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The Toronto Medical School

Oct. 1868
Oct. 18.

In what surroundings he passed the summer of 1868 is not apparent,

but like as not his pastime ^{was in gathering} ~~lay in collecting specimens~~ ^{samples of algae} from the water-ways in and about Dundas. ^{Concerning these specimens; in August he consults} ~~Possibly he may have accompanied the Rev.~~

^{Botany teacher at Trinity and the father of the Rev. Thomas Hincks F.R.S.}
Mr. Hincks, his ~~Professor of Botany of whom he makes mention, and in~~
~~the authority on the British Polyzoa into whose hands one of his rare findings seems thereby~~
to have fallen #; and in September he sends some diatomes from London to Salter Johnson,

^{Oster's}
Do not note to the Canadian Fresh Water Polyzoa

1883

~~reference to the fact~~ " I have received from the Rev. Thomas Hincks, the distinguished authority on British Polyzoa, a reprint from the Annals and Magazine of Natural History for March 1880, entitled "On a supposed Pterobranchiate Polyzoan from Canada." It is based on a communication from his father, the late Professor Hincks, of Toronto University, in which a short account is given of a polyzoan found on a sunken boat in the Humber river, near Toronto. According to the description "the tentacles, instead of being disposed in a horse-shoe figure and forming a continuous series, as in the ordinary fresh-water species, are borne on two distinct erect lobes, which are separated at the base", the arrangement met with in the Pterobranchiate Polyzoa. At the date of Professor Hinck's letter, Dec 1868, I was a student in his Natural History classes, and during the autumn of '68 had often taken his specimens of various sorts, and among them a mass of Pectinatella, which I had found in an old submerged barge near the mouth of the Humber. I remember the fact very distinctly, as it was the first specimen of Pectinatella which I had found

near Toronto, and Professor Hincks took a great interest in it, as he had not met with any fresh-water Polyzoa in Canada. Could this have been the specimen? It is a curious coincidence, to say the least, and perhaps in a look through the Museum of the University the specimen might be found, and the statoblasts would be sufficient to decide the question. Professor Hincks gives a sketch of the lophophore and it is hard to think that he would have been mistaken as he was an unusually skilful observer. The submerged barge was for many years a favorite collecting-ground, and in some seasons Pectinella was very abundant in the quiet water inside of it."

It is difficult for those of a later generation to imagine the struggle and turmoil which in those days engaged men's minds, particularly ^{the minds of} churchmen ~~minds~~, and more especially those like W. A. Johnson, the prototypes of Stephen Hales and Gilbert White, who had a scientific interest in the phenomena of nature. Following Cuvier and Owen, the doctrines and theories of Lyall, Darwin, Wallace and Huxley threatened to split the very church asunder. Some, like Wilberforce in the church attacked them; some like Gosse in science did likewise, and one may imagine, it being but nine years since "The Origin of Species", that Johnson faced the controversy fearlessly in discussion with his favourite pupil, and that his attitude was not an ambiguous one.

Moreover it was still expected that
 In those days the Anglican Church ~~was expected to take~~ *would absorb one* at least
in holy orders,
~~one~~ of a family of children, but the youth of the day were graduating
as it had satisfied Newman. Indeed they
 from Butler's 'Analogy' which failed to satisfy them, ~~and~~ were eagerly
subjects lapping up ~~the~~ *this theological revelation,* more appetizing subjects in an anonymous volume, "The
 Vestiges of Creation", in Lyell's "Antiquity of Man", in Herbert Spen-
 cer's "First Principles", in Huxley's "Lay Sermons and Addresses",
 which appeared anti-theological to a degree. Indeed many of them
 had come to feel with Huxley that extinguished theologians lie about
 the cradle of every science like the strangled snakes about that of
 Hercules.

