

1028/66/16

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(1870)

It is interesting that he says "a student with Prof. Bovell" rather than a student at the Toronto Medical School, and it is characteristic also that he links Zimmerman's name with his own, for it is evident from *his personal* ~~his~~ notes in his list of entozoa that the discovery was his own.

22/II/70. No IV. While dissecting the arm of a man who died in the Toronto General Hospital I found numerous Trichinae in the Biceps muscle, and further examination showed them to be scattered freely throughout the muscles. From ~~31~~ of the muscles, from the long head of Biceps I obtained 150 cysts, the greater number of them containing healthy-looking Trichinae.

29/III/70. No V. In the subject following the one above, and also brought from the Toronto General Hospital numberless cysts were found in all parts of the body. The parasites in this case are not as old, none of them beginning to undergo degeneration.

An interest in the entozoa had been awakened some time before. Indeed when he was still at Trinity, the earliest specimen which he records being under the date "7/II/68;" but it was not until Jan. 1st of 1870 that he began systematically to record the specimens ~~with explanatory notes~~ *and to give explanatory notes.* in a blank book. It was quite consistent with what was still under way in the study of the diatomaciae and fresh-water polyzoas, but it illus-

trates the formative stage of his habit of ~~mind in~~ observing, collecting, recording and tabulating, ^{specimens or cases,} and thus preparing material for future publications.

Many of the specimens are ^{carried} ~~taken~~ or sent to Johnson, whose interest is obviously aroused, though the preparations all appear to ^{have been mounted by} ~~be~~ those from his young friend who is rapidly forging ahead of him.

date fixed

#1314. 8/XII/69. Trichina spiralis (Encysted) From a subject (on the table) at New York; shows the calcareous deposit.

#1315. Entozoa from mucous stomach of a bat. Both given me by W. Osler; put up by him Nov^d 1869.

#1316. Jan/5/70. Tenaea; ova bearing segment taken from a dog. Given me by W. Osler. Balsam.

#1390-1. 22/IV/70. ^[Easter Recn.] Trichina spiralis from man at the Toronto G. H. from Osler. Gly.

#1392. Tenaea elliptica head protruded. from W. Osler. Gly.

#1403. 6/June/70. Echinorkyneus? from the Catfish both male and female. Given me by W. Osler Glycerine (See Cobbold).

It is easy to trace the source of these and other entries in Johnson's note-book. Thus:

[Johnson had troubles with his spelling]
(Johnson had troubles with his spelling)

#1388, 22/IV/70. Parasites on fins, body &c of little fish in my aquarium. They seem to have a chelinous horseshoe shaped piece inside, & are large brown looking things with powers of locomotion & short cilia all round the edges. Gelatinous mass destroyed by drying (Boil)

Whereas in Osler's note-book ^{are} the following, ^{the contents} On the Finns of Chub, ^{the first of}

21/IV/70. ON THE FINNS OF CHUB.

Have none at the end of the Easter recess:

On the finns of chub in the Rev. W. A. Johnson's aquarium were noticed several round white spots. These on examination proved to be some sort of Entozoa. In addition to these, some yellow spots were seen which seem to be a more advanced condition of the parasite. (see slide * * *)

2/V/70. Numerous Flukes attached to the intestine of a small chub. (see slide no. * * *)

12/V/70. Examined three chub: from the intestine of one two Echinorhynchus were obtained, a male and female.

^{of the} This visit to Johnson must have been during the Easter recess, (verified 11/10)

during which, it appears, he subsequently visits his relatives at their summer home on the Island, and later goes to Dundas, if one may judge from the first two of these ^{following} entries on the Entozoa in Pike.

23/4/70. In a pike 2 ft. 7 in. long caught at the Island, I obtained 68 specimens of Taenia and two or three small Ascaridae.

This tape-worm is about a foot long, and exhibited curious undulatory movements which continued for more than twenty-four hours after removal from the intestines. It is very extensible and may be stretched to almost double its ordinary length. The head is flattened, club-shaped when the worm is dead, but during life is generally extended, giving to it the shape of a flint arrow-head. Five suckorial disks are plainly seen but no hocklets. The segments taper very gradually, being exceedingly small at the neck, larger towards the end of the body, they are about twice as broad as they are long. The water vascular system is most distinctly seen in this worm, consisting of four channels, two on each side. At the head and for a considerable distance down the neck these tubes connect by means of inosculating branches, these about the head form a dense network. (see sketch).

30/4/70. From a pike caught in the canal basin at Dundas I obtained 28 Taenia and numerous small Ascaridae. In the stomach of this fish were 52 smaller ones, principally little bass and perch.

30/6/70. From the intestines of two pike obtained at the Fish-market, Toronto. In one 84 Taenia were found and in the other 53 not counting numerous small undeveloped ones, - looked like freshly eaten scolices. A few Ascaridae were found in the stomach of one.

23/6/70. From intestine of a pike obtained in Fish-market, Toronto. 56 Taenia; most of these were of a large size and longer than the usual ones from this fish.

Despite this new and consuming interest in Entozoa, he is not forgetting the diatomaciae as is apparent from these entries in the special note-book devoted to them:

"March 20, '70. Went out to Humber Bay with Rev. W. A. J. and obtained gathering from Grenadier Pond and its outlet."

"Mar. 23. Humber Pond eight varieties. Grenadier Pond nineteen."

