Nevada State Veterinary Association. Reno, Nev. July 14, 1926. Dr. Edward Records, Secretary, University of Nevada, Reno, Nev.

Illinois State Veterinary Medical Association. Springfield,, Ill. July 14-15, 1926. Dr. W. H. Welch, Secretary, Lexington, Ill.

Maryland State Veterinary Medical Association. Hagerstown, Md. July 15-16, 1926. Dr. E. M. Pickens, Secretary, College Park, Md.

Western New York Veterinary Medical Association. Batavia, N. Y. July 16, 1926. Dr. F. F. Fehr, Secretary, 243 So. Elmwood Ave., Buffalo, N. Y.

Kansas City Association of Veterinarians. New Baltimore Hotel, Kansas City, Mo. July 20, 1926. Dr. J. D. Ray, 400 New Centre Bldg., Kansas City, Mo.

North Dakota Veterinary Medical Association. Fargo, N. D. July 20-21, 1926. Dr. H. L. Foust, Secretary, State College, Fargo, N. D.

Minnesota State Veterinary Medical Association and Short Course for Veterinarians. University Farm, St. Paul, Minn. July 22-23, 1926. Dr. C. P. Fitch, Secretary, University Farm, St. Paul, Minn.

Saskatchewan, Veterinary Association of. University of Saskatchewan, Saskatoon, Sask. July 22-23, 1926. Dr. R. G. Chasmar, Secretary, Hanley, Sask.

Missouri Valley Veterinary Association. Kansas City Athletic Club, Kansas City, Mo. July 27-28-29, 1926. Dr. E. R. Steel, Secretary, Grundy Center, Iowa.

Montana Veterinary Medical Association. Helena, Mont. July 30-31, 1926. Dr. Hadleigh Marsh, Secretary, Livestock Sanitary Board, Helena, Mont.

Northwestern Veterinary Medical Association. Victoria, B. C. Aug. 2-3-4, 1926. Dr. W. Graham Gillam, Hon. General Secretary, Cloverdale, B. C.

Connecticut Veterinary Medical Association. Bridgeport, Conn. Aug. 4, 1926. Dr. Geo. E. Corwin, Secretary, 11 Warrenton Ave., Hartford, Conn.

Ontario Veterinary Association. Prince George Hotel, Toronto, Ont. Aug. 11-12, 1926. Dr. H. M. LeGard, Secretary, 223 Main St. N., Weston, Ont.

American Veterinary Medical Association. Phoenix Hotel, Lexington, Ky. Aug. 17-18-19-20, 1926. Dr. H. Preston Hoskins, Secretary, 716 Book Bldg., Detroit, Mich.

OSLER AND VETERINARY MEDICINE

By WARD GILTNER, *East Lansing, Michigan*

Dean, Division of Veterinary Science, Michigan State College

Sir William Osler, according to Dr. Wm. H. Welch, 'held a dominant position in medicine and at the time of his death he was probably the greatest figure in the medical world; the best known, the most influential, the most beloved.'

He was born and educated a Canadian; became famous as an American professor at Hopkins, spent his declining years as Regius Professor of Medicine at Oxford, dying as he had lived —a thorough Briton.

Harvey Cushing has done a great thing for our generation by affording us an opportuntiy to become acquainted with this remarkable man in a two-volume life of Sir William Osler.* R. M. Yerke says, in the *International Book Review*, "The life history of a noble man and a great physician. My advice regarding this life of Dr. Osler is definite and unqualified. 'Read it.' From the reading . . . I arose refreshed, strengthened, inspired to do better living." In the New York *Herald-Tribune*, Stuart P. Sherman says, "If wishing could do it, I would wish *The Life of Sir William Osler* into the hands of every man, woman and child who reads the six best-selling novels. It is an immense and wonderful book."

For the benefit of those veterinarians who may not have an opportunity to read *The Life of Sir William Osler*, but perhaps more particularly for my own pleasure, I have tried to set down a few things to illustrate Osler's interest in veterinary medicine.

