IN THIS ISSUE

READERS OF THE NEWSLETTER who attended the symposium in honour of the 75th Anniversary of the Osler Library on 16 October will remember with great pleasure the “virtual paper” delivered by Dr. Rick Fraser of our Department of Pathology. Dr. Fraser was in fact in Australia attending a conference at the time, but he had prepared a splendid animated PowerPoint with voice-over narration, about his latest discovery of Osler artifacts at McGill. We persuaded Dr. Fraser to transform his talk into the lead article for this number, and while it lacks the charming sound effects of the original (Emma Kirkby singing Handel!), it has preserved all of its excitement and interest. In the midst of his busy research career in pulmonary pathology, and his extensive publications on thoracic and lung diseases, Dr. Fraser has once again managed to unearth unexpected material evidence connected with Osler’s work as a pathologist at McGill.

OSLER AND THE TEACHING OF MICROSCOPY AT MCGILL UNIVERSITY

Imagine a summer afternoon in Montreal. It is 1877 and the weather is sunny and warm. A young bearded student named Fred Greenwood, dressed primly in tie and jacket, ascends the steps of the McGill University Medical Building, half wondering if he would be better spending his time in nearby Mount Royal Park. He enters a darkened hallway inside and descends to a small and rather cool basement room wherein several other young men are already seated at a long table. Greenwood takes his place and soon forgets any misgivings about his presence. In fact, there is a subtle but distinct air of excitement and anticipation in the room and he is secretly happy to be a part. He and his fellow students – all part of the McGill medical school class of 1878 – begin to cut and shape small paper boxes about 1 1/2 x 3/4 inches in area and 1/4 an inch in height. Into one of these, Greenwood pours a heated mixture of 4 parts paraffin and 1 part lard until it almost reaches the brim. Carefully, he lifts a small fragment of hard, brown tissue approximately 1/2 inch square from a jar containing Müller's fluid, dries it thoroughly with blotting paper and fixes it in the wax mixture near one end of the box by means of a sharp needle. Additional wax is poured to cover the specimen and it is set aside. Greenwood looks up, noticing the approaching figure of the master of the class. The latter leans over his shoulder, examining the newly cut tissue fragment lightly floating on the surface of a container of Müller's fluid. “Capital lad! Capital!” he exclaims to the delight of all around and to the particular pride of Greenwood. “A thin smooth section of liver! That will suit you well for the afternoon, and indeed for the rest of this week’s work.”

The story recounted above, although undoubtedly somewhat fanciful, is probably a very close approximation to what transpired at McGill in the early period of its transformation to “modern” medical teaching at the end of the 19th century. The “master of the class” was the young William Osler; the session attended by Greenwood was the first formal course in microscopy at the University.
The origin of Osler's interest in microscopy can be traced to his association with William Johnson at Trinity College in Ontario. The latter was an ardent amateur naturalist who took Osler and other students on field trips in the vicinity of the college, during which time specimens were collected for microscopic examination. In fact, the microscope Osler first used was likely one that belonged to Johnson. These field trips and the specimens derived therefrom opened up a new and exciting world to Osler. His enthusiasm is clear in a letter to his cousin Jennette, in which he stated—"... if you could only see the Algae, that green stuff that you see on ponds and stagnant water, it is so beautiful, the thousands upon thousands of small animals all alive and kicking that are in it."4

Osler had a similar relationship with James Bovell, who also taught at Trinity College and had a deep knowledge of natural history. He would gather specimens from sources such as ponds and bring them to Bovell's office where he would prepare slides and view them with his microscope, frequently in the company of Bovell and Johnson. "Often they would all (Johnson, Bovell and Osler) be immersed in microscopy at Bovell's on a Saturday morning, when a patient would show up and the pious doctor/scientist would curse the need to earn 'the damned guinea'.'"5 Osler’s first publications – in 1869 (Christmas and the microscope) and 1870 (Canadian Diatomaceae) – are clear testimony to both his interest in and proficiency at microscopy. It is difficult to know to what extent the attention to detail as well as accurate observation and description that are a necessary part of such microscopic investigations were an intrinsic part of his character or an early life experience that contributed to the presence of these qualities in later life.

