

Bertram John Topham
(1893-1962)



Today, Remembrance Day 2013, seemed like a good day for me to begin my memoirs of Bertram Topham, first recipient in 1940 of the Chant Medal for outstanding achievements in amateur astronomy in Canada. I've been thinking today of how a British born, Canadian artilleryman in the trenches of The Great War, World War 1, would turn his gaze toward the stars and begin observations of what he saw. Certainly the circumstances in which he found himself in France were worth turning away from. The appeal of focussing on something larger that followed universal laws would be strong.

In the course of this wondering I came upon this piece of writing by an officer who served on the Somme and wrote under the pseudonym Mark V11

"The stars shine brilliantly and (these trenches facing north) I gaze at The Plough dipping towards High Wood. What joy it is to know that you in England and I out here at least can look upon the same beauty in the sky! ... They have become seers – images of divine stability – guardians of a peace and order beyond the power of weak and petty madness. ... They, at least, will outlast the war and still be beautiful."

- "Night in the trenches," A Subaltern on the Somme

This is how I imagine it was for Bert, (perhaps minus the poetry), except I don't think he would have recognized the Plough. My understanding is that he knew very little about astronomy at that time. He did not know the difference between a star and a planet. The bright star he was tracking was actually the planet Jupiter. He noticed how it moved around in the sky and followed it two winters in a row.

Never mind, three centuries before him another star observer had got it mixed up too.

In 1610, a Florentine patrician named Galileo Galilei published a treatise called “Sidereus Nuncius” (Starry Messenger). With the help of his spyglass he observed *“four planets flying around the star of Jupiter at unequal intervals and periods with wonderful swiftness.”* (Translation A. van Helden). Making accurate sketches of these various positions required stopping down the aperture of his spyglass in order to make useful observations and a great deal of trial and error. It turns out these were the four largest of Jupiter’s 67 moons, named for the lovers of Zeus.



Wikimedia Commons Jupitermoons: four moons from top to bottom: Io, Europa, Ganymede, Callisto

In Bert’s acceptance speech in 1941 after receiving the Chant medal, he remarks: *“in the trenches in the last war I got to noticing how the starry heavens revolved round during the night and noticed that one bright star (I knew nothing about planets, etc. then) seemed to move past the smaller ones. Week by week I watched it and noticed that in time it got close to another fairly bright star and I decided to watch what they would do when nearest. Here I noticed that the fairly bright one also was moving through the smaller stars. Later the bright one passed the other one and still later it came back again and then they got farther apart and in time passed off the sky. I watched for the bright one until I saw it next winter and in time I got to knowing where I would see it.”*

Back in Toronto after the war he got a hold of the Handbook of the Royal Astronomical Society and found out that the star he had been chasing around the sky was Jupiter. With his old 1&1/2 inch telescope resting on the fence he spotted Jupiter and the four other stars all in one line. Looking it up in the Handbook he discovered that these four stars were in fact four bright moons of Jupiter and at all hours of the night they were altering their positions. This is how Bert

became a member of the Toronto branch of the R.A.S.C., by tracking the times these moons came in and out of view as they revolved around the planet.

I have come to learn that it is not that easy to see these “*four lovers of Zeus*” with the naked eye. However under the dark skies in the trenches of France, and with the keen eyesight of a young man, Bert seems to have managed quite well. Unfortunately, he completely lost his hearing as a result of an exploding shell. He was “stone deaf” as my mother put it. Looking back, I am very grateful for his keen eyesight. In his own words: “*I lost my hearing in the last war and I took up astronomy to relieve my sense of loneliness.*”

During the war Bert won a Distinguished Conduct Medal for the 14th Canadian Infantry Battalion. “*For conspicuous gallantry and resource in charge of a party of bombers. His party was exposed to heavy fire from three sides, but, in spite of severe casualties, he made an advance of over 350 yards, and afterwards carried in several wounded men*”.



The fact that Bert won the medal for Canada is what has surprised me. I had always thought he was fighting in the British Infantry. This led me to a search on Ancestry.com. Here I found out a bit of chronology of his early life, but not everything. Bertram John Topham was born on December 18th, 1893 in Northwich, Cheshire, England. (This fits with my mother’s estimation

of his birthday, sometime around Christmas, but he never told my family the exact date, nor did he ever open any presents we gave him. He did open them later privately in his room!) I found him next on a 1911 English Census, 17 years old, living in Lancashire with two names I recognized, that of his aunt and uncle. His occupation at that time was listed as Apprentice Metal Turner (iron). As a result of recognizing these two names I was able to figure out to the best of my ability, my family's connection to Bert. I believe that one of my grandmother's sisters married the son of Bert's aunt and uncle. In any case they all emigrated to Canada sometime between 1911 and the 1920(s). Later on I discovered a document, Canadian Ocean Arrivals 1919 – 1924, in which I discovered that Bert landed in Halifax on Dec. 7th, 1913 (just in time to be enlisted for the Canadian Infantry!). By 1922 he was living at 134 Vine Ave. in Toronto and sailed on the Megantic that year to England for a visit. He was 29 years old and single (a fact that was to remain throughout his life). His occupation at that time was listed as electrician.