Cushing relates:

> . . . It was during the spring of 1870, despite all of his accumulating interests, that Osler began visiting the veterinary hospital, possibly drawn there in the first place by his interest in comparative parasitology and in the expectation of adding to his growing collection of entozoa—an expectation fully realized. (Quite consistent with this were his subsequent associations with the veterinarians at McGill.) (vol. 1, pp. 63-64)

And later:

> . . . It will be recalled that while in Toronto he was wont to visit veterinarians in connexion with his study and tabulation of animal parasites, and it is evident from the titles he first uses at this time (' Professor of Physiology in the Veterinary College, Montreal' and 'Vice-President of the Montreal Veterinary Medical Association') that his interest in comparative pathology was still sufficiently alive to have induced him to ally himself

*Dr. Harvey Cushing, professor of surgery in the Harvard University School of Medicine, was recently awarded the Pulitzer prize for 1926, amounting to $1.000, for the best American biography teaching patriotic and unselfish service to the people. Editor.

with this other school. (The veterinary students attended the lectures of Dawson on botany, Girdwood on chemistry and Osler on the 'institutes.' Subsequently the Veterinary College, which had been purely a private venture, became officially a faculty of McGill and on Osler's suggestion was named 'The Faculty of Comparative Medicine.') Accordingly on January 27th he had lectured at the Montreal Veterinary College and was somewhat apologetic for his lack of preparation, though his subject was at his tongue's end.

Several papers on comparative pathology were published during the next few years. In the first of them ('Verminous Bronchitis in Dogs with a Description of a New Parasite.' The *Veterinarian*, Lond., June, 1877, i, 387. His introductory paragraph begins: 'Early in the month of January I was asked by Principal McEachran, F. R. C. V. S., to aid him in the investigation of a disease which had broken out among the pups at the kennels of the Montreal Hunt Club, and which was believed to be of a pneumonic nature.'), read before the Veterinarian Association on March 29th, he described a form of bronchopneumonia in dogs due to a previously unknown parasitic nematode. This he incorrectly names, having mistaken its generic identity, and it was subsequently renamed by Cobbold in 1879 the *Filaria Osleri*. (Osler's original designation was *Strongylus canis bronchialis*, but the nematode had none of the characteristics of Strongylus. Indeed, despite Cobbold, it has so little in common with Filaria that recently a new genus, Oslerus, has been proposed for it. Cf. 'Two New Genera of Nematodes, &c.', Maurice C. Hall. *Proceedings of the U. S. National Museum, Washington*, 1921.) He theorized regarding the mode of infection, and probably lack of time prevented him from subjecting his views to the experimental test. Of his other papers on comparative pathology, the more important dealt with hog cholera, echinococcus, bovine tuberculosis, and the parasites in the Montreal pork supply. Until his last days Osler kept in touch with Duncan McEachran, even though their lines of work greatly diverged; and it is perhaps noteworthy that only a year before his death he wrote a review of General Mennessier de la Lance's 'Essai de Bibliographie Hippique,' a volume which had come to his attention. In the last paragraph of the article which appeared in the *London Veterinary Review*, he refers to the fact that he had been a 'former teacher in a Veterinary College' and that therefore felt permitted to offer the author on behalf of the profession in Great Britain congratulations on the completion of his great work. (vol. i, pp. 151-152)

It is inspiring to read that on our veterinary faculties there has been listed the name of this great figure in medicine. A little further, Cushing writes:

On January 23rd, before the Pathological Society in New York, Osler presented the results of one of his more important studies in the domain of comparative pathology. ('On the Pathology of so-called Pig Typhoid.' *Veterinary Journal and Annals of Comparative Pathology*, Lond., 1878, vi, 385. Instead of his actual title, viz. 'Professor of the Institutes of Medicine,' he gave 'Professor of Physiology and Pathology in McGill University and the Veterinary College, Montreal.') He had chanced to hit upon a most baffling epidemic disease affecting hogs, knowledge of which at the time was most meagre and for that matter still remains so, for it appears to be one of those infectious disorders due to what is called a filterable virus, that is, an organism too small for microscopic observation. A trained microscopist, a keen observer and ardent pathologist, had Osler undertaken as Pasteur did just at this time (1877) the study of a simpler disease such as anthrax, the causative agent of which even unstained is easily seen in the blood when examined under the microscope, he might in all possibility have been led to make equally important discoveries. But he had come under Bastian's rather than Pasteur's influence; he never really became an adept in bacteriological technique; and, by the time Pasteur's views had become accepted, had moved on to other fields than experimental medicine and comparative pathology—fields moreover which engrossed him completely.