In 1872, Osler traveled to England, where he registered for a course in practical physiology offered by Professor John Burdon Sanderson. His experience there furthered his microscopic knowledge in pathologic anatomy and in the nature of blood cells. It is likely that the more formal mechanism of learning entailed by these classes influenced his subsequent decision to establish a similar course at McGill.” Back in Montreal in 1875, Osler became involved in treating patients with small pox. He was paid approximately $600.00 for this service by the Montreal General Hospital, with which he bought 15 Hartnack students’ microscopes from Paris to be used in a practical course on microscopy and histology. The McGill Faculty decided to have a formal summer session in 1876 at which Osler gave the first such course. Presumably on the basis of his initial ideas as well as those developed while giving the course, he wrote a student manual which was published in 1882 (Fig. 1). 2

At the beginning of the manual, two courses related to microscopy are said to be offered, one in Normal Histology (further described as related to "the examination and preparation of the (sic) healthy tissues. Microscopes and reagents provided") and the other in Clinical Microscopy ("a course specially designed to meet the requirements of the practitioner, including examination of sputa, urine, blood in disease, tumours, etc."). In his introduction to the manual, Osler stated:

"A practical course on Normal Histology is advantageous in many ways: it affords you a practical acquaintance with the appearance and modes of preparation of tissues in health, it familiarizes you with the use of the Microscope, and it assists in the formation of those habits of accurate observation which should form an important part of your training. Keep in mind, from the outset that you are not to become Histologists, but Practitioners. So regard this course as one among many means to the end which should be ever before you, viz., proficiency in the diagnosis and treatment of disease. Once in active practice, not a day will pass without an opportunity of using the Microscope to assist in the diagnosis of obscure affections. It is of equal importance with the Stethoscope, the Ophthalmoscope and the Laryngoscope and, ignorant of its teaching you cannot practice with due credit to yourself, or with full justice to your patients. To become expert in its use requires time and patience—not more time, however, than, with judicious economy, the hard-worked student can well afford, and not more patience than should "possess the soul" of anyone who aspires to such a profession as medicine."2

The manual continues with a brief description of the microscope and its proper use, followed by a discussion of how to prepare tissues for microscopic examination, including hardening and softening solutions and cutting, staining and mounting of tissue sections. The student was said to need the following materials: a pair of small fine pointed scissors, fine pointed forceps, 2 needles in handles, a razor, a section lifter (made by flattening out the end of a bit of copper wire), glass slips and top covers, watch glasses (1/2 dozen), labels and a small box with trays capable of holding 100 slides.

It is the last-named that is the centre-piece of this story. Fred Stowell Greenwood was a member of the McGill medical class of 1878, of which there were 27 graduates. He undoubtedly partook in the histology course given by Osler in 1877, as evidenced by a wooden box containing 56 slides, many of which were probably prepared more or less...
The concept of disease was thus evident in the mind as an important part of the pathologic anatomy that had undoubtedly been formed in Osler’s mind in a time-honoured moment of daydreaming shared by many young students.

Most of the slides in the box illustrate normal histology, principally of humans. Examples include cerebellum (Fig. 4), spinal cord, esophagus and various portions of the gastrointestinal tract (Fig. 5), kidney, connective tissue (bone, cartilage and muscle), adrenal gland and cornea.

The appearance of the tissue sections and the handwritten labels on the slides suggest that most of these were probably cut and stained by Greenwood himself. Other slides bear labels indicating that they were purchased from a supplier (e.g., C. Seiler or John C. Hutcheson). There are also 13 slides of animal tissue, mostly diatoms and other invertebrates (Fig. 6), and 14 examples of diseased tissue. The latter include carcinoma of the breast (Fig. 7), tuberculosis, cirrhosis, pneumonia, and coal miner’s lung.

The link between normal histology and pathologic anatomy that had undoubtedly been formed in Osler’s mind as an important part of the concept of disease was thus evident in the material that was used by his students.

Osler’s manual includes some interesting descriptions that relate particularly to the practice of microscopy in Montreal. Two methods were identified for tissue hardening. Freezing is described as being applicable to most tissues, as well as being both speedy and convenient. “During the winter months in this country, it is only necessary to expose an organ to the air for a few hours, or place it over night between the double windows, and it freezes hard enough to be sectioned with a cold razor.”

Although picturesque, this was clearly not convenient for summer sessions, and a variety of other hardening fluids, including dichromate of potash, Müller’s fluid (dichromate of potash, sulfate of soda and water), chromic acid, and others are discussed. The preparation and use of tissue stains is also described in detail, the two best considered to be carmine and logwood. The slides were mounted in dannar (equal parts of mastic, dannar, chloroform and turpentine), Canada balsam (balsam fir sap and chloroform) or Farrant’s solution (equal parts glycerin and saturated arsenious acid containing gum arabic). Osler seemed to prefer the latter, offering his experience that “bits of fresh tissue stained in Beale’s carmine and mounted in glycerin will keep for years, if properly sealed at the edges. I have slides prepared in this way 12 years ago, as good now as when mounted.”