At some point in the twenties Bert came to live with my grandparents and my mother in Toronto, who were also recent immigrants from England. I don't know the chronology of dates or locations of the houses they lived in before 105 Regent St. although the house just before was only a few blocks away in the West End of Toronto. I do know that my grandfather and Bert built the brick house on 105 Regent St. and the original home still stands. It is here where Bert moved a second hand observatory by truck across Toronto, to install it on his roof. It became known as "Topham's Top" and the whole performance attracted a write-up in the Newspaper. It reads as follows:

"AMONG the trials and tribulations of an amateur astronomer, moving an observatory is not a common difficulty. However, B. Topham, 105 Regent St., West Toronto 9, Ontario, Canada, moved a second-hand one by truck across Toronto. It measured 10'6" in height and 10'3" in diameter and appears to have proved about as difficult to transport as an armful of eels. First, it had to be hoisted in two parts over a 10' fence and deposited on the truck. Next, before it was scarcely started, it encountered two houses bordering a driveway, which gave a space only 9' wide. This impossibility was surmounted and then came an underpass which proved to have just 2" too little head room. To beat this hazard the air was let out of the truck tires. Arriving at its destination the observatory could not be set in place as shown in Figure 4 until the sloping roof of a wing of the residence was removed and a flat roof substituted. Topham had heard so much about heat insulation, he says, that he packed the ceiling timbers beneath with "rock wool," then laid his observatory floor as a separate entity upon the roof beneath. Then with a chain block attached to a scaffold, he pulled the observatory up-another penthouse type-and there it sits-permanently he hopes, after all the adventures mentioned. Perhaps it would have been easier to move the house to the observatory, but hindsight is usually easier than foresight. The dome is rotated by means of a gear working on complete inner circle of Link Belt chain. 1/8 h.p. motor does the revolving."



Me, grey-haired one, gazing up at where Topham's Top once was -105 Regent St, 2010

As seen in the photo above, Topham's Top did not sit permanently as Bert had hoped. In the late thirties, as Bert's observations gathered greater momentum they moved to 1250 Castlefield Ave. where he built his famous observatory. It's not clear as to whether my mother or her parents had any say in this matter! They seemed to function as a unit.

“Bert Topham built the entire structure of his Castlefield observatory and the gleaming white dome dominated for decades the Dufferin Street district on the borders of North York and York Townships. He equipped it with the latest instrumentation and carried out planned programmes of astronomical study. In the 1940's, both he and his observatory became known to many scientists throughout the continent. An endearing feature of his makeup was that he liked to share his knowledge and observatory with other, and, quite frequently, groups of youngsters and adults were invited to attend observing sessions.” (reported in the Centennial Edition of SCOPE)

“With his 16.5 cm refractor, he observed rather faint variable stars and was commended by Leon Campbell of the AAVSO for his very precise magnitude estimates. He also systematically searched for novae and comets. On moonlit nights he ground and polished telescope mirrors and welcomed visitors to his observatory. Word of mouth alone attracted thousands of people to his Castlefield Avenue Home over the years. According to Dr. Gartlein of Cornell University, Topham was among the most assiduous auroral observers on the continent, and Dr. Millman praised him for his outstanding contributions to meteor research”. (reported in “Looking Up” – The R.A.S.C.)



my mother on right at Castlefield, unsure of date

Throughout these years, his day job was electrician at Swift's Meat Packers. It was referred to from time to time, Bert being electrocuted at Swift's, but although I often looked at his fingers which were missing a few tips, I never understood how bad it was or what effect it had on his life until receiving a letter he had written to the R.A.S.C. in 1944 . (It was forwarded to me from the Toronto Society). He had just completed 16 weeks of hospitalization and was back home. As well as almost killing him, the accident cooked both hands for eleven minutes, while he hung on to two overhead cables when the ladder moved. They brought him round in one hour and fifteen minutes. His left hand was deformed, almost without skin. His right was usable though the fingers did not open full. He was due to go back in a few months for skin grafts on both hands. He wrote:

“ The burnt tendons of two fingers of left hand make 3rd and 4th fingers useless and will be a set back to me on figuring a 10 inch Mirror which is at the appropriate sphere, also I have not Power in hands to open my Observatory Dome so will not be able to do telescopic Observing until after the final grafting of hands, but, I will do all I can on Auroral work, and will send any observations I make weekly, to Mr. Carl Gartlein as I used to do prior to 1940.”