Pasteur had written to Bastian in July, 1877: 'Do you know why I desire so much to fight and conquer you? It is because you are one of the principal adepts of a medical doctrine which I believe to be fatal to progress in the art of healing—the doctrine of the spontaneity of all diseases.' Naturally enough the younger generation sat back and watched the tilting of these giants, and, until Tyndall entered the lists on Pasteur's side and finally Lister, English-trained youths were naturally imbued with the ideas of spontaneous generation, as Osler seems to have been when he saw the blood platelets apparently transform into bacteria.

This particular epidemic among hogs, which Osler undertook to study, had originally been regarded as a form of anthrax, though latterly the view prevailed that it was the counterpart in hogs of typhoid fever in man, the bacterial origin of which was of course as yet unknown. 'Having in the course of my reading become acquainted with this unsettled state of matter,' Osler wrote, 'I gladly at Principal McEachran's suggestion investigated a local epizooty which had broken out near Quebec in a drove of 300 hogs, hoping that by a series of independent observations the truth of one or the other of these views might be confirmed.' And in the course of his inquiry he not only studied the postmortem appearances of the disease, but performed a few successful experiments by transfer inoculation, drawing the conclusion that the disease bore no relation to typhoid or anthrax, but that it was dysenteric in character though without parallel in human dysentery—a view sustained today, the term 'hog cholera' having been substituted for 'pig typhoid.' (vol. i, pp. 164-165)

In speaking of Osler's introductory lecture to the medical students on the reopening of school, Cushing states in a footnote:

On this same date (October 1, 1878) Osler was giving the opening lecture before the students of the Montreal Veterinary College under the title, 'Comparative Pathology,' a report of his remarks *in extenso* being given in the *Veterinary Journal*, Lond., 1878, vii, 405. After defining pathology as the physiology and microscopical anatomy of disease, he referred to the Contagious Diseases (Animals) Act of 1878 as unjust to the cattle trade and warmly advocated inspection as a protection against hog cholera, Texas fever, and so on. (vol. i, p. 171)

Osler not only interested himself in comparative pathology but evidently made his students assist him as the following embarrassing situation, related by Cushing, indicates:

. . . Incidentally the students were used by the professor from time to time for his own dire purposes, and Ogden one day was sent to perform an autopsy on a horse that had died from some mysterious nervous ailment. It necessitated the removal 'intact and in one piece' of the animal's brain and spinal cord, a difficult enough procedure even for one more experienced, and it took Ogden nearly all day. Not knowing how to dispose of the trophy, it being late afternoon, he took it home and proudly laid it out full length in the family bath-tub, where it unfortunately was first discovered by Buller, who was furiously angry. Osler luckily came in in time to save from harm both specimen and student, and pacified the 'landlord' by agreeing to take the first bath. (vol. i, pp. 176-177)

Cushing reveals another of Osler's traits:

It cannot be unduly emphasized that Osler throughout his life practised what he preached in this respect, and regarded the attendance at medical meetings as one of his obligations, an obligation, moreover, of which he made a pleasure. (vol. i, p. 188)

In 1881 Osler attended a great international medical congress in London. He gives an account of this most important meeting but:

He fails, however, to mention his own important paper before the Pathological Section, on Endocarditis, a subject he was still pursuing; nor does he speak of the session on comparative pathology and the fact that he was a delegate of the Montreal Veterinary Association to the British National Veterinary Congress, whose session he attended on July 20th and of whose proceedings on his return to Montreal he gave a *resume* on October 27th at one of the fortnightly meetings of the Montreal association. (vol. i, p. 190)

As further evidence of Osler's interest in comparative pathology, Cushing recalls:

His interest in parasitology, which, as the natural outcome of his early microscopic studies with Johnson and Bovell. had led him to study and tabulate all the parasites he could identify in man and animals, was still in evidence. He rarely failed to report before one of the societies any chance post-mortem finding which had some bearing on the general subject. Thus on February 17th before the 'Medico-Chi.' he showed an example of bronchiectasis in the lung of a calf, a case of glanders, also a rare specimen of verminous aneurysm from a horse's aorta; and later in the year an example of *Amphistoma conicum* from the paunch of a cow. All this merely serves to indicate his great interest in the study of animal diseases, to satisfy which he continued to hold his position in the Veterinary School.

