Library Association was doing." (*Bulletin of the Medical Library Association*, 23 (1934): page 33.)

Miss Charlton was recently proposed to the Historic Sites and Monuments Board of Canada (HSMB) as a "person of national historic signifi-

cance" and in September 2003 the Minister of Canadian Heritage approved the Board's recommendation. A Government of Canada plaque honouring her accomplishments will be erected outside the McGill University Health Sciences (formerly Medical) Library in due course. There are already HSMB plaques on the McGill campus for Sir William Osler and Maude Abbott.

Further information is available at: <http://www.health.library.mcgill.ca/osler/charlton/index.htm> ❄

BIBLIOTHECA OSLERIANA

Oslerians will be pleased to learn of several developments at the Osler Library that will help to make the *Bibliotheca Osleriana* more available to scholars.

Firstly, the textual matter from the 1929 edition and its 1969 reprint have been made available on the Osler Library's web-site. This includes Sir William Osler's Introduction to the catalogue, the Editors' preface and Lloyd Stevenson's prologue to the reprint. This project was carried out by David Crawford, former Health Sciences Librarian and Curator and now McGill's first Emeritus Librarian. The Osler www site is at www.health.library.mcgill.ca/osler

Secondly, as was announced last year, the library has now completed adding catalogue records for all the printed books in the *Bibliotheca Osleriana* to the library's online catalogue MUSE. In addition to being able to locate items by the normal author, title and subject it is also possible to locate the record for a specific BO number by using a keyword phrase search (example: Osler 1234 – where 1234 is the BO number).

Thirdly, it is now possible to browse the BO records, in numerical order, in MUSE using the newly created *Bibliotheca Osleriana* browse index. To



use this one must go to the Osler Library's 'sub-catalogue' and select the *Bibliotheca Osleriana* browse index. Enter only the number e.g. 1234. You can go directly to the full MUSE catalogue or to the Osler sub-catalogue from <http://www.health.library.mcgill.ca/osler/Bibliotheca%20Osleriana/bib-osler/DSC-intro.htm>. The bulk of this major cataloguing project was done by Anneli Lukka, the Health Sciences Library's technical services manager, who also prepared the index to the *Osler Library Newsletter* a few years ago.



APPEAL TO THE FRIENDS, 2003-2004

by Pamela Miller
History of Medicine Librarian

The Osler Library sprang into action following our re-opening in December of 2002. Our newly refurbished research rooms filled up rapidly. The summer always brings researchers from out of town who need to spend extended periods of time working here and last summer was no different. The recipient of our Fellowship award arrived to consult our collection of paediatric books and her report appears in this newsletter. Now, with the return of students, the Wellcome Camera is generally full and both our new research rooms are in steady use. A new and much appreciated feature is the availability of our circulating collection in the evenings and on weekends, one of many happy results of our recent renovations. Several international conferences held in Montreal in the past months brought research visitors to see the newly renovated facilities and to use the collections. The first edition of Osler's *Principles and Practice of Medicine* continues to attract attention 111 years after it first appeared. It was consulted to verify for example, how Osler recommended treating diabetes before the

discovery of insulin and also of how Osler described anaemia. At the other end of the scale, we have had an artist, funded by an academic research grant, searching our early illustrated anatomy books gathering inspiration for a computerized work of art which he is in the process of preparing. Members of the Osler Society arranged for a tour and Dr. Rolando Del Maestro, Head of the Montreal Neurological Institute's Brain Tumour Research Centre brought the members of his laboratory to examine early works on neurology.

Apart from our rare collections, we are proud to be able to keep providing the latest books for our researchers as well as out-of-print material, thanks to your help which provides us with about 80% of our purchasing funds. This year, we have increased our spending for recent publications, rare books and archives, conservation and special projects. For example, we have added the *Correspondence of Robert Boyle*, edited by Michael Hunter, Antonio Clericuzio and Lawrence M. Principe, Pickering and Chatto, London 2001, contained in 14 volumes, edited, footnoted and in certain cases, translated. Each volume contains a glossary and biographical guide for easy reference. The final volume contains the index. The letters transport the reader back in time giving personal insight into the ferment of scientific research in the 17th century. These letters provide the context in which Osler's impressive collection of Boyle's works were published. *The Emergence of Neuroscience in the 19th Century*, edited by Nicholas J. Wade, Routledge/Thoemmes Press, 2000 comprises 8 volumes of reproductions of essential works which contributed to the advances in the knowledge of the brain during the course of the 19th century. The series includes the works of Charles Bell, Charles Blode on F.J. Gall, Johannes Muller, Alexander Bain, Jean Marie Charcot, David Ferrier and Charles Sherrington. Researchers interested in the history of homeopathy will be amazed by the recent multi-volume publication of Samuel Hahnemann's (1755-1853) patient records, including names, illnesses and