I was born in 1952 in Toronto. These were the post WW11 baby boomer days of the renewal of hope, and actualization of “the American dream” (which Canadians shared). This is when I met Bertram Topham. Both of my grandfathers were dead by the time I was one and a half, and I was lucky to have Bert step in to take their places. It was good for him too. Perhaps by then he needed an escape from using his brain so much in the various fields he had been involved in, I

don't know. What I do remember is endless play. My mother told me on many occasions throughout her life that Jim and I were "everything to Bert". Having never had any children of his own, in the climate of my family's openness to the philosophy of "it takes a village", we were his, as well as everybody else's. I always felt his excitement upon our arrival and it was immediately evident all the fun he had in store for us.



my brother Jim on left, 1952?

My older brother remembers Castlefield better than I do. He remembers taking a bus there with my mother, he remembers the Observatory, lots of stairs, walking around it, the dome. The only thing I remember is the front porch of the house. When I was almost too young to remember, after my Grandfather's death, Bert and my grandmother moved from Castlefield to Brampton Ontario. Brampton, at this time, approximately 1954, was a small rural town. It was known as the flower town of Canada. They lived on the main street, Queen St., not far from the Dixie Cup factory. I remember this distinctly, driving past a giant Dixie cup only it looking small because it was so high up in the sky, and my brother explaining over and over to me that even though it looked small, it was really really big.

It was here where Bert rather fittingly developed a new pastime. Flowers, of course! I remember being shown everything he was growing in the greenhouse. I believe he spent lots of time in there, and took lots of photographs, some time-lapse of flowers opening. My grandmother was more the vegetable gardener I think.



Jim and Bert out back of house in Brampton 1956



Picturesque Garden at Brampton 1956

Every Sunday, once again as far back as I can remember, we drove to Brampton after church. Upon arriving Bert was completely focussed on my brother Jim, and I. He may have had the bowling pins already set up on the living room rug before we got there. We began rolling the balls immediately. The rest of the afternoon (so long in those days) continued in this manner. In the winter he would pull us on the toboggan towards the local sledding hill. (Boy were we spoiled!). We had a metal flying saucer later on. Other afternoons we would go down to the basement where he had hockey nets set up. My Dad and I on one team, Jim and Bert on the other. We would propel the puck (or ball, that I can't remember) along the shiny floor with our sticks wending our way carefully around the furnace, and the usual array of various enclosed pipes. I remember large posters of various species of birds taped up to these tin enclosures.

Thanks to my brother's almost photographic memory, I can tell you the name of the town where "the unit's" farm was located. I've decided to call my mother's family "the unit" from now on,

due to its somewhat eccentric nature. He said the last town he remembered us driving through before we reached the farm was Maxwell. It was hilly country, this is what I remember, due to a game we played. As Dad was driving up hill we repeated the words “up up up up Up” till reaching the top followed by “Wheee.....” all the way down! Nana and Bert must have spent summers there until I was about seven or eight, because I remember the visits vividly. My favourite thing was the swing. Bert attached it to a branch higher than I have ever seen before or since in swing construction, and pushed me till he taught me how to pump. Then he would only push till I got going. I felt like I was reaching the sky.



Bert behind me teaching me to fish with bamboo pole

The daylight things you see are the things I remember the most, not the dark nights, so perfect for star gazing. Although I'm sure one night we were standing on the shore of Georgian Bay (Springhurst Beach) looking at the Northern Lights. I also remember being taught how to find the North Star and being shown the milky way. Unfortunately, considering what this story is about, I have a confession to make. I was afraid of the dark. Just think about how much more interesting this story would be if I hadn't.



example of Bert's incredible photography – Dam he built at the Farm 1957



Bert on a hill with my grandfather indulging in his life- long hobby - photography

My brother and I do remember a dark room where Bert developed his photographs, although we disagree as to where it was in the house. But Jim remembers, as I do not, being shown photographs of planets, and he remembers Bert, on clear moonless nights, getting prepared for particular observations. I remember Bert's desk, (which I still have in my possession), on which were usually scattered maps of the stars. My attraction to the desk was strong, as though it was in some way a window to The Universe that I needn't bother studying. It was enough just to stand in front of the desk and have all the information permeate into me!

There were a few British games I remember playing. Bert would prepare for our visits by collecting chestnuts in the fall. He taught us to thread pieces of string through. We then struck each other's conker until one broke.

Bert taught us to burn paper by shining a magnifying glass on it in bright sunlight, he showed how light split by a prism forms beautiful rainbows, and demonstrated how liquid mercury splits into separate blobs which re-merge with each other to form new shapes.