Throughout this year, in conjunction with one of the veterinary students, A. W. Clement,* he was engaged in an exhaustive study of the parasites of the pork supply of Montreal. In their report, ultimately presented before the Board of Health, January 12th, 1883, they emphasized the necessity of strict governmental supervision over the sources of food supply, and of meat inspection in particular. They dealt particularly with the three more common parasites transmissible to man—trichina, cysticercus and echinococcus—and the amount of labour expended on their studies is indicated by the statement that 1037 hogs were examined, chiefly at the Dominion abattoir, during a period of six to eight months. When this is gauged with what was said in the section on Trichina, namely that in his human autopsies numbering between 800 to 900 Osler had found four cases, it can be seen that their material and experience enabling them to draw comparisons between animals and man, was large. This timely investigation was of great public service and was a contribution to the health and hygiene of the community which probably had more weight as coming from a physician holding no political office than had it originated from some other source. As a by-product of this study he took up, as he had already done with trichinosis, the subject of echinococcus infection in man, being a parasitic disease transferred more commonly from dog to man and a rare condition except in Iceland and Australia. On this quest he visited the museums of New York, Philadelphia, and Washington in search of specimens.

He was engaged at this same time in another piece of work of similar nature, though it pertained to a purely animal disease produced by a parasite, namely, cestode tuberculosis. (Presented before the Montreal Veterinary Association, January 19, 1882. *American Veterinary Review*, Apr., 1882, vi, 6-10.) This study was also carried out in conjunction with Mr. A. W. Clement, and they recorded a successful feeding experiment with the production of the disease in the calf—an experiment undertaken to afford the students of the Veterinary College an opportunity of studying the development of the symptoms. (vol. i, pp. 197-198)

It was at this time that Koch made his epochal announcement of the discovery of the tubercle bacillus before the Physiological Society in Berlin (Mar. 24, 1882), as recorded by Cushing:

*The A. W. Clement here referred to as a veterinary student was graduated from McGill in 1882. He was connected with the institution in a teaching capacity, from 1882 to 1885. He then studied abroad for several years and after his return to America was attached to Johns Hopkins University, engaged in research work. He later entered the Bureau of Animal Industry, was state veterinarian of Maryland, and served as president of the American Veterinary Medical Association, 1898-99. He died March 3, 1901, in his 44th year. Editor.

Koch's celebrated address ended with the statement that when the idea of the infectious nature of tuberculosis had taken root among physicians the means of warfare suited to contend with this enemy would be elaborated. It was along these lines that Osler's subsequent work in connexion with tuberculosis mainly lay, and in later years he became one of the chief leaders in the antituberculosis crusade. But even prior to Koch's pronouncement he had seen the light. For as Dr. Duncan McEachran recalls ('Osler and the Montreal Veterinary College.' *Journal of the Canadian Medical Association*, 1920), at one of the early meetings of the 'Medico-Chi.' after he had given an address on the contagious character of bovine tuberculosis, Osler expressed the opinion that tuberculosis was spread by contagion in the human species also and advocated a campaign to popularize this view. But it was urged by others that this would merely cause public alarm and that the apparent hereditary character of the disease could sufficiently well account for its occurrence in the several members of a family. (The idea of contagion did not reach the public for another twenty years, not until after the Tuberculosis Congress in London in 1901, on which occasion McEachran was the representative of Canada, and Osler of the United States.)

. . . On the heels of this gathering, the Canadian Medical Association, of which he was still the General Secretary, held its annual meeting in Toronto, where he not only read his paper on Echinococcus Disease, but also gave a demonstration of the newly discovered bacilli of anthrax and tuberculosis. (This paper 'On Echinococcus Disease in America,' was a statistical study of sixty-one cases gathered from various sources, together with his own personal observations. He signs himself as 'Lecturer on Helminthology, Montreal Veterinary College.' Cf. *American Journal of the Medical Sciences*, Oct., 1882, lxxxiv, 475-80.) (vol. i, pp. 200-201)

Cushing also reveals Osler's interest in comparative anatomy:

During this autumn and the winter of 1883-4 the usual miscellany of case reports was read before the 'Medico-Chi.,' including the exhibition of further postmortem specimens from the Veterinary College. Before the naturalists, too, on October 29th, he gave a paper on the comparative anatomy of 'The Brain of the Seal,' illustrated by many prepared specimens of the brains of various animals. (vol. i, p. 207)

In 1884, from Leipzig, Osler writes:

. . . I go there (Cohnheim's Laboratory) at 8 a. m. work until 10:30 at Bacteria, then go to Leuckart's laboratory until 1 p. m. when I dine and return to Weigert or go to Zurn's assistant at the Veterinary School.

A very significant sentence, but of course not especially significant to veterinarians, appears in this same letter.