Unlabelled or delicately faded diagnostic reports, and reviews of bureaucratic correspondence were sifted and discarded as if they were the detritus of an archeological dig. The box was located at the back of a floor cupboard, buried by the accumulation of years. It caught my eye as an interesting piece of work and was transferred to a clean drawer in my new office, where it remained undisturbed for over a year. Eventually, while waiting for a resident to finish a case in the autopsy room one rainy summer afternoon in 2002, I looked more carefully and found the inscription of Greenwood on the inner lid. One wonders if the ghosts of Greenwood or even Osler himself might have been abroad with subliminal suggestions.

The first slide I examined was labelled “scirrhous carcinoma of breast” and showed an infiltrating duct carcinoma almost as clearly as some intra-operative frozen sections
performed today. From that point, it was only a few short sessions at the Osler library and some additional microscopy work to realize the nature and significance of the discovery. Inside the box is a small piece of somewhat faded paper on which has been typed:

"Donated to the pathology department library of the Montreal General hospital by Dr. Fred Greenwood. The property of his father – 1877."

Frederick Cyril Greenwood, Frederick Stowell’s son, graduated from McGill in Medicine in 1918. The date at which he gave the box to the pathology library at the Montreal General Hospital and the use, if any, to which the slides were subsequently put are not known.

In 2004, the surfaces of the slides were carefully cleaned and the tissue sections/smears were digitally imaged, mostly by Dr. Leena Narsinghani, who was working as a technician in the Pathology Department. Images of the original specimens, as well as many additional images remastered to "remove" dirt and enhance colour/contrast, were given to the Osler Library along with the box and its 56 slides at the celebration of the 75th anniversary of the Library, October 16th, 2004.

References
5. Ibid, page 57.
6. Ibid, page 86.
publication with many coloured illustrations that shows the depth and breadth of the Osler Library’s collections (see Notes for more information).

Osler Lecture by Professor Ian Hacking, Chair of Philosophy and History of Scientific Concepts, College de France, took place two weeks after our anniversary celebrations! Professor Hacking containing 500 illustrations and 7 essays exploring Henry Wellcome’s vast collection; The History of Drug Containers and their Labels by George Griffenhagen and Mary Bogard, published by the American Institute

Most of the credit for the success of the book must go to Professor Faith Wallis and to Carmen Jensen of Instructional Multimedia Services (formerly ICC) at McGill University for the content and stunning design. Alan Forster of MedIT was responsible for the outstanding photography, assisted by Lily Szczygiel Public Services Assistant at the Osler Library.

The seminar gave us the opportunity to show off our new display cases, designed by Anderson X-Design, a gift of the Class of Medicine ’78. A selection of books featured in the publication (as well as the histology slides) is on display and new selections from among the books will be displayed as time goes on.

Osler Day, including our annual meeting of the Board of Curators, the spoke to a packed Martin Amphi-theatre on “Analogue Bodies, Digital Minds”. The lecture was followed by the 83rd Annual Osler Banquet, during the course of which Professor of Anthropology Alan Young added to the hilarity of the evening by giving an anthropological introduction to the Osler silver, an integral part of the ceremony.

On top of planning for our celebrations, normal activities have continued throughout the year. Our purchase of current titles continues to increase. This year we ordered 1,154 new titles, 242 more than last year. It has been a particularly productive year for beautifully illustrated scholarly texts on the topic of medical collections including Medicine Man, The Forgotten Museum of Henry Wellcome published by the British Museum Press in 2003, of the History of Pharmacy in 1999; The Rise of Experimental Biology an Illustrated History by Peter L. Lutz, Humana Press, 2002; the controversial Professor Gunther von Hagens’ Body Worlds The Anatomical Exhibition of Real Human Bodies, Institute für Plastination, Heidelberg, 2002; Medizin in der Antike by Ernst Künzl, Stuttgart, 2002; L’Ospedale di Cremona: Medicina, Arte, Storia, edited by Gian Luigi Daccò and Mauro Rossetto, Milan 2001; and La Imagen del Cuerpo Humano en la Medicina Moderna (siglos XVI-XX) the catalogue of an exhibition sponsored by the Fundación Bancaja, Valencia in 1999. Stanley Burns published Sleeping Beauty II: Grief, Bereavement and the Family in Memorial Photography, New York 2002, with images taken from his own immense personal collection of medical photographs.