treatments. *Die Krankenjournal* is published in Heidelberg and edited by Heinz Henne. Today's privacy legislation makes publication and even retention of more recent medical records difficult to the point



that many institutions are reluctant or unable to keep these documents. Unfortunately, future historians may not have the same wealth of material at their disposal. In 1720, Heinrich Bass (1690-1754) published a highly illustrated book on bandages and bandaging, ...*Grundlicher Bericht von Bandagen...* which the Library was fortunate enough to purchase, thanks to our Friends. Working closely with Professor George Weisz of the Department of Social Studies of Medicine, we were able to bid successfully at auction in Paris on 41 rare books on paediatrics covering such subjects as early work on physical education for children, the effects of poverty on children and

Methods for bandaging the head from Heinrich Bass' Grundlicher Bericht von Bandagen..., Leipzig, 1720.



FIG. 52. — Jeu de la balle ovulaire.

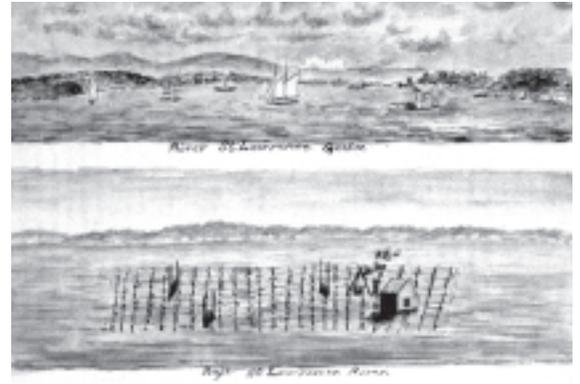
Taken from La cure d'exercice aux différents âges de la vie et pour les deux sexes, by Maurice Boigey, Paris, 1934

infant mortality. Proceeds from the auction (which took place on the day of the opening ceremonies at the Osler) went to UNESCO. Thanks to money from the Friends, it was possible to react quickly to the sale

from McGill in 1868 and at the age of about 40 embarked as ship's doctor on the Allan Line's "S.S. Pomeranian." During five voyages between Montreal and London, Wye painted 50 watercolours including scenes of

Lore and Healing, please do check the page, or write to us and we can send you the list.

Your generosity has enabled us to carry out special projects. This



A 'medieval' bath from *Le livret de l'enfant: (notes sur la santé des enfants)* by Armand Fumouze-Albespeyres, Paris, c. 1906.



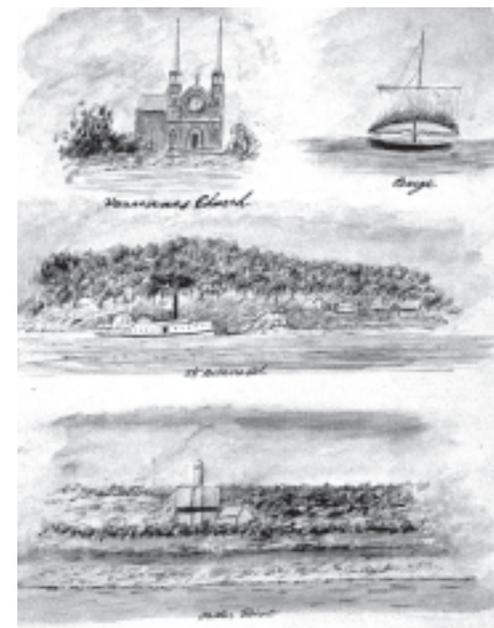
the St. Lawrence, Belle Island and Cape Breton Island, and sketches of the ship. Over the course of the next three years Dr. Wye crossed the Atlantic many times, employed by different shipping companies, visited the Holy Land and the East Indies and sketched as he travelled. Interestingly, at the beginning of each entry, he records his dreams, some in shorthand which keeps his most personal dreams away from all but the most determined researcher. Apart from observations on his surroundings and fellow passengers, Wye consistently records his religious activities and his attendance at church services, including the sermons. So far, no one seems to know much about his subsequent career, although possibly he practised in London after his seafaring days were over.

summer we hired a student to help to prepare brief entries to our Edinburgh theses and to make this information available on the public catalogue. This project is one of the many fortunate side effects of our renovations. When re-shelving and assigning new locations for our rare volumes, we discovered that 76 identical volumes had only one record on MUSE, "Edinburgh Theses," not very helpful! Years ago, close to 1000 theses dating from 1756 to 1827 were collected by the McGill Medical Library. This is a great collection, for its content and its

knowing that we have funds specifically for this purpose. We were also able to purchase, from another source, a number of turn-of-the-century books on tuberculosis and its treatment including the organization of tuberculosis classes, open-air treatment and a popular medical guide of 1880 about watering places and mineral springs of Germany, Austria and Switzerland.