. . . Lord! don't I wish I could live all the year around for 120 marks a month (beer included). (vol. i, p. 216)

Cushing resumes:

During the short span of years since his McGill appointment he had stirred to activity the slumbering Medico-Chirurgical Society; he had founded and supported a students' medical club; he had brought the Veterinary School into relation with the University; he had introduced the modern method of teaching physiology; had edited the first clinical and pathological reports of a Canadian hospital; had recorded nearly a thousand autopsies and made innumerable museum preparations of the most important specimens; he had written countless papers, many of them ephemeral it is true, but most of them on topics of live interest for the time, and a few of them epoch-making; he had worked at biology and pathology both human and comparative, as well as at the bedside; he had shown courage in taking the small-pox wards, charity in his dealings with his fellow physicians in and out of his own school, generosity to his students, fidelity to his task; and his many uncommon qualities had earned him popularity unsought and of a most unusual degree. (vol. i, p. 228)

Osler filled the chair of Clinical Medicine at the University of Pennsylvania from 1884 to 1889. The year of his arrival in Philadelphia also marked the opening of the University of Pennsylvania School of Veterinary Medicine. Cushing states:

> . . . Just as in Montreal it was seldom that he did not have some interesting specimen to show, some new technical method to demonstrate, or some subject of interest to present in relation to comparative pathology; for though the opportunity in Philadelphia was less, since the Veterinary Department of the University had only just been established, he took advantage of every possible occasion to pursue his studies of disease in the lower animals. (vol. i, p. 250)

Showing that his mind was always open to matters of comparative pathology, he writes in 1885 to a Canadian confrere, "That glanders case will make an interesting communication. I hope Howard has saved some specimens."

Osler was a tireless writer, a contributor to the medical press, both of scientific papers and editorials. His biographer speaks of this:

> . . . Many of the editorials, like those on the recent discoveries concerning actinomycosis and hydrophobia, are an indication of his continued interest in the diseases common to man and animals. None of the newer subjects escaped him, and many of the editorials were reviews of the more recent papers in the leading French and German periodicals to which he had access at the College of Physicians. One may identify many of the editorials by internal evidence, as that on the 'Death of Dr. Wm. B. Carpenter' (*Medical News*, Nov. 14, 1885, xlvii, 546), whose name he couples with that of Huxley and Owen and whose works on Comparative Pathology and the Microscope, were often consulted in his days at Weston with 'Father' Johnson. (vol. i, p. 262)

He was a very thorough student of the blood, being one of the foremost in the profession to take up the study of malarial parasites, as the following comment of Cushing indicates:

> . . . Haematozoa had also been seen in fish, in rats, in birds; and he gave an account of Surra, a disease affecting the horses, mules, and camels in India, which his friend Griffith Evans had recently described in the London *Veterinary Journal*, attributing it to a blood parasite. (In the copy of Evans' "Report on 'Surra' Disease" (1885) in Osler's library, he has written: 'When I was a student with Bovell at Toronto, 1868-9, Griffith Evans, who was stationed there as veterinary surgeon to the Artillery, was much interested in the microscope and frequently came to Bovell's room to help in the preparation of specimens. He had previously been stationed at Montreal, where he had graduated in medicine from McGill in 1864. When serving in India he made the discovery of the parasites in the blood in Surra—the first trypanosome disease to be described. On his retirement he went to Bangor, where he still lives, a hale, hearty octogenarian. He sent this, and a book of photographs of famine scenes in India, 8 Jan., 1918.') Osler regarded the flagellate form as the adult condition of the malarial plasmodium; but it remained for one of the Johns Hopkins students, W. G. MacCallum, while studying malaria in birds, to first observe the conjugation of the organisms and thus fully to explain their flagellate form. (vol. i, p. 274)

Again:

> . . . Osler stated that he had made a series of observations on the blood of fishes and birds, in view of the statement that some of the forms described by Laveran had been found in the blood of carp and some water-

fowl. Professor Baird of Woods Hole had offered him facilities for this work and had furnished him with forty-five carp in which he had failed to detect organisms. Nevertheless, in the blood of a goose sent him from Ontario by Dr. G. A. MacCallum (father of his pupil W. G.) with the statement that the bird had malaria, he had found one or two pigmented bodies. They were not numerous, however, nor was the temperature elevated; nor, so far as could be made out, did the goose have chills. (vol. i, p. 279)