Osler returned to Trinity for his second year in Arts, and after
 enduring it for one week announced to his parents and to the Provost
 his determination to go into medicine. This decision was his own,
 for as father of the man he had ^{come} to learn his own mind and it appears
 to have been the only momentous decision of his life - and there were
 many to make - over which he wavered. It must have caused some dis-

appointment at home, but if so his parents were not ones to bring undue pressure to bear in influencing the choice of career of one of their sons. Even had they been so inclined, Johnson and Bovell unconsciously drew him in another direction, and Sir Thomas Browne had interpreted for him the physician's religion. Another environment, an earlier decade, would almost certainly have seen him enter the Church.

And what of these friends and preceptors? Johnson had left the army for the Church. His two sons entered Medicine, though one of them subsequently took Holy Orders. And Bovell in a few years came to do likewise, but at this time as soon as he heard of his young friend's decision he exclaimed "That's splendid, come along with me." This the boy literally did, and during the next two years the two lived more like father and son than as teacher and pupil.

There were three particularly able and promising students who entered the Toronto Medical School this fall of 1868 - Fred Grasset, Richard Zimmerman and William Osler. Grasset completed his course

in Edinburgh, served as one of Lister's dressers and ^{in time} became a leader
 in surgery, ^{in Toronto} Zimmerman the son of a railway magnate of Niagara
 Falls met an untimely death in 1888, at which time Osler sent the
 following note to the Journal of which his friend was long one of
 the editors.

Some of my most pleasant recollections as a student are associated with
 Richard Zimmerman, whose death took place last week in Toronto. At Toronto School
 of Medicine, which we entered together, his zeal was always a stimulus, but his
 capabilities, as tested at the examinations, were far beyond my reach. In London,
 though at different hospitals, we saw much of each other. His brilliant career at
 St. Thomas', where he secured the prize of a house physicianship under Murchison
 and Bristowe, gave him exceptional facilities, and he returned to Canada in 1874
 one of the most thoroughly trained men it has been my pleasure to know. Success
 came rapidly, and in the enjoyment of the esteem of his colleagues, the confidence
 of the public, and the love of his students, how bright seemed the outlook! But
 the shadow of an hereditary ailment fell and deepened - and the end has come. To
 me there remains the memory of a bright, unselfish, loving friend.

*In Notes & Comments, Can. Med. & Surg. Journ., Mar. 1888,
 511.

On leaving ^{Trinity} Toronto it is probable that he resided with his
 sister Ellen who had married a ^{Mr} Williamson the year before and was
 living in Toronto, ^{near the head of Simcoe Street,} but this is not certain and, even if true, he
 apparently spent most of his odd hours at the Bovells. From the
 first he must have entered into his medical work with the industry

and enthusiasm which characterized his relation to his choice of profession to the end. A number of letters from his surviving classmates are unanimous in stating that he was exceptionally studious and faithful in attendance at lectures, that he spent the ~~greater~~^{most} part of his time in the dissecting room, "working a good part of the time in his own way by himself"; that when he was not dissecting he was "always to be found looking through a microscope at Bovell's cells"; that he was a general favourite not only with the class but with their preceptors of whom Hodder, Richardson, H. H. Wright and of course Bovell are chiefly mentioned, and that when 'grinding' the class, the teachers were apt to turn to Osler when others could not answer their questions. He is said to have been social and companionable, and always ready for a frolic and bit of fun.

From Toronto Med. School notes

"One of the sports indulged in to a very limited extent was boxing, the champion being big long John Standish who could box all day. He had the strength of a giant with a kindly gentle heart and took care never to hurt anyone. The students

were amused one day to see little Osler tackle the giant and quite surprised to find that the little one was almost the only one of the crowd that could strike Standish."

Dr. R. H. Robinson, another fellow-student, writes that on one occasion he felt ill and consulted Bovell at the Medical Building. The latter told him to go to his boarding-house, to go to bed and remain there until he called on him the next day. Bovell forgot about it until the third day and then took Osler with him, to look for the patient somewhere on Grosvenor Street at a number he could not remember. Robinson, who meanwhile had recovered, was out walking and saw Bovell standing in the

street in apparent distress, while Osler was running from door to door enquiring ~~for him~~. *There are many other similar tales of Bovell, about his mindlessness - of putting some blisters on a patient and forgetting them till three weeks later; of losing his horse baggage, which he had left standing at a house where he had called the evening before - but this will be enough.*

It is not easy to trace the varied activities of a medical student of fifty years ago, particularly of one who was habitually reticent about himself so that even were the letters of the time preserved they would tell little. The fall is taken up

with anatomy, and Gray's second American edition was followed, whereas Roscoe's "Elementary Chemistry" was the text-book on that subject.