Dr. C. H. Calm & Mrs. Eve Osler Hampson, Dr. Susan Kelen (grand daughter of W.W. Francis, the first Osler Librarian. 83rd Annual Osler Banquet “To Osler”

Professor Faith Wallis autographing a copy of 75 Books while Vice-Principal Toni Masi looks on.
This year we have, for a variety of reasons, spent more on rare books than in quite some time, purchasing 115 rare works to add to existing strengths in our collections including D.J. Larrey’s Relation Historique et Chirurgical de l’Expédition de l’Armée d’Orient, en Égypte et en Syrie, Paris, 1803. This volume plus Bernhard Siegfried Albinus’ Dissertatio secunda, de sede et caussa coloris Aethiopum et caeterorum hominum, Leiden and Amsterdam, 1737, were auctioned at Swann’s. The auction included medical books from the Maryland State Medical Society. Osler played a leading role in reviving this Library, founded in 1830, which by 1892 was facing financial and management difficulties. Osler helped find new housing, insisted on the employment of a trained Librarian, Marcia Noyes and contributed the first $1000 towards its endowment fund. The temptation, therefore, to purchase works to fill gaps in our collection plus two items donated by Osler to the Library, proved hard to resist. Osler acquired the Albinus for the Library from the Frick Fund while in Europe in 1901. It contains a rare coloured plate by Jan L’Admiral showing the skin and nails of a black woman. In July, 1919, Marcia C. Noyes, Librarian of the Medical and Chirurgical Faculty of the State of Maryland wrote in the Johns Hopkins Hospital Bulletin:

The name of Osler is writ large in the history of the library from the time of his first connection with it in 1890... Dr. Osler was elected a member of our Library Committee in 1892 in which year the committee reported

As usual, donors have been generous with gifts from their own collections for which we are so very grateful.

old books in 1829 it grew to 14,590 volumes in 1905, and has grown steadily ever since.

Purchases from other sources include: Joseph Hyrtl’s work on the blood vessels of the human placenta, Die Blutgefasse der menschlichen Nachgeburt in normalen und abnormen Verhaeltnissen, Vienna, 1870, and a mid-16th century work on physiognomy, a popular research topic these days, entitled Gulelme Gratoroli Bergomatis atrium & medicin[a]e doctoris... Lyons, 1558. This book contains manuscript notations and some words and sentences may have been crossed out by a contemporary censor. We have not forgotten dental history and have purchased, Essai sur l’anatomie et la physiologie des dents, ou, Nouvelle théorie de la dentition, by A. Serres, Paris, 1817. The medical recipes of the late Doctor Taylor of Innerkip, Woodstock, Ontario, 1885 is a rare Canadian publication which we were delighted to add to our holdings.

As usual, donors have been generous with gifts from their own collections for which we are so very grateful. Dr. William Feindel donated four books by Thomas Willis: Diatribe duae medico-philosophicae... London, 1660 and the 1663 Amsterdam edition of the same work, Pharmaceutice rationalis. Sive diatribe de medicamentorum operationibus in humano corpo, Oxford, 1679 and The London practice of physick, or, The whole practical part of physick contained in the works of Dr. Willis... London, 1685, further strengthening the Osler’s Willis holdings. Dr. Robert Mitchell presented us with Friderich Hoffmann’s, Consultationum et responsorum medicinai centuriae tres... Venice, 1737. Maureen Crane donated Electricity and the Methods of its Employment in removing Superfluous Hair and Other Facial Blemishes, by P.S. Hayes, Chicago, 1904. Dr. Theodore Sourkes donated The Book of Snuff and Snuffboxes, M.M. Curtis, New York, 1935. Professor Jacques Bernier presented us with Maladies, Médecine et Société au Canada, Société Historique du Canada, 2003. Dr. Rolando Del Maestro presented us with Leonardo da Vinci, Master Drafsman, edited by Carmen C. Bambach, New York, 2003, the catalogue of the exhibition held at the Metropolitan Museum of Art in 2003.

We have purchased microfilm and microfiche notably, Sex & Sexuality, 1640-1940, from literary, medical and sociological perspectives taken from the Wellcome Institute for the History of medicine and the Bodleian Library, and 2 units from lincunabula: the Printing Revolution in Europe, 1455-1500, edited by Lotte Hellinga, Woodbridge, Conn.