In 1889 Osler, leaving the University of Pennsylavnia, became attached to the Johns Hopkins Hospital, where for fifteen years he made medical history. Cushing records:

. . . Thus in December there appeared the first number of the *Johns Hopkins Hospital Bulletin*, which was to play such an important part in bringing the activities of the hospital group before the medical world. The first number contained a preliminary account of Welch's studies on hog cholera, and a further statement from Osler on the value of Laveran's organism in the diagnosis of malaria, . . . (vol. i, p. 322)

At a meeting of the Association of Physicians, in Washington, in 1893, Osler took a prominent part in the program, which, of course, dealt largely with human medicine. Tuberculosis was beginning to receive some consideration but, as Cushing says:

Unquestionably, however, the most notable communication was that made by Theobald Smith on the 'Texas Cattle Fever' in its relation to protozoon diseases. Through his results had previously been published by the Government Bureau of Animal Industry, this was the first time his epochal discovery —a pathogenic micro-organism which could be transmitted only through the agency of an intermediary host (in this case the cattle tick)—was brought before the profession. The paper was briefly discussed by Welch alone, and one wonders whether the great significance of the discovery, which was to be followed by a succession of others—the mosquito in malaria and in yellow fever, the tsetse fly in sleeping-sickness, the flea in plague, the louse in typhus —could then have been fully taken in by the majority of Theobald Smith's auditors. (vol. i, p. 382)

While of course Osler had nothing to do with the discovery of the cause of Texas fever, it is interesting to note that this discovery and many others, as years went on, were announced in the medical press and in meetings where he had an opportunity to discuss and encourage by his unusually sympathetic attitude toward all things of interest to medicine, whether human or veterinary. He certainly was not the less a great figure in human medicine because of his interest in veterinary medicine. Who knows but that his greatness in the field of medicine is not justly attributable to his deep interest in comparative pathology?

Osler was noted for his contempt of a world ruled "by the doctors that want to use therapeutic methods they do not understand." (Arrowsmith) He had very little use for drugs and was a leading exponent of preventive medicine. Of a symposium held in Baltimore, on the subject of 'Typhoid Fever in Country Districts,' Cushing writes:

. . . He opened the session with a paper in which he urged the regular inspection of dairy farms, measures to prevent the contamination of the water supply, and the compulsory notification of every case of typhoid before an official State Board of Health. There were radical recommendations, and in no uncertain terms he gave warning that the Baltimore death-rate from typhoid never would be reduced to the ratio of modern cities until the local cesspool system of drainage was completely abolished and the city took over the control of the watersheds of the Gunpowder River and Jones's Falls. He had good reason to enter the lists in favor of these necessary reforms, for at the time Arthur Oppenheim, one of his assistant residents, was lying ill at the hospital with what proved to be a fatal attack of this preventable malady; nor was he to be the only victim of typhoid among the hospital family. (vol. i, pp. 413-414)

May he not be considered the father of much of our modern veterinary sanitary inspection?

To the veterinarians who were so royally entertained by their Canadian brethren at Montreal, in 1923, an extract from an Osler address before the British Medical Association, which ventured to hold one of its meetings overseas, will be appreciated. In writing of the occasion, Cushing observes:

. . . Speaking more as a Canadian than an American, he dwelt on 'certain of the factors which have moulded the profession in English-speaking lands beyond the narrow seas—of British Medicine in Greater Britain.'

"Evolution (Osler said) advances by such slow and imperceptible degrees that to those who are part of it the finger of time scarcely seems to move. Even the great epochs are seldom apparent to the participators. During the last century neither the colonists nor the mother country appreciated the thrilling interest of the long-fought duel for the possession of this continent. The acts and scenes of the drama to them detached, isolated and independent, now glide like dissolving views into each other, and in the vitascope of history we can see the true sequence of events. That we can meet here today, Britons on British soil, in a French province, is one of the far-off results of that struggle. This was but a prelude to the other great event of the eighteenth century: the revolt of the colonies and the founding of a second great English-speaking nation—in the words of Bishop Berkeley's prophecy, 'Time's noblest offspring.' Surely a unique spectacle that a century later descendants of the actors of these two great dramas should meet in an English city in New France! Here the American may forget Yorktown in Louisbourg, and the Englishman Bunker Hill in Quebec, and the Frenchman both Louisbourg and Quebec in Châteauguay; while we Canadians—English and French—in a forgiving spirit, overlooking your unseemly quarrels, are only too happy to welcome you to our country—this land on which and for which you have so often fought." (vol. i, p. 458)

This of course has nothing to do with veterinary medicine but it gives us who have so few opportunities an insight into the technic of promoting a better international understanding. 'For above all nations is humanity,' and surely science recognizes no boundary lines—political, social, or professional.