Four illustrated diaries kept by John Henry Wye from 1888-1891 proved to be irresistible. Dr. Wye, the son of a farmer from near Brantford, Ontario, earned his medical degree

We continue to add books in many languages to our circulating collection, among them *La cartografia del cervello: il problema delle localizzazioni cerebrali nell'opera di David Ferrier, fra fisiologia, psicologia e filosofia*, by Carmela Morabito, published in Milan and *Los artistas valencianos de la ilustracion y el grabado biologico y medico (1759-1814)*, by Felipe Jerez Moliner, Valencia, 2001. Mary Simon regularly publishes a list of our new acquisitions on our web page and so if you want to know what else we have acquired along with *Cold Wars* or *Leechcraft: early English Charms, Plant*



biographical information. With this new information, if you want to know if and when (between 1756-1827) your ancestor graduated in medicine from the University of Edinburgh, all you have to do is type in the name of

Finally, conservation is still a priority and what a thrill it is to place a newly restored book back on the shelf and know that it is now in the best environment possible. Helkiah Crooke's *Mikrocosmographia, A*



THE WATERING PLACES AND
MINERAL SPRINGS
OF
GERMANY, AUSTRIA, AND
SWITZERLAND:
BY
EDWARD OTTRANK, M.D.
PHYSICIAN TO THE UNIVERSITY OF EDINBURGH
AND TO THE ROYAL INFIRMARY OF EDINBURGH.
LONDON:
W. ASHESON AND SONS, 11, ABchurch Lane, W. 1880.

the student under "author" in the MUSE catalogue and the individual's thesis appears (or does not if he did not attend). Our set is not complete, but it is excellent for the dates it covers. On the topic of theses, we continue to work our way through boxes of unbound theses, supposed duplicates of our bound set of French medical theses purchased in 1988. We have discovered that some of the theses are not duplicates and the only way to be certain that we have everything is to go through each box and verify each title, one by one.

description of the body of man. Together with the controversies thereto belonging, London, 1631, is a splendid example of a book restored to health and happiness. Treatment of this book included washing, resizing, flattening and removal of earlier repairs, aqueous deacidification, treatment of mould, re-sewing and re-backing the binding and finally preparation of its own custom made box. At some point, a previous owner decided to varnish the title page, which is now shiny and somewhat brown. After very careful testing to see whether it was possible to remove the varnish without harming the ink, it was decided to leave well enough alone. Helkiah Crooke (1576-1635) was physician to King James I.

This brief report launches our annual appeal. It is an attempt to convey the excitement of this extraordinary Library and to express our gratitude to you for your great generosity. ✿

The unvarnished title page from Helkiah Crooke's Mikrocosmographia, A Description of the Body of Man, London, 1631.

ΜΙΚΡΟΚΟΣΜΟΓΡΑΦΙΑ.
A
DESCRIPTION
of the Body of Man,
TOGETHER
WITH THE CONTROVERSIES
THERETO BELONGING.
Collected and Translated out of all the Best Authors of Anatomy, Effigies
cut out of Copper, Wax, Bones, and Anatomical Instruments, by HELKIAH
CROOKE, M.D. Physician to His Majesty King James the First.
Published by Wm. Asheſon and Sons, 11, Abchurch Lane, in London.
The second Edition corrected and enlarged.



Figure of Anatomy plates and figures, and printed title, Mikrocosmographia, London, 1631.

FRIENDS OF THE OSLER LIBRARY

The Library gratefully acknowledges the support it has received from Friends, both old and new, who have responded to the appeal for funds for the 2002-2003 academic year. Over the year, 231 Friends have given a total of approximately \$41,330 and they are listed below. Most of the contributions have come from Friends in Canada and the United States of America. However, very welcome contributions have also come from several other continents.

The appeal to the Friends for the 2002-2003 academic year concluded on May 31, 2003. Contributions received after May 31, 2003 will be recorded in the 2004 fall issue of the *Osler Library Newsletter*.

The appeal for the 2003-2004 academic year is made in this issue, No. 100-2003.

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Plate from Die Krankheiten der Brustdrüsen, by Theodor Billroth, Stuttgart, 1880



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