A visit must have been made to Weston both at the beginning and end of the Christmas recess, for under the dates 24/XII/68 and 9/I/69 Johnson records a number of microscopic specimens such as "Trachea of a mouse given me by W. Osler. Gly. beautifully stained", and he in return inscribes as a Christmas gift Alpheus Hyatt's "Observations on Polyzoa Sub Order Phylactolae-mata" which had just appeared in the Proceedings of the Essex Institute. Inasmuch as there was no course in histology these specimens must have been prepared on his own initiative by Osler himself.

↘ The Osler recess must have been passed largely around Lake Umbagog
 Collector's specimens for which he sends a goodly number to
 Johnson and a week later on his way home, this from
 from Sandy Cove and Knappefelt Bay

b a horse trough:
 "28/IV/69 Alga? Jindyaedia etc in gathering from
 a horse trough on the road and hillside between Hamillan
 and Dundas, sent one by post from W. Osler to see
 water bears; did not find any. In Stant's fluid
 and sealed immediately."

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In spare hours during all this first year he and Bovell were doubtless much together and the latter's granddaughter writes:

"He was about twenty in those days and literally lived at our house. He adored Grandfather and the latter loved him like a son - and they were both crazy about the microscope. Mother says her life was a perfect burden to her with weird parcels arriving which might contain a rattle-snake - a few frogs - toads or ^{poison} ~~toads~~. She found quite a large snake meandering around the study one afternoon, and when she protested violently, the two told her she should not have been in there."

During the summer recess of 1869 he again devoted himself to collecting, and by the end of July is able to send Johnson some new species from Niagara Falls and elsewhere.

#1260. 30/VII/69. Diatomæ taken on weeds at mouth of Desjardin Canal by W. Osler and boiled by him, showing among other good diatomæ the "Coscinodiscus armatus".

And other entries follow. Later in the summer Father Johnson pays a visit to Dundas and the note-books record excursions to their favourite hunting grounds. Johnson indeed gathers things to keep him busy well into the fall, for in November thus:

1869

#1272. Upper and Lower surfaces of leaf of Deutzia Scabia: picked while at Mr. Osler's, Dundas, in September last, put up 5/XI/69.

And so after this visit from Father Johnson he returned to his other friend and father in Toronto, and to his second year in the Medical School.

A note-book of the period is extant, dated October 1, 1869, which is of

no great ^{Significance} ~~importance~~ except for one thing. It contains a few pages of chemical notes as well as notes on materia medica (Nov. 3, '69 to Feb'y 9, '70), but it is largely filled with the next year's lectures on obstetrics, chemistry and pathology taken at McGill. - In pencil on the fly-leaf

in W.O.'s hand is "James Bovell, M.D. M.R.C.P. Prof. Nat. Theology in Trinity College Toronto Lecturer on Institutes of Medicine Toronto School of Med. Consulting Physician to Toronto General Hospital. Physician to Lying in Hospital. Lay secretary to Provincial Synod Author of Outline of Natural Theology, etc. etc. etc. James Bovell". And throughout the

book the name is scribbled whenever there appears to have been a lapse in the lecture or the student's mind wandered - "James Bovell M.D. M.R.C.P.";

"James Bovell M.D.". The man must have come to influence an extra-

(1889)

ordinary influence over the boy, and to his last days as will be seen, in moments of absent-mindedness or when trying a pen it was the name of James Bovell that came first to paper, not his own.

In those days, before the multitudinous subdivisions of clinical medicine which have bid fair to crowd the fundamentals out of the curriculum, the course of anatomy extended over two years, and as the dissecting room represented the only laboratory to which a student had access, the abler ones reveled in it. The teachers of the pre-clinical branches, moreover, were at the same time practitioners; and in a paper on aneurysm written years later* Osler wrote that:

*Aneurysm of the descending aorta. Internat. Clinics, 1903, 1.