Bert led us on countless nature walks. He, of course, would insist at the outset, that we have walking sticks. Did we use knives to sharpen the points of branches we found? It is here where I wonder if imagination interferes with facts and I haven't the time to keep asking Jim, to make up for my...sigh...not so photographic memory. I have included this photo of Bert, because it shows he had been using these sticks long before I came along!



Bert with trademark walking stick

At some point the Maxwell farm was sold and Bert and Nana spent summers at a cottage near Collingwood. This was good for us because we spent our summers close by on Springhurst beach (now part of Wasaga). I was old enough by then to imagine Bert's nature walks transporting us to other parts of the world, perhaps the Amazon. Little did I care for the type of vegetation around us. After all if standing at his desk could be a conduit for the Universe, surely northern Ontario could transform into a rainforest if I followed his footsteps!



Bert, behind me, at his Collingwood cottage, 1959

The summer of 1962, we didn't know anything was wrong. Everything carried on as usual, with Bert looking forward to our visits as much as ever. He played with us and seemed to be as energetic as ever. But late in the summer, I think it was, he was hospitalized at Sunnybrook Veterans Memorial and the diagnosis was dire. "He's full of cancer" my Mother said. We visited him at the hospital. He lasted barely a week.

I remember the night he died. I was sleeping with my grandmother at the time. My mother came to the door and awakened her. I heard what she said, that he was dead. I didn't cry. We didn't show much emotion in my family. I think many families were like that back then. It wasn't until many years later that this grief finally caught up with me. I was standing waiting for a bus in Toronto in my mid-thirties. Suddenly I started crying uncontrollably about my loss.

Bert Topham's name is perpetuated in an award for outstanding observers established by the Toronto Centre in 1984. The 2004 winner of the Bertram J. Topham award for "Observer of the year" writes of Bert:

"The first recipient of the Chant Medal in 1940, a year before my birth, was Bertram J. Topham (1893-1962) of the Toronto Centre. He was a variable star observer (like me) and used a magnificent 165-mm refractor from his observatory in northwest Toronto. Although I never met him, I spent many evenings observing through his wonderful telescope, which had been purchased by the Montreal Centre a few months before I joined the RASC in 1957. To a teenager with a 4.25-in Newtonian, this was my first close encounter with a real telescope! "

In 2009 I searched his name on the Internet and found, to my surprise, a reference to the Bertram J. Topham award. I printed out the information for my mother to see. Even while suffering from epilepsy and all the brain challenges that go with it, the particular course her aging finally took, it was one of her few delights, this paper I showed her. She insisted I let some of Bert's old friends who were still around know about it.

Two weeks before my mother, Evelyn Pilkington, died she told me the address on Regent St. where they had lived (an astounding memory for numbers like my brother). She spoke of chickens in the back yard, didn't mention Topham's Top (not a great one for astronomy), but casually remarked that her father and Bert had built the house by hand. I was astounded, as this was a fact I had never known. It's amazing how much you never find out from your parents.

When I visited 105 (oh dear, did I get the number right?) a week before my mother died there were Tibetan prayer flags hanging from the porch. I met the new, (Tibetan) owners, who let me walk to the back. I touched the original brick with my hand and noticed how carefully all the pieces fit together. It was real workmanship, due to my grandfather's "perfectionism", which with mixed blessings has passed down the line. I'm certain Bert did a wonderful job of the electricity!

Are the prayer flags inadvertently whispering thank-you(s) to the wind for the functioning of "the Unit" out of which grew countless small discoveries in astronomy I have never even bothered finding out about? ..(My mother had an excuse, "astronomy wasn't for her"). I like to think they are.

The only book Bert ever gave me was a book called "The Spirit Lives." It's not really a book at all, it only looks like one from the outside. It is a box, cleverly disguised. In it are hidden my most special treasures.

Inadvertently, I did take an Introduction to Astronomy in my undergraduate studies. I have joined the RASC Toronto Branch. I know how long it takes for a photon of light not just to reach the earth from the sun, but to make the circuitous trek from the hot core of the sun to its periphery. This summer I stood in a park in Charlottetown under not such a dark sky, three quarter waning moon, but was nevertheless retaught how to find the North Star and had a chance to gaze through a telescope at the binary star formation forming the end of Cygnus the Swan's tail.

This doesn't feel like the end of Bert's tale, but it is definitely a beginning.

Lynn Kirk,
 Daughter of Evelyn Pilkington
 Great Niece of Sarah ("Cissie") Hilditch (daughter-in-law of Sarah and George Edward Hilditch who were Bertram Topham's biological Aunt and Uncle)