In reviewing Cushing's *Life of Osler* one is tempted to include everything, exclude nothing; not only direct quotations but an endless amount of worthwhile material, suggested by every quotation, comes to one's mind and seeks a place on the printed page. However, this must be brought to a close.

Reference has already been made to events observed by Osler but in which he was not necessarily the chief actor. The British Congress on Tuberculosis, the second of these special congresses held on an international basis, opened July 22, 1901, in London. Cushing records:

> During the serious sessions of the congress which followed, the outstanding and, be it said, somewhat disconcerting, episode occurred on the second day, when, introduced by Lord Lister, 'Geh. Med. Rath. Professor Dr. Robert Koch, Direktor des Instituts für Infektionskrankheiten in Berlin,' discoverer of the tubercle bacillus, gave a notable address, a certain portion of which provoked most unexpected commotion. Koch gave an exceedingly interesting analysis of the way in which different infectious diseases must be combated, and laid down a most sensible program for the fight against tuberculosis. Much of the value of this was lost, however, because of the one section of his paper in which he dwelt on the difference between human and bovine tuberculosis. For what riveted the attention of his audience to the exclusion of all else was his statement that human tuberculosis was practically non-transmissible to animals; that the reverse was probably also true; and consequently that the attempt by legislative action, particularly rigorous in England, to stamp out the disease in cattle as a source of human infection, had been misdirected. This led to a storm of protest and disagreement among sanitarians, which lies outside the story. Suffice it to say that Koch again, as with his tuberculin, had been a little premature in his conclusions; and in the discussion that immediately followed the address, Lister with extreme clearness of thought promptly put his finger on the weak point in the deductions of Koch drawn from his experiments. (In these experiments Koch had shown that it was impossible to infect cattle, swine, or other animals with the bacillus taken from cases of pulmonary consumption in man, whereas they were readily susceptible to transmission of infected material from animal to animal. The reverse experiment of course, could not be tried without personal sanction of a group of human volunteers. However, involuntarily, experiments are continually being conducted, particularly in the case of children who are fed on butter and milk containing living bacilli from infected animals. Koch did not believe tuberculosis could be contracted by humans in this way. Others who disagreed with him were apparently correct, but his, just then, was the greater voice. The aftermath of all this can be followed in the correspondence, editorials, etc., in the *British Medical Journal* of July 27, 1901, and succeeding issues. It may be said that a Royal Commission on Tuberculosis was soon appointed which sat for ten years, with a net expenditure of 75,557 pounds, and published an elaborate report in 1911, to the effect that man *is* infectible by the bovine bacillus, Professor Koch notwithstanding.) (vol. i, pp. 560-561)

I have found that the veterinarians, especially the country practitioner, is something of a philosopher. The scientist turning philosophical in his advancing years has a certain fascination for me. It will be remembered that Osler, upon preparing to leave America for Oxford, England, opened his mouth and put his foot in it, as the vernacular has it; or, to state the case more accurately, the press of America, as is its wont, made it appear that he had said something to the effect that man was of little use after forty for productive works and might as well be chloroformed at sixty. At least Osler opened his mouth and the press put his foot in it. Two years later, at Oxford, Osler writes:

To this edition (second edition of his 'Aequanimitas'), I have added the three valedictory addresses delivered before leaving America. One of these —'The Fixed Period'—demands a word of explanation. 'To interpose a little ease,' to relieve a situation of singular sadness, I jokingly suggested for the relief of a senile professoriate an extension of Anthony Trollope's plan mentioned in his novel 'The Fixed Period.' To one who had all his life been devoted to old men, it is not a little distressing to be placarded in a world-wide way as their sworn enemy, and to every man over sixty whose spirit I may have unwittingly bruised, I tender my heartfelt regrets. Let me add, however, that the discussion which followed has not changed, but rather strengthened my belief that the real work of life is done before the fortieth year and that after the sixtieth year it would be best for the world and for ourselves if men rested from their labours. (vol. i, p. 670)

When Osler left the States, in 1905, to become Regius Professor of Medicine at Oxford, he must have found little time for veterinary medicine. He devoted a great deal of his time to fighting the anti-vivisectionists.