"When a student in Toronto I occasionally visited the jail with our teacher of Anatomy, Dr. J. H. Richardson, and among the prisoners was an old soldier who had been discharged from the army after the Crimean War for aneurysm of the aorta, so his papers said, and, considering the large experience of the army surgeons with the disease, it is not likely that there could have been any mistake."

He goes on to say that the old man died in 1885, thirty years after the

1870

Crimean War, and Dr. J. E. Graham gave him the specimen to be drawn and described - a healed sacular aneurysm at the junction of the arch and descending aorta. It is quite likely that this early visit started the inquisitive boy's interest in aneurysm which was so evident in his Montreal days, but this is anticipating.

As has been stated, the outstanding recollection of him on the part of his surviving fellow students is that he was always dissecting. Dr. Albert MacDonald who was prosector in anatomy, recalls that he "spent more time in the dissecting room than any other student, frequently bringing his lunch with him in order to get some extra time for dissecting. He did much of this work alone, working out problems of his own in his own way, without the aid of a demonstrator. Thus he pointed out the presence of the trichina spiralis in the muscles of one of the bodies, which no one else had observed."

This, happening in the winter of 1870, ^{illustrates} is possibly ~~as good an ex-~~
~~ample as any~~ ^{as well as any other example might,} of his characteristics, not so much in that it shows un-
usually acute powers of observation but rather in that it evidences his

1870

wide-awakeness and his ability to use acquired knowledge, for he had already seen the trichina under the microscope. ^{as} This is apparent from two sources. The first is Johnson's note-book, in which occurs this entry:

"29/III/68. Trichina spi: from Hampden Illinois U.S. Human, occasioning death given me by Arthur. (Gly.)"

and a few weeks later another specimen mounted and recorded on the same day with some "diatomes given me by W. Osler who drew my attention to them." The other source of evidence is in a remarkable note-book of this period started by Osler himself, in which occur lists of entozoa from all possible sources, and of which more will be said in its proper sequence.

"Another event, in this first year's study, which had some influence on my later life, was the discovery of the Trichina spiralis. Dr Cobbold has told the story of the several steps leading to the discovery and following it, in his latest work on the Entozoa. My share was the detection of the 'worm' in its capsule; and I may justly ascribe it to the habit of looking-out, and observing, and wishing to find new things, which I had acquired in my previous studies of botany. All the men in the dissecting-rooms, teachers included, 'saw' the little specks in the muscles: but I believe that I alone 'looked-at' them and 'observed' them: no one trained in natural history could have failed to do so."

This paragraph was not written by William Osler but occurs in the short Autobiography of Sir James Paget. The circumstances, however,

cf. Memoirs and Letters of Sir James Paget London 1901

1870

were much the same, and Osler with his instincts as a naturalist looked ^{also} at as well as saw the specks. Indeed Dr. Jukes Johnson says they cut literally thousands of sections and studied them. Specimens are sent to Father Johnson, Bovell doubtless becomes interested, and innumerable ^{feeding} experiments are performed (cf. fig. p. 30) in the attempt to infect the animals, for at the time but little was known of the disease in America. Some six years later, in his first paper on Trichina Spiralis, he wrote:

(From Canadian Journal of Medical Science) Vol I
 May, 1876 p. 175

From article:-

TRICHINA SPIRALIS. by Wm. Osler, M. D.
 (concluded from the April Number)

When a student with Prof. Bovell, of Toronto, I had several opportunities of studying these parasites. In the month of February, 1870, while dissecting a subject with Dr. Zimmerman in the Toronto School of Medicine, we discovered numerous trichinae throughout the whole muscular system, all of which were densely encysted, many having become calcified. From a single drachm of one of the muscles of the arm I obtained 159 cysts, the greater number of which enclosed healthy-looking worms. This man was a German, and had been janitor at the hospital, where I had known him for over two years. 4

Trichina spiralis. From Canadian Journal of Medical Science
 May 1876 I. 175