Donations to the archives consist of 10 cm. of archives presented by the late Irene Kon of family letters and documents concerning her family’s close friendship with Dr. Norman Bethune. Karen Molson donated photographs of the well-known Montreal neurologist Dr. Colin Russel and correspondence
between Dr. Russel and his parents during World War I.

In this 75th anniversary year, we purchased 7 letters from Osler to Miss Reiba Thelin between June and October, 1904 from a collector in New York. Osler was in the process of helping Miss Thelin set up her practice as a tuberculosis nurse and although brief, the correspondence is informative and amusing.

We can now search the entire inventory of the Cushing papers thanks to the devotion of two casual employees whose work stretched over a five year period, Caroline Cholette, now working for Hydro Quebec and Michelle Diamond, currently working for a film company. As many of you know, the Cushing papers are the best archival resource for Osler’s life and are copies of correspondence amassed by Harvey Cushing in the course of producing his award-winning biography of Sir William Osler. We are working on plans to make these summaries available via our web page. We began the project seven years ago with AMS Hannah support through their archive internship programme, which allowed us to process the Osler correspondence from his Oxford days. A summary of each letter was entered on an Access database. As time went on, we were able to work back to earlier letters from Osler’s pre-Oxford period. Now summaries of the entire correspondence can be searched using the database, a huge time saver for the staff.

Concerning staffing, our search committee has been busily interviewing candidates for the position of Assistant History of Medicine Librarian and we are hopeful that the position will soon be filled. One more person will certainly relieve the demands on the Library staff which seem to turn into a deluge at the least provocation.

This brief report launches our annual appeal. Echoing the enthusiastic student (and our search rooms are full of students) it is a Library to be proud of thanks to the support of our friends. *

---

**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 2003-2004 academic year. Over the year, 212 Friends have given a total of approximately $34,000 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 for the 2004-2005 academic year is made in this issue, No. 102-2004.

**Contributing Friends**

- Anne G. Abel
- Ronald Graham Barr
- Jacques Bernier
- J. Walker Butin
- Library, Canada Science and Technology Museum
- Robert Campbell
- Richard Cherry
- Jack Cohen
- David S. Crawford
- Peter S.B. Digby
- Donald E. Douglas
- Duke Medical Center Library, Duke University
- Paul G. Dyment
- Robert Roy Forsey
- Thomas Emmett Francoeur
- Toby Gelfand
- Roger Ghys
- John T. Golden
- Rosemary Haddad
- James F. Hammersten
- H. Alexander Heggtveit
- Robert Jackson
- Ruby G. Jackson
- Harriet Joseph
- Peter B. Kang
- Marian G. Kelen
- Camilo Larrain
- Douglas W. MacEwan

**Supporting Friends**

- Jack B. Alperin
- Lawrence K. Altman
- J. Ronald Bayne
- Gerald Beasley
- Gregory Kent Bergey
- Stuart S. Burstein
- Carmine J. Capalbo
- Alan J H. Coffey
- Eugene Conner
- David F. Copeland
- Audrey Copping
- June R. Cumberland
- Richard A. Carrie
- N.A. D’Amato
- Richard B. Davis
- Stacey B. Day
- Andrew A. De Szalay
- Patrick M. Doran
- Richard B. Davis
- Stacey B. Day

---

75 Books from the Osler Library

...a novel approach to the history of medicine... makes a great gift for Oslerians, doctors and book collectors in general.
Notes from the Osler Library

Dr. William Feindel
Congratulations to Dr. William Feindel, Honorary Osler Librarian who has just been named "un Grand Montrealais" by the Montreal Board of Trade.

Osler Library
Research Travel Grant
Dr. Karim Mukida, neurosurgery resident from the University of Toronto, received our grant this past year, visiting the Osler in July to carry out his research on Wilder Penfield's neurocytology research in Spain in 1924.

It is once again, time to send in applications for 2005. The deadline for submission is December 31st 2004. For all the details please go to http://www.health.library.mcgill.ca/osler/travelgrant.htm

75 Books from the Osler Library
This stunning 182 page, heavily illustrated book is available for sale at the Osler Library. Beautifully designed, filled with expert commentary, it provides a novel approach to the history of medicine and makes a great gift for Oslerians, doctors and book collectors in general. Copies may be ordered from our web page (http://www.health.library.mcgill.ca/osler/publications.htm#75) for $40. 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.

E-mail List of Friends of the Osler Library
We would like to establish an e-mail list of our Friends in case there is information we want to send out quickly. If you would like to be on that list, please send an e-mail to lily.szczygiel@mcgill.ca.