His affection for Dr. Duncan McEachran, of the Veterinary School in Montral, is revealed in the following letter:

Sept. 9, 1912.

Dear Mac: Do let me know when you reach England. I send this on chance to the Bank of Montreal. We should be so glad to see you here. Come and spend a night and I will motor you to Banbury the next day. Sincerely yours. (vol. ii, p. 332)

His interest in agriculture is indicated by the following experience in connection with hog cholera, recorded by Cushing:

According to *The Times*, on this same Saturday (May 2, 1914) was held 'a discussion of great importance not only to agriculturists but to the medical and veterinary professions and the public in general,' which took place at a meeting of the Berks and Oxon Chamber of Agriculture. It was called to act on a resolution—'that further research in swine fever should be undertaken at one or more university centers as well as at the Government Laboratory at Alperton.' Osler's interest in comparative pathology which went back to his early Toronto and McGill days, may be recalled; and the agitation seems to have arisen from the question whether universities—and particularly Cambridge, where Dr. George H. F. Nuttall was especially fitted to undertake research in this direction—should participate in it, or whether it should be a purely governmental affair, for under these circumstances research was apt to be biased and its results often pigeon-holed. Osler is quoted as saying at the meeting that 'there was nothing like a row for doing good. Until the the pool was troubled by the angel the waters had no healing. Therefore they owed the Chairman (the President of the Chamber) a debt of gratitude; the problem of swine fever would benefit and no harm be done. The officials of public bodies did not take offence. They were thick-skinned.' To this Sir John McFadyean replied: 'One needs to be.' And Osler answered: 'I know, and you are.' " (vol. ii, p. 406)

Sir William (for in the meantime he had been knighted) was a most enthusiastic bibliophile. In January, 1918, according to Cushing:

He appears to have taken to bed with him an unusual book, the 'Essai de Bibliographie Hippique' by General Menessier de la Lance, the last volume of which had recently been published. How he learned of these volumes does not appear—possibly the Bibliography part of the title drew them into his net—it could not have been the Horse—he does not appear to have ridden one since the day in Dundas when he 'got the sack!' But the books went to

his heart. The retired French General had succeeded in doing for the literature of his subject precisely what Osler hoped to do with his own library. And his review of the volume, which begins as follows, was written with his old zest:

> "Not naturally dry, bibliography is too often made so by faulty treatment. What more arid than long lists of titles, as dreary as the genealogies of the Old Testament, or as the catalogue of the ships in Homer! What more fascinating, on the other hand, than the story of the book as part of the life of the man who wrote it—the bio-bibliography! Such, for example, is the recent bibliography of Samuel Johnson, issued by the Oxford Press, from the pen of that master of the subject, the late William Prideaux Courtney, which shows us, even better than does Boswell, the working ways of the great lexicographer. To be of value to the full-fed student of today a bibliography should be a *Catalogue raisonne*, with judicious remarks and explanations. In our great libraries this is impossible from lack of space, but the plan is followed with great advantage in the special bibliographies, of which this work before us is a model of its kind. . . ."

Cushing interpolates:

He goes on to tell how he had put the volumes to the test, all of which indicated with what delight he had gone through them, doubtless with his own bibliographical project in mind; and after commenting on the high plane of veterinary science across the Channel, he (Osler) ends thus:

> "Students of the horse in all its relations owe a deep debt of gratitude to General Mennessier de la Lance for this comprehensive and valuable work, so full of accurate and careful scholarship. As a former teacher in a Veterinary College I may be permitted to offer him on behalf of the profession in Great Britain our congratulations on its completion, and our heartfelt wishes that he may be spared to see final victory crown the Army of which he has been so distinguished a member." (vol. ii, pp. 592-593)

Surely there is no reading so satisfying as good biography.

GLAND GRAFTING OPERATION

A gland-grafting story of dramatic character is reported in Paris from the town of Lille. A nine-year-old girl had been an idiot all her life, due to certain glandular deficiencies. There was in the prison at Lille a convict who had been sentenced to the guillotine. Local surgeons decided to attempt a transplantation of the thyroid gland from the criminal's throat, under the skin of the child, and immediately after the execution this was done.

The surgeons then kept the child under close observations for several months, before they undertook to report the case. Their statement is that at the end of three months an improvement in the child's mental state began to be apparent, and that at the end of nine months, when their port was made, she had the understanding, behavior and vocabulary of a normal child of her years.

—*Science.*