"Mar. 24. Went out again and obtained another gathering from the same place. The Diatoms were all alive and moving freely. Many types of Ocellatoria were mingled with them and gave the gathering a rather greenish appearance. From the pond on the right hand side of the bridge the following Diatoms were obtained" - and there follows a

list of twenty-five varieties, some of which are described and pictured.

"April 2. [He is evidently devoting to the microscope] "The endochrome in this [drawing of specimen] is rolled up into four balls the middle ones the largest. While watching it the two centre ones coalesced and spread themselves throughout the cell pressing the smaller ones against the apices. This was in Nav. affines and seen with 1/20."

"April 21st. Out at Weston, In a gathering from the G. T. Railway numbers of Nitzschia amphioxys and Mendion curellare???"

There can be little doubt but that had William Osler at this time come under the influence of Huxley or Agassiz or possibly of Leidy that he would

have gone on with his biological studies and have abandoned medicine.

Aside from his opportunities in the dissecting room it would appear that the school was not proving a great success, and his lecture notes, with their "James Bovell M.R.C.P." scribblings, would indicate that his mind was not captured by the lecturers. There is possibly one thing that might have deterred him, his ineffectiveness with his pencil, for though many of his drawings are probably accurate enough they are lacking in any artistic quality. Years later ~~in Philadelphia~~, when he finally came in contact with Joseph Leidy at the Biological Club in Philadelphia, it was Leidy's superb drawings that especially provoked his enthusiasm. This was shown as late as 1915 when on adding to his library a copy of Leidy's great quarto on Rhizopods he wrote to Joseph Leidy, Jr., to ask for one of his father's sketches to insert in the volume, where it may be found.

However this may be, he persisted in sketching what he saw under the microscope as best he could, and the notes given above, with their accompanying illustrations, are comparable to those accompanying the notes on the entozoa, and later on those made in Montreal and London when he was poring

over blood specimens, those made in Philadelphia when absorbed in the malarial parasite, and those made during the first year in Baltimore on the amoebae of dysentery which practically ended his days with the microscope. The method of the pursuit in each instance was the same, and though occasionally he ventured to reproduce some of his own sketches in his early papers, the art of illustration was not his long suit.

In all these extra-curricular pursuits, though his name infrequently appears, Bovell probably figured largely ^{for they were much together. In a letter written years later} and it is apparent that they ~~kept on office together~~ ^{was located} on Spadina Avenue near Queen Street. Tradition ^{to the Jefferson Medical students, whom he had helped to advise in London, he spoke of this period as follows:} ~~has it that this venture was entered upon at Osler's suggestion with the~~ ^{It apparently "the" refers to this talk, they kept their and he shared it together.}

object of starting a consulting practice for Bovell and of ^{obliging him: thereby to} ~~making him~~ collect his fees. The partnership is said to have continued for about a year and apparently the business methods ^{of these others} of the senior ^{partner in the end} prevailed ~~in the~~

~~and~~ ^{How Prof} W. R. B. Nevitt who entered Trinity as one of Osler's contemporaries, writes that "he brought there no marked reputation except that he was a good fellow and held the distance record for throwing a cricket-ball."

He says further:

Look up
Macallum
letter of Sept 27, 1920

"Bovell's office was on Spadina Avenue. One afternoon I had some engagement with W.O. and called for him at the office. The room was a large bare room with a few chairs and a small deal table - like a kitchen table. Osler opened the drawer of the table - Dr. B. had gone out - and said 'Look here! This drawer has been filled to overflowing with bills two or three times this afternoon and now look.' One solitary bill lay in the drawer. As the patients paid their fees Osler placed them in the drawer. A needy patient came along and Dr. B. reversed the process and handed money out so that the sick man might get his medicine and the food and other things he required."

There are many like stories of Bovell, many of them probably more or less true and many of them have Osler as an appendage. The older man was adored by ^{all} the students though it could never be foretold whether his lecture was going to be medical or theological, or indeed whether he would remember to come at all, and on a few occasions both at Trinity and the Medical School Osler gave his lecture for him. Just before Osler's entry to the school the row of houses on John Street and St. George's Square where Bovell had lived, were burned down and he had built the house called "The Hermitage" on Dennison Square; and it was here that he and W.O. kept all their rabbits.

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If the two together were concerned with a famous murder trial of the day
for medico-legal jurisprudence was one of Barilli's many interests around
possibly by his earlier relation to the arrest of Bourgeois Hare. With the aid
of the microscope they found before the court that certain blood stains on a
discarded coat were human blood and on this evidence the criminal was hanged.

mice, rats and other animals, including, alas!, to the scandal of the com-
munity, an occasional neighbour's cat which had ventured afield.

It was during the spring of 1870 too, despite all of these accumul-
ating interests, that he begins visiting the veterinary hospital, possibly
drawn there in the first place through 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 subse-
quent associations with the veterinarians at McGill. But with all this
he found time to complete his paper on the diatomaceae and to forward it
to Principal Dawson of McGill who was at the same time President of the
Natural History Society of Montreal. The paper was not presented before
the Society until the October meeting, but was published in the June
volume ^{of} ~~and~~ the Transactions.

His evident powers of observation and ability in the presentation of
a subject show forth in this his first appearance in print. He begins:

"Among the many beautiful objects which the microscope has re-
vealed to us, none, perhaps, are such general favourites (especially
with the younger microscopists) as the Diatomaceae. Their almost uni-